ANGLO-CHINESE JUNIOR COLLEGE

2016 JC2 PRELIMINARY EXAMINATIONS

ECONOMICS 9732/01

Higher 2

18 August 2016

Paper 1: Case Studies

2 hours 15 minutes

Additional materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

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

Answer **all** questions.

At the end of the examination, fasten all your work securely together.
Fasten the **BLUE** cover sheet on top of your Case Study Question 1 answers and the **ROSE** cover sheet on top of your Case Study Question 2 answers.

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

The Market for Steel

Table 1: Crude steel production (million tonnes)

Country \ Year	2010	2011	2012	2013	2014
China	638.7	702.0	731.0	822.0	822.7
United Kingdom	9.7	9.5	9.6	11.9	12.1
WORLD	1,433.4	1,538.0	1,560.1	1,650.3	1,670.1

Source: World Steel Association

Table 2: Crude steel consumption (million tonnes)

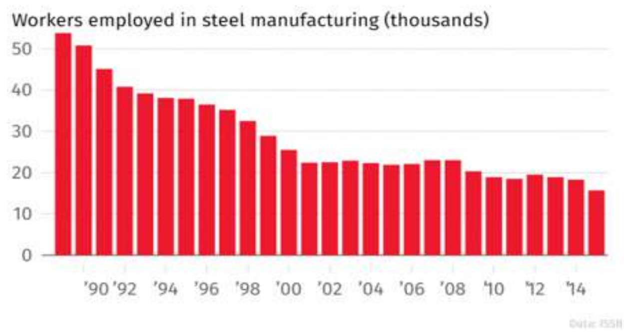
Country \ Year	2010	2011	2012	2013	2014
China	587.6	641.2	660.1	735.1	710.8
United Kingdom	8.8	9.0	8.4	8.5	9.6
WORLD	1,308.2	1,411.8	1,439.3	1,528.4	1,537.3

Source: World Steel Association

Figure 1: Global steel prices (US$/tonne)

Figure 2: Employment in UK Steel Manufacturing (thousands)

Figure 3: UK Industrial Production Index



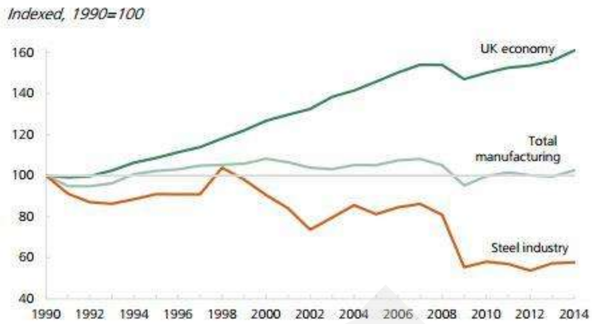


Fig 2 & 3 Source: *www.independent.co.uk*

Extract 1: Niobium the boutique commodity

Applications of niobium have increased steadily over the years. About 90 per cent of niobium is used in the steel industry, primarily in oil and gas pipelines, automobiles, bridges, high-rise buildings and welded pipes. Resistant to corrosion, niobium strengthens and lightens steel. Adding niobium reduces the weight of a car and improves fuel efficiency; it also significantly reduces the amount of cement required in the construction of building and bridge structures.

The growth and evolution of niobium also extend into the field of medicine (magnetic resonance imaging that produce detailed images of the inside of the body), electronics and nanotechnology (e.g. developing quantum computers which can process multiple data simultaneously, with unlimited capacity).

Brazil is the largest producer of niobium in the world; niobium is the country's third most important mineral export. Two firms in Brazil alone make up 92 per cent of global niobium production with Canada producing the remaining 8 per cent. As of 2010, China was the largest consumer of niobium, accounting for 25 per cent of total consumption. This reflects the size and importance of China's steel industry - China was the largest producer of stainless steel, with its share in world production rising from 1-2 per cent in the 1990s to 37 per cent in 2010.

Adapted from "The Evolution of the Niobium Production in Brazil", *Materials Research*, vol. 18 no. 1, Jan/Feb 2015 & *Argonaut Research*, 29 April 2016

Extract 2: The changing niobium landscape

Niobium is hard to find and currently mined in only three places on Earth. 84 per cent of the global supply comes from one company - Companhia Brasileira de Metalurgia & Mineracao (CBMM) in Brazil. London-based Anglo American is the second largest niobium producer in the world and also mines in Brazil. The third niobium producer is Niobec, which mines in Canada.

The demand for niobium remains high due to its use in the production of quality steel. Yet, prices fell last year as slumping oil and gas markets led to fewer metal pipe purchases, according to niobium producer, Anglo American, which wants to cut debt after a collapse in commodity prices. Anglo American is a global and diversified mining business, with a mining portfolio that includes copper, platinum, diamonds, coal, iron ore and manganese, nickel, niobium and phosphates.

Despite the money to be mined in niobium, divestments have taken place in the past few years for considerable compensation. In 2011, CBMM sold a 30-percent stake to Asian steelmakers at US$3.9 billion in two transactions – a consortium of five Chinese steelmakers, and a consortium of Japanese and South Korean companies. In late-2014, Iamgold divested its Niobec mine to a consortium for US$530 million to focus on its core gold mining business. In the most recent transaction, Anglo American announced on 28 April 2016 that it was selling its niobium business in Brazil for US$1.5 billion to China Molybdenum. The company's decision was another step in its quest to sell non-core assets and cut back debt against a backdrop of volatile commodity prices.

Adapted from *The Globe and Mail*, 18 May 2016
& Reuters, 2 September 2011

Extract 3: Chinese steel firms expanding in Africa

China produces too much steel. With 800 million tons of steel a year, the country makes up half of world production in 2014 - adding to the current global glut. Chinese steel is at its lowest price in over a decade and most firms producing the commodity in the country are loss-making as construction slows in the world's second largest economy. Market analysts are not surprised to see China's steel sector shrinking because "a lot of that growth was artificially supported by government subsidies".

But with overcapacity continuing, Chinese steelmakers are exporting a large amount of the metal to other markets at low prices, hurting the sector and prompting trade participants to cry foul on what is perceived as dumping. Yet, instead of shrinking its steel sector, Chinese firms are expanding steel production in Africa. According to a Shanghai-based trade publication, Chinese firms are taking a longer view of Africa's potential given that African steel demand is expected to hit 300m tonnes per year by 2050. African sources of iron ore and basic steel could also give China a more stable supply to feed its industry.

There is a further reason why China has to play the long game in African minerals - Chinese firms use a stick-at-it-strategy because of their newcomer status. In contrast with firms from Britain and France which have roots going back to African countries' colonial days, Chinese firms have had to prove their reliability. They hope that good behaviour during a crisis - even if it loses them money in the short run - will secure them better contracts in the future.

Adapted from *The Economist*, 13 July 2015
& *CNBC.com*, 18 November 2015

Extract 4: UK steel crisis

More than one in six workers in Britain's steel industry is facing the axe after Tata Steel, one of Europe's leading steel manufacturers, confirmed it was cutting almost 1,200 jobs as part of a radical shakeup. The announcement increases pressure on the government over its handling of the crisis.

Britain's steel industry has been battered by falling steel prices, high energy costs, cheap imports and the strength of the pound. Tata said imports of steel plate into Europe had doubled in the past two years and imports from China had quadrupled. The steel crisis threatens severe knock-on effects, with jobs threatened throughout the supply chain for the industry. In addition, many towns with steel plants rely on the sector's skilled workers to spend money in local shops and other businesses.

Karl Köhler, chief executive of Tata Steel's European operations, said "The European commission needs to do much more to deal with unfairly traded imports – inaction threatens the future of the entire European steel industry." Tom Westley, chairman of the UK's Westley Group foundry business, said that in the short run, ministers might need to intervene to save the industry. "When prices of products become so low ... you have to have a longer-term strategy. Perhaps we have got to give some level of subsidy to keep this industry alive and look at it as a national asset rather than [in terms of] costs."

Adapted from *The Guardian,* 20 October 2015

Questions

(a) Account for the trend in global steel prices from 2011-2014. [2]

(b) Explain the decision of niobium producers such as Anglo American to divest its interest of niobium mining. [4]

(c) Explain how "government subsidies" in Extract 3 affect resource allocation in China's steel sector. [3]

(d) Using a demand-supply diagram, explain how "the strength of the pound" would affect the market for steel in the UK. [3]

(e) Discuss the factors which the UK government could consider in deciding whether or not to protect the country's steel industry. [8]

(f) With reference to Extracts 2 and 3, assess whether the move by some Chinese steelmakers to expand steel production in Africa or to buy into the niobium business is a sound strategy. [10]

[Total: 30]

Question 2

Asia's Infrastructure Gap

Table 3: Government Budget Balance (% of GDP)

	2011	2012	2013	2014
Indonesia	-1.1	-1.8	-2.2	-2.2
Philippines	-2	-2.3	-1.4	-0.6
Singapore	1.1	1.6	1.3	0.1

Source: World Bank, accessed 17 July 2016

Table 4: GDP Growth Rates (Annual % change at constant prices in local currency)

	2011	2012	2013	2014
Indonesia	6.2	6.0	5.6	5.0
Philippines	3.7	6.7	7.1	6.1
Singapore	6.2	3.7	4.7	3.3

Source: World Bank, accessed 17 July 2016

Extract 5: Asia faces five challenges to its economic future

Asia faces five challenges as it pursues sustained economic growth: overcoming the middle-income trap, improving its institutions and governance, coping with an aging population, curbing rising inequality, and promoting financial development.

According to Changyong Rhee, the Asia's Director of the International Monetary Fund (IMF), Asia's future growth appears bright but its success is not guaranteed and it depends crucially "on choosing the right policy mix to contain risks and secure growth."

If things slow down more in China than expected, other countries in the region will pay the price. In addition, China's rebalancing from investment towards consumption, gradual appreciation of the renminbi, increased flexibility in rural-urban migration, and other adjustments by the regional powerhouse are opening up opportunities for other developing countries in Asia.

In Japan, there is a risk that Abenomics-related measures could be less effective in boosting growth than envisaged, particularly if structural reforms in labour and product markets fall short of expectations and fail to raise consumer and investor confidence. And domestic and global political tensions could hamper trade or weaken investment and growth across the region.

Source: *International Monetary Fund Survey*, 29 May 2014

Extract 6: Plugging Asia's $11 trillion infrastructure gap

The Asian Development Bank forecasts that Asia needs US$8 trillion (S$11 trillion) in the decade to 2020 to plug the infrastructure deficit. As countries move up the value chain and urban populations expand, demand for transport, logistics and utilities will only continue to grow, increasing the burden on public funds. The World Bank estimates that a 10 per cent increase in capital investment into infrastructure projects contributes to a 1 per cent growth in gross domestic product.

Rising urbanisation in countries such as Indonesia and the Philippines will spur greater need for physical infrastructure and power generation capacity. Indonesia is focusing on mass transit, toll roads and airport development, while the Philippines is developing its ports, expressways and energy projects. Given the massive requirement, the region may still face a funding shortfall even if the newly launched Asian Infrastructure Investment Bank provides annual loans of US$10 billion to US$15 billion for the first five or six years. Better-linked physical and digital infrastructure which promotes the smooth movement of goods and services will edge the 10 members in Asean closer to achieving its goal of seamless regional connectivity.

Source: *The Straits Times,* 31 March 2016

Extract 7: PPPs can help close Asia's infrastructure gap

According to Takehiko Nakao, the Director of Asian Development Bank (ADB), there is a serious lack of infrastructure in Asia and while governments need to increase public infrastructure investment to narrow this infrastructure gap by mobilizing more tax revenues backed by strong enforcement and borrowing from international financial institutions such as ADB, it is also crucial for them to tap on private-resources locally and abroad through public-private partnerships (PPPs).

PPPs are contractual arrangements where a government partners with the private sector to deliver infrastructure services. They can take several forms, from simple contracts for private-sector-run garbage services to more complex build-operate-transfer (BOT) agreements. Under BOT, private parties finance and build infrastructure, then operate it over a fixed period to generate returns before transferring ownership to the government. PPPs are gaining strong foothold in Asia.

Source: http://www.adb.org/news/op-ed, accessed 14 July 2016

Extract 8: Spicing up growth in Indonesia

Indonesia's President Jokowi wants Indonesia to return to 7% annual growth — a rate unseen since the Asian financial crisis of the late 1990s, but not unusual before it. The problem is commodities. The country is the world's leading exporter of palm oil and tin, the second-biggest rubber exporter and the fourth-largest coal producer. Indonesia is also the world's biggest gold mine and third-largest copper mine. When China's hunger for commodities was growing and prices were high, Indonesia boomed. As China slows down, Indonesia too.

Jokowi wants to rebalance Indonesia's economy away from commodities and towards manufacturing. He is optimistic. Indonesia today is the fourth-most-populous country in the world, with a huge, fast-urbanising domestic market and a rising consumer class. Workers are cheap and demography is in its favour: the average manufacturing job costs less in Indonesia than in Thailand and China and its population median age, 29.2, is well below those of Thailand (36.2) and China (36.7). However, foreign investment has stagnated in recent years. Companies spend 50% more on logistics than those in Thailand and twice as much as those in Malaysia. Manufacturing's share of GDP, meanwhile, fell from 29% in 2001 to 24% in 2013.

Jokowi has taken some steps to reverse the slide. He launched a one-stop shop to speed up investment approvals, raised the budget for infrastructure by 53% — the biggest year-on-year increase in Indonesia's history, diverting the savings from the welcome cutting of fuel subsidies to boost infrastructure budget and is seeking foreign investment for infrastructure projects.

But many business people worry that the results will not match the rhetoric. Much of the infrastructure money will go to inefficient, state-owned enterprises. Indonesia has inflexible labour laws and minimum wages have shot up. The number of industries barred to foreign investors has grown steadily, now to include onshore oil extraction and e-commerce. A much-criticised draft law may soon require companies that sell tablets and smartphones to produce up to 40% of their components in Indonesia. Tight immigration rules have cut the number of foreign workers in Indonesia by 16% in three years.

Source: *The Economist*, 9 May 2015

Questions

(a) **(i)** Compare the change in Singapore's budget balance as a percentage of GDP with that of Philippines between 2011 and 2014. [2]

(ii) Explain how economic growth might improve the budget balance. [2]

(b) Explain why it is more likely the government and not the private sector that would finance the provision of infrastructure. [4]

(c) Explain why there might be concern that Indonesia is too dependent on commodities as a key export sector. [4]

(d) Discuss how the rebalancing of China's economy and the gradual appreciation of its currency will impact other developing economies in Asia. [8]

(e) In light of Indonesia's macroeconomic aims mentioned in Extract 8, discuss whether the government should embrace greater market forces and increase the participation of foreign firms in its economic policies. [10]

[Total: 30]

2016 ACJC Prelims

Suggested Answers to H2 CSQ1: The Market for Steel

(a)	Account for the trend in global steel prices from 2011-2014.	**[2]**	*Figure 1 & Tables 1-2*

- **Identify the trend in global steel prices**: declining trend / prices are decreasing
- **Account for the falling prices**: world production of steel always higher than world consumption of steel → supply always higher than demand → accumulation of surplus → downward pressure on prices

Mark scheme:
✓ 1 mark for identifying trend
✓ 1 mark for reason

(b)	Explain the decision of niobium producers such as Anglo American to divest its interest of niobium mining.	**[4]**	*Extract 2*

The decision by Anglo American was largely driven by the motivation to maximise its profits / minimize its losses.

Any 2 reasons, explained:

- Niobium prices are falling and prospects for the industry remain gloomy. This is because demand for niobium is not likely to pick up given the weak demand for steel (Extract 2). As such, selling away its niobium mining business would help Anglo American minimise losses (in revenue and/or profits).
- Fall in commodity prices have also landed Anglo American in heavy debt (Extract 2) due to the losses incurred. Divestment from its niobium business would help the firm reduce risks and exposure to the volatile commodity market, hence helping to cut losses and debt.
- Divestment helps Anglo American to streamline and focus on other areas in its core business. With too many areas of mining to manage, divestment away from a loss-making area such as niobium will help Anglo American improve its revenue and profit.

  (Extract 2: Anglo American has "diversified mining business", including copper, platinum, diamonds, coal, iron ore, manganese, nickel, niobium, phosphates (hint of term 'core business' from "Iamgold divested its Niobec mine … to focus on its core gold mining business").

Mark scheme:
✓ 2 marks for each explained reason = 1 mark for correct identification of reason + 1 mark for explaining

(c)	Explain how "government subsidies" in Extract 3 affect resource allocation in China's steel sector.	**[3]**	*Extract 3*

(Extract 3: China's steel sector - "a lot of that growth was artificially supported by government subsidies".)

- Infer that the subsidy was an export subsidy; even if cannot name it as export subsidy, should identify that subsidy helps steelmakers cover their cost of production & improve export competitiveness (Tables 1&2 also show China's steel production > consumption → hint of exports)
- Subsidy = government fund to help producers cover their cost of production → firms are incentivised to increase supply even with no increase in demand → more resources are channelled (from other industries) to the production of steel → over-allocation of resources into steel industry (excess supply)

Learning point: the export subsidy (protectionist move) shields inefficiency → worsens resource allocation

Mark scheme:

✓ ***2 marks to explain how subsidy has affected resource allocation***

(d)	Using a demand-supply diagram, explain how "the strength of the pound" would affect the market for steel in the UK.	[3]	*Extract 4*

- Correct DD-SS diagram → DD falls, thus represented by a leftward shift in DD curve
- Reason 1: stronger pound → steel exports become more expensive → demand for UK steel falls
- Reason 2: stronger pound → imported steel from China and EU are cheaper substitutes → demand for UK steel falls
- Impact on market for steel → fall in equilibrium price and equilibrium quantity

Mark scheme:
✓ ***1 mark for correct diagram***
✓ ***1 mark for using either reason 1 or 2 to explain impact of strong pound***
✓ ***1 mark for impact on P_e and Q_e***

(e)	Discuss the factors which the UK government could consider in deciding whether or not to protect the country's steel industry.	[8]	*Fig. 2 & 3, Extract 4*

Unpacking/framing:

- Extract 4 sets the context as to why the UK government needs to decide on whether or not to protect the steel industry, i.e. falling steel exports, competition from cheaper steel imports, massive job losses in the steel industry, calls for protection.
- One possible way to structure the answer is to weigh the factors against the macroeconomic goals of the country. It is also possible to work an answer around the AD-AS framework.

Factors to consider:

- **What is the extent of impact of the declining steel industry on the UK economy**?
  - Impact on employment: Extract 4 mentions that Tata Steel, a leading steel manufacturer, is going to cut 1,200 jobs. This makes up 8% of total employment in the UK steel manufacturing (Figure 2 shows total employment at about 16,000). Although this is data for only one manufacturer, it is likely that workers in other steel manufacturers are also suffering the same fate.

    Counter argument: While the threat of losing jobs in the steel industry is daunting, it is worth noting that employment in the steel industry has been declining (from 50,000 in 1990 to 25,000 in 2000 and 16,000 in 2014). This could signal that the industry has not been faring well for a long time. Thus, to protect the industry would continue to hide its inefficiencies and prevent any corrective steps to be taken by companies to improve their competitiveness and sustainability.

  - Impact on GDP: Steel manufacturing is an export industry and a contributor to the country's AD and hence GDP. However, there is no data to indicate how major the contribution of steel exports to UK's GDP is.

    Counter argument: Steel manufacturing is but only one industry in the UK's manufacturing sector. While total manufacturing output (Figure 3) has been languishing and stagnating for many years, the production of steel industry has been falling sharply for a long time – production in 2014 was 40% lower than it was since the peak in 1998. This shows that total manufacturing output (although flat) has not received much boost, if any, from the steel industry. In fact, it could have been the declining steel industry that has been a drag on the overall manufacturing sector.

- **What causes the decline in UK's steel industry?**
  - Unfair competition: UK steel manufacturers face unfair competition from Chinese firms who can sell

at lower prices because of government subsidies (Extract 4: steel imports from China quadrupled)

Counter argument: UK steel exports could have lost its comparative advantage due to its own inability to remain competitive, thus should not totally blame its woes on China's cheaper steel. If the industry is protected, cost inefficiencies may be worsened as steel manufacturing firms do not see the incentive to improve competitiveness.

- **Are there alternatives to protectionism?**
  - Supply-side policies: If it is truly a loss in comparative advantage, protectionism is clearly not an appropriate policy. The government should respond with more appropriate measures to remove inefficiencies, or consider finding new areas of comparative advantage.

Counter argument: However, time and resources are needed when it concerns implementation of alternative policies. In the short term, negative impact of adopting alternative policies may significantly outweigh the benefits which can only be seen in the long term.

Synthesis:

- The impact on employment is likely to be a major factor in government decision, given the large number of workers involved. There is much to be considered if the government were to decide *not* to protect the steel industry, i.e. the issue of re-skilling the workers in the steel industry – cost, time, attitude/ receptiveness of workers to move to alternative industries.
- Given the declining performance in Figures 2&3, it is likely that the steel industry has not been doing enough to stay afloat amidst competition from other countries. Whether or not the government has been doing anything positive in past years to help steel manufacturers stay afloat, it certainly needs to take a closer look at the industry now.
- Protection is not the way to go, but the government can step in to help the industry reform so that it is better-placed to compete in the world. While it must push for inefficiencies to be weeded out (firms streamline, downsize or even close down), it can provide partial funding to help firms innovate and improve their practices, and also help workers upgrade their skills, or even to re-skill so that they are employable in other industries.

Level Descriptors for (e)		*Marks*
L3	*For an answer which* • *well-developed* • *has clear identification of "factors" which government should consider* • *uses relevant examples from extracts to support arguments* • *has minor or no conceptual inaccuracies*	*5-6*
L2	*For an answer which* • *may not clearly identify the "factors" but shows understanding of them in the analysis* • *provides some relevant examples and evidence from case materials* • *has some conceptual inaccuracies*	*3-4*
L1	*For an answer which* • *is largely irrelevant to the question* • *has only a brief explanation without economic analysis* • *contains major conceptual inaccuracies*	*1-2*
E2	*Well-explained/supported judgement on which factor(s) may be more significant or most*	*2*

	significant in helping the government decide on whether to protect	
E1	*Attempt to evaluate but did not make further judgement*	***1***

(f)	With reference to Extracts 2 and 3, assess whether the move by some Chinese steelmakers to expand steel production in Africa or to buy into the niobium business is a sound strategy.	[10]	*Extracts 2-3*

Unpacking/framing:

- The question of "sound strategy" suggests that the actions by Chinese steelmakers may not make much business sense.
- Expanding one's business, in this case via horizontal and vertical integration, is a common strategy to increase profits, either by raising revenue or lowering costs. The debate on "soundness" of strategy, however, comes into the question because of the context of gloomy outlook for the steel and niobium industries.

<u>Thesis: The move by Chinese steelmakers may not be a sound strategy in the short term</u>

- Steel industry is in a glut (over-production + weak demand). That is why steel prices are falling and profit of steelmakers are being hurt. Expanding steel production when the industry is already experiencing excess capacity would further exert downward pressure on steel prices, hence possibly causing the Chinese steelmakers to incur even greater losses.
- Niobium prices are also falling (derived demand for steel). Investing into the niobium business when prices are falling would mean poor/falling revenue and profits (or even losses) until and unless the industry recovers. This is dependent on the recovery of the steel industry since the majority of niobium is demanded for steel production (Extract 1).
- Investments into niobium mines or steel production are being made at high prices. Incurring these high costs at a time when outlook is gloomy would mean that the investment could take a very long time to break even where revenue earned is sufficient to cover costs incurred (normal profits). In the meantime, the Chinese investors are sitting on high-risk investments.

<u>Anti-thesis: Expanding into Africa or buying into niobium business is a sound strategy for the long term</u>

- Since niobium is an input in steel production, buying into niobium business helps ensure stable supply and good pricing for steelmakers who also own a niobium business. Chinese steelmakers who bought into the niobium business will thrive when the steel industry, and in turn the niobium industry, recovers in future.
- Chinese steelmakers who are expanding steel production in Africa are hoping to get a head start when demand picks up, especially in Africa ("taking a longer view of Africa's potential given that African steel demand is expected to hit 300 mn tonnes per year by 2050"). This is a long-term, forward-looking decision to buy in when the market is weak so that significant gains can be reaped when demand in Africa rises, which will then raise prices and hence revenue as well as profits.

<u>Synthesis</u>:

- Expanding steel production in Africa may be a sound strategy for Chinese steelmakers – it will offer them alternatives of lower-cost production plants (given that Africa is less developed than China and would be cheaper to operate in/from) in the event that China's government removes its export subsidies in future.
- If Chinese steelmakers are cash rich and have accumulated supernormal profits from good years, they can afford to sit out the gloomy outlook for both the niobium and steel industries. Hence the decision is a sound one, despite it appearing to be costly and risky at this point in time. After all, buying into these businesses during good times could cost them even more. So, in comparison, their current buys could

	Level Descriptors for (f)	*Marks*
L3	*For an answer which* • *has an accurate and well developed thesis and anti-thesis* • *has a developed discussion on both strategies* • *provides relevant examples from extracts to support arguments* • *has minor or no conceptual inaccuracies*	***7-8***
L2	*For an answer which* • *is balanced but underdeveloped* ***OR*** • *is well explained but not balanced (one-sided argument)* • *developed but discussed only one strategy, i.e. "expand steel production in Africa" **or** "buy into niobium business"* • *provides some relevant examples from the extracts* • *has some conceptual inaccuracies*	***4-6***
L1	*For an answer which* • *is largely irrelevant in answering the question* • *has only a brief explanation without economic analysis* • *contains major conceptual inaccuracies*	***1-3***
E2	*Well-supported judgement on whether the Chinese steelmakers' decisions were sound*	***2***
E1	*Attempt to evaluate but did not make further judgement*	***1***

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Suggested Answers to H2 CSQ2: Asia's Infrastructure Gap

(a)	(i)	**Compare the change in Singapore's budget balance as a percentage of GDP with that of Philippines between 2011 and 2014.**	**[2]**

- Singapore was experiencing a budget surplus while Philippines was experiencing a budget deficit between 2011 and 2014.
- Singapore's budget surplus as a percentage of GDP has worsened while Philippines's budget deficit as a percentage of GDP has improved.

Mark scheme:
✓1 mark for each observation

	(ii)	**Explain how economic growth might improve the budget balance.**	**[2]**

- Government's tax revenue from personal and corporate income tax will automatically increase when wages and profits rise due to economic growth **OR**
- If economic growth is a result of rising AD against a non-increasing AS, the risk of demand-pull inflation will prompt the government to adopt a budget deficit where government expenditure is reduced to lower inflationary pressures **OR**
- The government may distribute lesser unemployment benefits as more people get employed, hence reducing welfare spending.

Mark scheme:
✓2 marks for each explained reason pertaining to either a change in G or T

(b)	**Explain why it is more likely the government and not the private sector that would finance the provision of infrastructure.**	**[4]**

- Infrastructure such as ports, mass transit and toll roads (Extract 6) are merit goods deemed by the government as socially desirable and would be under produced by the private sector in a free market. The production of infrastructure also generates positive externalities in the form of economic growth due to better-linked physical and digital infrastructure increasing efficiency in transporting goods and services within and across countries (Extract 6) **OR** explanation of infrastructure being a public good.
- The provision of infrastructure involves high fixed cost and the private sector may not have the financial ability to do so (Extract 6: Even with the newly launched Asia Infrastructure Investment Bank, Asia may still suffer from a lack of funds). Therefore, the government must step in to provide the funds needed (Extract 7: Governments must utilize more tax revenue in raising public infrastructure investment).

Mark scheme:
✓2 marks to explain infrastructure being a merit good whose production generates positive externalities OR 2 marks to explain infrastructure being a public good
✓2 marks to explain why public funds are needed to finance infrastructure provision

(c)	**Explain why there might be concern that Indonesia is too dependent on commodities as a key export sector.**	**[4]**

- By depending on commodities as a key export sector, Indonesia's export revenue is constantly subjected to commodity price fluctuations (Extract 8). With China reducing its demand for Indonesia's commodities, commodity prices are expected to continue falling and this will reduce export revenue further.

- Compared to manufacturing and tertiary industries, commodities offer a much lower value-addedness, hence contribution to economic growth. If Indonesia wants to reverse its declining economic growth rate (Table 3) and achieve its targeted 7% annual real GDP growth, it needs to shift its export focus from commodities to manufacturing (Extract 8).

Mark scheme:
✓2 marks for each explained reason with reference to extracts and/or data

(d)	**Discuss how the rebalancing of China's economy and the gradual appreciation of its currency will impact other developing economies in Asia.**	**[8]**

Unpacking/framing:

- China is rebalancing her economy from investment-led to consumption-driven growth and appreciating the renminbi at the same time (Extract 5).
- This would have effects on the trade balance of other developing economies in Asia such as Indonesia and Philippines. The changes in trade balance would then affect the country's macroeconomic aims.

Thesis: The rebalancing of China's economy and the gradual appreciation of its currency should benefit most developing economies in Asia.

- Despite slowing economic growth in recent years, rising household income has caused Chinese households to demand for goods and services of higher quality and variety.
- As China rebalances its economy, consumption is expected to continue rising. If domestic firms in China are not able to address the needs of Chinese households, consumers may turn to import from other developing economies in Asia, thus increasing X and AD in these countries, hence raising economic growth and jobs creation. The increase in export revenue would also improve the current account balance, assuming no change in import expenditure.
- The appreciation of the renminbi would make China's exports dearer in foreign currencies. Consumers who previously import from China may now switch to importing from other countries as their exports are now relatively cheaper. If demand is price elastic, the more than proportionate increase in quantity demanded will lead to an overall increase in export revenue, hence further raising AD and thus growth as well as jobs creation.

Anti-thesis: However, the rebalancing of China's economy and the gradual appreciation of its currency may negatively impact some developing economies in Asia.

- As China reduces dependence on investment-led growth, demand for capital goods and primary commodities meant for infrastructure production such as coal and copper could fall. This would reduce export revenue for commodity exporting countries such as Indonesia (Extract 8). AD falls and reduces real GDP growth (Table 1: Indonesia) through the reverse multiplier process. In addition, a worsening of current account balance could result as net export earning falls, assuming no change in import expenditure.
- It takes time for China to rebalance its economy. Shifting from investment-led growth to consumption-led growth may cause the economy to slow down as consumption is unable to increase immediately to make up for the fall in investment. This may then reduce economic sentiment which can reduce consumption, thus going against rebalancing in the short term. The fall in consumption may include a smaller demand for imports, thus reducing the export revenue of other countries.
- As mentioned previously, the appreciation of the renminbi would make Chinese exports dearer in

foreign currencies. For developing countries in Asia that import primary or intermediate goods from China, they will therefore suffer from imported inflation. The rise in cost of production causes SRAS to decrease, prompting firms to pass on higher costs to consumers in the form of higher prices.

Synthesis: Whether other developing economies in Asia would benefit from China's rebalancing depends on the following factors -

- Type of exports → Countries which export capital goods and commodities meant for infrastructure development e.g. Indonesia will be more negatively affected than countries which export manufactured goods such as Vietnam and Thailand.
- Time period → The rebalancing of China's economy is likely to pose more challenges in the short term. It takes time for China to rebalance its economy. Hence, the benefits would likely be reaped only in the long term.
- Government's response in the form of mitigating policies → To reduce negative impact in the form of falling export demand and imported inflation, governments can implement policies especially in the short term.

Level	Descriptors	Marks
3	• Balanced & sufficiently developed analysis of how other developing economies in Asia are affected • Strong conceptual mastery shown in the use of AD/AS framework • Making some reference to case study	5-6
2	• Balanced but underdeveloped analysis **OR** • One-sided but developed analysis • Some use of economic reasoning / concepts	3-4
1	• Largely irrelevant to answering the question • Answers has major conceptual inaccuracies • Descriptive answer with no economic analysis	1-2
E2	Reasoned judgement with the use of criteria such as type of exports and time period	2
E1	Attempt to evaluate but did not make further judgement	1

(e)	**In light of Indonesia's macroeconomic aims mentioned in Extract 4, discuss whether the government should embrace greater market forces and increase the participation of foreign firms in its economic policies.** **Unpacking/framing:** • Indonesia is trying to rebalance its economy from commodities-led growth to	**[10]**

manufacturing-driven growth in order to reverse its declining real GDP growth (Table 1) and achieve its target of 7% annual real GDP growth. Indonesia also faces the pressure of creating sufficient jobs for its young workers.

- To achieve these macroeconomic aims, an increase in both AD and AS is required, which can be facilitated by embracing greater market forces and allowing entry of foreign firms.
- Embracing greater market forces is a type of structural reform where government intervention is reduced to improve efficiency of markets in allocating resources. In Indonesia, labour market reforms are urgently needed to address rigidities caused by inflexible labour laws, minimum wages and tight immigration rules (Extract 8).
- Also a type of structural reform, increasing the participation of foreign firms has the aim of raising competition among firms, hence improving competitiveness and expanding the country's productive capacity in the long run. Currently in Indonesia, FDI is barred from entering certain industries (Extract 8).

Thesis: Embracing greater market forces and increasing participation of foreign firms can help support the rebalancing of Indonesia's economy. In addition, it helps reverse the decline in FDI, hence increasing both actual and potential growth as well as employment.

- Removal / reform of inflexible labour laws:
  - Aim is to achieve greater efficiency in allocation of workers across industries.
  - Demand for workers is likely to rise in manufacturing industries as Indonesia pushes ahead with rebalancing.
  - By allowing workers to move freely from commodities to manufacturing industries, the greater supply of manufacturing workers will help ease upward pressure on wages. This strengthens Indonesia's cost competitiveness in manufacturing (Extract 8), thus raising SRAS and hence economic growth as manufacturing takes a larger share of the country's GDP.
- Removal of minimum wages:
  - Aim is to reduce labour cost and raise employment.
  - Minimum wages has resulted in a surplus of workers who are willing to work but not being employed by firms currently.
  - The removal of minimum wages will help increase employment and reduce cost of production for labour-intensive firms. This increases SRAS and improves Indonesia's competitiveness, thus increasing economic growth.
- Loosening of tight labour immigration rules:
  - Aim is to reduce shortage of semi-skilled workers in manufacturing industries.
  - With most workers working in commodities industries previously, the lack of semi-skilled workers may cause wages to rise.
  - For instance, there are sectors where firms are required to produce up to 40% of their components in Indonesia before being able to sell them. However, despite the lower wages offered by Indonesia, foreign firms have not been keen to set up production bases, perhaps due to the lack of semi-skilled workers domestically (Extract 8).
- FDI has been declining despite lower wages offered to manufacturing firms. This is likely due to poor infrastructure which can be inferred from Indonesian firms having to spend more on logistics compared to firms in other countries (Extract 8). Therefore, to reverse the decline in FDI, Indonesia should increase infrastructure spending.
  - To avoid wasting budget resources on inefficient local firms, the government should tap on public-private partnerships (PPPs) where private firms, both local and foreign, partner the government in delivering infrastructural services (Extract 7). This allows the most efficient firm to be commissioned and increases both AD and AS, achieving actual and potential growth.

Anti-thesis: However, embracing greater market forces and allowing participation of foreign firms may hinder Indonesia in achieving its macroeconomic aims.

- Structural unemployment may happen if the Indonesian government does not provide skills training for workers who do not have the skills to shift from commodities-exporting sector to manufacturing industries. This could worsen once foreign workers are allowed to enter and compete with the local workers. Material SOL of local workers may fall as wage decreases due to increase in supply of foreign workers.
- By increasing participation of foreign firms, inefficient domestic firms may end up shutting down due to the lack of protection. This can lead to massive unemployment especially in the short term which may then explain the government's decision to bar FDI from entering industries such as onshore oil extraction and e-commerce (Extract 8). However, competition can help to raise efficiency of firms and benefit the economy in the long term.
- Minimum wages may have been implemented to protect the income of lower-skilled workers. Removal of minimum wages may worsen income inequality and SOL.

Synthesis: To successfully rebalance, Indonesia should embrace greater market forces and increase participation of foreign firms.

- However, mitigating policies should be implemented, especially in the short term where workers may face structural unemployment and rising income inequality due to greater competition in the labour market. This therefore requires the government to implement supply-side policies such as skills training to reduce the risk of workers being structurally unemployed.
- Ultimately, the government should weigh the costs and benefits of pursuing these structural reforms. Although there will be pains in the short term, Indonesia should press on with embracing greater market forces and increasing participation of foreign firms in view of the long term benefits generated on the economy.

Level	Descriptors	Marks
3	• Balanced & sufficiently developed analysis on why Indonesia should adopt structural reforms in the form of embracing greater market forces and increasing participation of foreign firms. • Strong conceptual mastery shown in the use of AD/AS framework with good linkages drawn to how the 2 approaches help Indonesia achieve its macroeconomic aims. • Provides relevant examples from extracts to support arguments.	6-8
2	• Balanced but underdeveloped analysis **OR** • One-sided but developed analysis. • Some use of economic reasoning / concepts but answer is not able to fully explain why the two structural reforms are needed. • Provides some relevant examples from the extracts.	4-5

1	• Largely irrelevant to answering the question. • Answers with major conceptual inaccuracies. • Descriptive answer with no economic analysis to support.	1-3
E2	Reasoned judgement with the use of cost-benefit analysis.	2
E1	Attempt to evaluate but did not make further judgement.	1

ANGLO-CHINESE JUNIOR COLLEGE

2016 JC2 PRELIMINARY EXAMINATIONS

Anglo-Chinese Junior College
25 Dover Close East Singapore 139745 Tel: 6775 3511 Fax: 6771 5479

ECONOMICS **9732/02**

Higher 2 25 August 2016

Paper 2: Essay Questions 2 hours 15 minutes

Additional materials: Writing 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.

Begin each question on a **fresh** 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, 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 **3** printed pages.

Answer **three** questions in total.

Section A

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

1. Crude oil can now be extracted out of the ground at a lower cost of production. In addition, global economic activity has been contracting as a result of the slowdown in China's economy. This has resulted in crude oil prices falling by more than 50% in the second half of 2014.

(a) Explain the likely effects of cheaper crude oil on the market for natural gas and the market for refined oil. [10]

(b) Discuss the relative significance of demand and supply factors in determining whether a fall in price of crude oil will be persistent. [15]

2. Singapore's new satellite-based electronic road-pricing (ERP) system will have island-wide coverage and the ability to charge for distance travelled by different types of vehicles.

Assess the view that a system of road-pricing is the best way to tackle the problem of worsening traffic congestion in Singapore. [25]

3 Successful firms are able to identify the growing trends of new shopper segments and use new technologies to provide an engaging and seamless shopping experience, in both online and offline spaces.

Nielsen Insights, 29th April 2015

(a) Explain how technological advancement may improve profits of firms. [10]

(b) In light of technological advancement, discuss whether more markets are likely to be oligopolistic. [15]

Section B

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

4. Household savings in 2014 as a proportion of the country's GDP was 24% for Singapore and 4.8% for USA.
OECD Economic Outlook 2014

Assess the economic case for raising household savings in a country. [25]

5. (a) Explain why low unemployment is one of the macroeconomic objectives for Singapore. [10]

(b) Assess whether the policies adopted by the Singapore government to maintain low rate of unemployment remain relevant in view of the challenges faced by the economy. [15]

6. (a) Explain what might cause a deficit on a country's balance of payment on current account to worsen. [10]

(b) Discuss whether currency depreciation or reducing government spending is a more effective policy for a country faced with worsening current account. [15]

ACJC Preliminary Examination 2016
Economics H2

Paper 2 Answers

1. **Crude oil can now be extracted out of the ground at a lower cost of production. In addition, global economic activity has been contracting as a result of the slowdown in China's economy. This has resulted in crude oil prices falling by more than 50% in the second half of 2014.**

a) **Explain the likely effects of cheaper crude oil on the market for natural gas and the market for refined oil.** **[10]**

b) **Discuss the relative significance of demand and supply factors in determining whether a fall in price of crude oil will be persistent.** **[15]**

Part (a)

Approach

- Recognition that there are two separate markets involved, and the likely effects should differ between the markets though the same economic framework is used. For each market,
    - Economic relationship between crude oil and the other product should be identified
    - Explaining why demand and/or supply will change as a result of a fall in price of crude oil
    - Using elasticity concepts (where appropriate) to justify the extent of change in demand or quantity demanded
    - Pointing out the changes in equilibrium price and quantity of the product with a brief explanation of the price adjustment process

Introduction

- A fall in price of crude oil will lead to different effects on the markets for natural gas and refined oil, due to the different economic relationships that crude oil has with these products.
- Whilst the equilibrium price and quantity of natural gas will fall arising from a fall in demand as a result of cheaper crude oil; in the market for refined oil, there is likely to be an increase in equilibrium quantity accompanied with a fall in equilibrium price due to an increase in supply. Assume ceteris paribus condition holds.

Body

Market for natural gas

- Natural gas and crude oil are substitutes as energy sources.
- If crude oil is cheaper, than quantity demanded for crude oil as a source for energy will increase. This will result in a ***fall in demand for natural gas*** as a source for energy as producers switch from using natural gas to crude oil. (change in price of related goods)
- Extent of fall in demand for natural gas will depend on ***XED***. Given that they are relatively close substitutes, XED is likely to be ***positive and large***. Hence there will be a large fall in demand for natural gas due to the fall in price of crude oil.
- When demand for natural gas falls, the quantity supplied would exceed the quantity demanded at the original price, resulting in a surplus. This creates a downward pressure on price. Hence ***price adjusts downwards to clear the market***.
- Overall as demand for natural gas falls, equilibrium price and quantity of natural gas will fall. This is illustrated in the diagram below.

Price

SS

P_0

Market for natural gas

P_1

DD_1 DD_0

Quantity

Q_1 Q_0

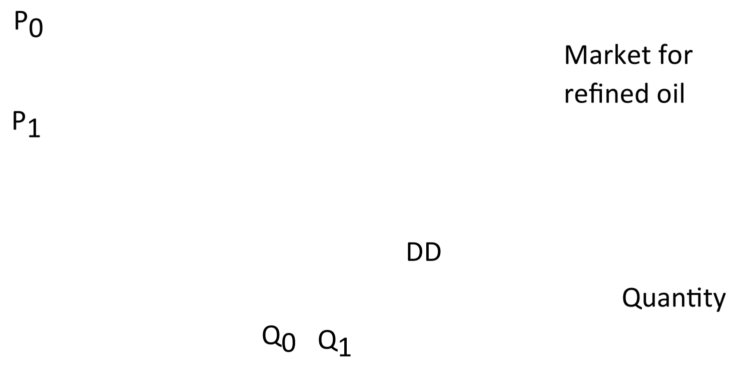
Market for refined oil

- Refined oil uses crude oil as an input for its production.
- If crude oil is cheaper, then costs of production of refined oil falls as a result. This will result in an ***increase in supply of refined oil***.
- When supply of refined oil increases, quantity supplied exceeds quantity demanded at the original price, creating a surplus. This creates downward pressure on price, which then adjusts accordingly to clear the market. As price falls, quantity demanded also increases since more consumers are willing to pay for the refined oil.
- In effect, an increase in supply of refined oil will lead to a ***fall in equilibrium price and an increase in equilibrium quantity*** as illustrated in the diagram below.
- The extent of increase in equilibrium quantity is likely to be small given that demand for refined oil is likely to be price inelastic. This is because refined oil is used as an input of production in many goods and services, such as fuel for cars.

SS_0

Price

SS_1



Ideally, two demand and supply diagrams for both markets should be drawn to illustrate the changes to equilibrium price and quantity.

Conclusion

- For both markets, there is a fall in equilibrium price due to cheaper crude oil. But whilst there is an increase in equilibrium quantity for refined oil, equilibrium quantity of natural gas would fall as a result of cheaper crude oil.

Mark Scheme

Knowledge, Understanding, Application and Analysis		
Level	*Descriptors*	*Marks*
L3	• Clear, accurate and comprehensive use of demand and supply analysis (shifts and elasticity concepts) in explaining how cheaper crude oil would affect BOTH markets for natural gas and refined oil • Price adjustment process is briefly referred to in the explanation.	7 – 10
L2	• Demand and supply analysis is used to explain the impact of cheaper crude oil on both markets, but is not very clear or accurate at times. • No mention of the price adjustment process • Answer more on one market only	5 – 6
L1	• Essay contains many conceptual inaccuracies. Examples include price affecting demand and not quantity demanded, or a fall in demand causing a fall in supply.	1 – 4

Part (b)

Approach

- Unpacking the context (market for crude oil) and the criteria used to anchor the question (**persistence** in the fall in price of crude oil).
- Explanation of both demand and supply factors leading to a fall in price of crude oil, with reference to the stem provided, and contextual knowledge where appropriate.

- Comparison of the significance of both demand and supply factors in determining whether this fall in price of crude oil will be persistent by considering the nature of the factors and the likelihood of outcomes.

Introduction

- The market for crude oil is rather volatile considering that there are many countries that produce it and rely on it to generate national income, such as Saudi Arabia or Venezuela. Any shocks to supply will definitely affect the price of crude oil. Recent developments, such as technological advancement or the lift in sanctions for Iran in exporting oil, have and will continue to affect the market for crude oil. Hence given the importance of the crude oil market, it is crucial to look at future changes in the price of crude oil.
- To determine whether the fall in price of crude oil is persistent, one might consider the likely changes in demand and supply of crude oil in the future. ***Two key questions***:
    - Will supply of crude oil continue to increase in the future?
    - Will demand of crude oil continue to fall in the future? If not, will the increase in supply of crude oil exceed the increase in demand for crude oil?
- ***Given that supply factors tend to be more structural in nature as opposed to demand factors, it is likely that a continued increase in supply of crude oil will outweigh the changes in demand of crude oil, leading to the persistent fall in price of crude oil.***

Body

Development 1: Explaining possible demand factors leading to a change in price of crude oil

- **Changes in income**:
    - Contraction in global economic activity implies that global national income may be falling or rising less quickly. As crude oil is required as an input for production for many goods/services, and since demand for many of such normal goods/services with positive YED is falling, this will lead to a fall in demand for crude oil (Derived demand). Crude oil is a normal good in itself, and hence demand will fall when income falls.
- **Changes in tastes/preferences:**
    - The use of renewable fuels, such as LNG or biofuels, are gaining traction due to the growing need to reduce carbon emissions and slow the speed of global warming. Producing renewable fuels are more environmentally friendly and generate less carbon emissions as opposed to the production/extraction of crude oil. Since renewable fuels are alternative energy sources to crude oil, the change in preferences/tastes towards use of renewable fuels implies that there is a likelihood that demand for crude oil might begin to stagnate, or even fall in the future as demand for renewable fuels increases.
- **Changes in price of related goods**
    - With advancing technology in the production of renewable fuels, the price of renewable fuels is likely to fall further. As a result, this will also cause the demand for crude oil to decrease since crude oil and renewable fuels are

substitutes as mentioned before. The extent of fall in demand for crude oil would depend on its XED with respect to price changes of renewable fuels. XED is likely to be quite large in value given the high degree of substitutability between crude oil and renewable fuels as sources of energy. Thus the fall in demand of crude oil could be quite large.

Development 2: Explaining possible supply factors leading to a change in price of crude oil

- **Technological advancements**
  - As technology advances, new techniques to extract crude oil has been developed. Examples include Fracking, hydraulic fracturing and horizontal drilling techniques. These techniques are cheaper than the original methods of extracting crude oil, hence there is a fall in cost of production.
- **Number of crude oil suppliers**
  - There is an increase in the number of crude oil suppliers across the world. Examples include Iran where oil sanctions were lifted recently, increased oil production by Iraq after decades of economic sanctions and wars.
- **Strategies adopted by OPEC in responding to increased competition**
  - Saudi Arabia decided to maintain crude oil production, so as to protect their market share. In doing so, it hoped that this would drive prices low enough and cause the new suppliers to be driven out of the market because of the losses it began to incur. However, this did not happen as the techniques used by new suppliers allowed them to produce at a very low cost.

Development 3: Weighing the relative significance of demand and supply factors in determining whether the fall in price of crude oil will be persistent

- **Structural (long-term) nature of supply factors supporting the argument that supply of crude oil will continue to increase into the future**
  - Future technological advancements in the production of crude oil will lead to further decreases in COP.
  - Iran is here to stay as an oil supplier in the market for crude oil.
- **Cyclical nature of supply factors supporting the argument that supply of crude oil could decrease in the future**
  - There is the possibility of supply shocks (examples include conflicts in the Middle East or an abrupt cut in the production of crude oil by OPEC) that might cause supply of crude oil production to fall drastically.
- **Cyclical nature of demand factors supporting the argument that demand for crude oil will likely rise in the future**
  - Given the cyclical nature of global economic activity, national income across countries are likely to rise in the near term, hence the fall in demand for crude oil is likely to be temporary. Since crude oil is considered a necessity in the production of many goods, YED is likely to be positive (normal good) and small. Thus even as income rises, the rise in demand for crude oil is still likely to be relatively small given YED is small in value.

- **Structural (long-term) nature of demand factors supporting the argument that demand for crude oil will continue to fall in the future**
    - Due to accelerating climate change, there might be increased pressure on countries to reduce carbon emissions. As a result, more government policies might be directed towards the pricing of carbon emissions. This might further reduce the demand for crude oil in the future.

Further Reference: http://www.vox.com/2016/1/12/10755754/crude-oil-prices-falling

Synthesis (Making a reasoned judgment and reconciling both sides of the arguments)

- Whilst there are both demand and supply factors that point to the possibility of price of crude oil rising in the future, these factors tend to be cyclical in nature, and also more uncertain. It is plausible that conflicts in the Middle East might cause a supply shock, or that there would be a global economic recovery, however this has yet to be observed in economies due to the severity of the economic problems leading to a prolonged slump. In addition, economic powerhouses such as China are likely to see further slowdown in their economic growth, crimping demand for crude oil
- This contrasts with the other demand and supply factors that point to the possibility that the fall in price of crude oil will be persistent. These factors are structural in nature and are more likely to continue into the future.
- Thus even though supply factors tend to be more structural in nature, there are also crucial demand factors, which are structural in nature, that suggests that demand of crude oil is likely to fall in the future. Hence the fall in price of crude oil is likely to be persistent.

Knowledge, Understanding, Application and Analysis		
Level	*Descriptors*	*Marks*
L3	• Clear unpacking of the term "persistent" in relating to the fall in price of crude oil • Accurate and precise explanations of both demand and supply factors leading to a fall in price of crude oil. These explanations are supported well by good use of real-world examples • Clear argumentation in weighing different demand and supply factors in determining whether the fall in price of crude oil is persistent, possibly with reference to criteria such as nature of factor	9 – 11
L2	• Some understanding of the term "persistent" in relating to the fall in price of crude oil is demonstrated, but it is not very clear. • Underdeveloped explanations of both demand and supply factors leading to a fall in price of crude oil **OR** developed explanation of either demand or supply factors. • Some attempt to weigh the different demand and supply factors, but argumentation is weak.	6 – 8
L1	• Incorrect understanding of the term "persistent" in relating to the fall in price of crude oil. • Essay is irrelevant in many parts. • Essay contains many conceptual inaccuracies, including demand and supply factors.	1 – 5

Evaluation		
Level	*Descriptors*	*Marks*
E2	• An evaluative discussion on the relative significance of demand and supply factors in determining whether the fall in price of crude oil is persistent. • Essay synthesizes several arguments and makes a reasoned judgment on whether this is a persistent fall. *Eg. Essay considers the nature of demand and supply factors, and weighs the different arguments before concluding that the fall in price of crude oil is likely to be persistent and this is not solely because of supply factors being structural in nature, but also (structural) demand factors that point towards a falling demand of crude oil in the future.*	3 – 4
E1	• Judgments are made, but they remain largely unsubstantiated. *Eg. Essay recognizes that both demand and supply factors are significant in determining whether the fall in price of crude oil but does not argue clearly why.*	1 – 2

2. **Singapore's new satellite-based electronic road-pricing (ERP) system will have island-wide coverage and the ability to charge for distance travelled by different types of vehicles.**

   Assess the view that a system of road-pricing is the best way to tackle the problem of worsening traffic congestion in Singapore. [25]

Approach

- Brief explanation as to why traffic congestion is an example of market failure.
- Brief explanation of possible factors leading to worsening traffic congestion in Singapore (consideration of context mentioned in the question)
- Explanation and evaluation of road-pricing system (eg. use of ERP) in tackling worsening traffic congestion
- Considering any two other methods as solutions, in terms of their strengths over road pricing and possible limitation.
- Weighing the various arguments and coming to a reasoned conclusion as to the best way, by pointing back to the factors/root causes leading to worsening traffic congestion.

Introduction

- In land-scarce, there are constraints to how much land can be used for road development. With rising standard of living and high-capacity living, traffic congestion is an unavoidable problem in Singapore even with decades of traffic management policies in place.
- Demand for road space has grown faster than the supply of it. Due to shortage, there is a need for market forces to operate to clear the market.

Explaining market failure of traffic congestion

- Market failure is the situation in which the price mechanism does not bring about efficient allocation of resources and the welfare of society is not maximized. In the case of traffic congestion, the ***condition of too many cars on the road is a representation of market failure because it brings about welfare loss to society***.
- Cost-benefit analysis can be used to explain why traffic congestion is an example of market failure
  - Presence of negative externalities generated from road usage. Examples include pollution due to carbon emissions, or longer journey times for other drivers on the road
  - Divergence of MPC and MSC leads to too many cars being on the road (traffic congestion) as ***drivers do not take into account the negative externalities generated by the usage of their car***.
  - Existence of welfare loss (loss in productivity; quality of life)
- Brief explanation of possible factors leading to worsening traffic congestion in Singapore *(Note: Students could pick one or two to explain briefly)*

- Increasing affluence, so more households might be buying cars (demand for cars and hence car usage increases)

- Increasing population due to lax immigration policies in the early 2010s. This increases the demand for cars, especially amongst expats.

- Public dissatisfaction with public transport due to increasing incidence of breakdowns in the train network and highly crowded buses/trains. This change in tastes/preferences increases the demand of alternative modes of transport besides bus/trains, such as cars and taxis.

- Lower prices of fuels due to the drastic fall in price of oil.

- Current policies could also be ineffective in curbing traffic congestion in Singapore. (Eg. Whilst the cost of owning a car is high, the cost of driving is comparatively lower)

Note: Students should only explain the critical ideas as to why traffic congestion is an example of market failure, since it is not the focus of the question. There is no need to draw the cost-benefit diagram to illustrate, since it could be drawn later to explain how road-pricing could solve the problem of traffic congestion.

Thesis: A system of road pricing would help to tackle the problem of worsening traffic congestion as it makes road users internalise the external cost of using road space. Different prices could also be charged depending on variable shortage conditions.

- ERP is an electronic toll collection scheme to manage the traffic by way of road pricing. It is a usage-based system.
- Cars have to pay tolls when they pass by ERP gantries, located at roads leading into the Central Business District and expressways

- ERP charges vary from place to place and between peak and off peak times, since extent of congestion also depends on the time of day and the location. If the road is more congested, ERP charges tend to be higher to alleviate the congestion as the demand for these roads are likely to be more price inelastic than other roads. These roads tend to be heavily used, and there are few alternative routes.

- Since the congestion is heavier on these roads, there could also be a larger extent of negative externality generated by using those particular roads (eg. More man-hours lost due to time spent on the road).

- Imposing charges on roads will make users internalise the external cost of their decision to drive by ***increasing their MPC.*** As a result, less users might decide to drive. The appropriate amount of fee to charge if the government aims for Q_S level of traffic would be equal to the amount of MEC at quantity Q_S (illustrated in the diagram as the length AD).

- With technological advancement, satellite technology could be employed to charge drivers a price for each km travelled with different prices for different roads and for different times of the day, perhaps mentioning automatic number plate recognition systems could be employed too.
- One significant benefit of this new system is that there is ***finer differentiation of the charges***, so drivers are more likely to weigh their benefits against costs of driving on the roads at any one time.
- With finer differentiation of charges, more tax revenue can be collected through this system of road-pricing using satellite technology as compared to the current system using ERP gantries. (*similar idea to price discrimination*)

Antithesis 1: However road pricing as a solution could possibly be limited in its appropriateness due to government failure or the unintended consequences it could bring about for the economy.

- ***Inadequate information*** means that the government may set an inappropriate price for using roads. This could imply that the price doesn't reflect the true cost of congestion. If road charges are set too low, then traffic congestion persists as many drivers continue to use the roads, since they are unconcerned with the charges which may constitute a low proportion of their income.
- If road charges are set too high, then this could affect the economy negatively as ***transport costs*** rise possibly leading to higher prices of products. Cost push inflation may arise, as SRAS decreases owing to higher costs in distribution.
- Government policy could also be affected by public opinion and the reactions of voters and this might cause government failure.
- In relation to the satellite-based ERP system, a major drawback is that the tax is no longer salient to the road user. The road user may continue to use the roads nonchalantly because he is not mindful of the charges he incurs. Thus the internalisation of external cost may not be as effective due to the loss in salience.

Antithesis 2: There is a need for other methods to tackle the problem of worsening traffic congestion in Singapore. These methods could include the development of the public transport system which reduces the demand for cars, and reducing the number of COE quotas which increases the costs of owning a car.

1. **Development of public transport system as quality and affordable alternatives**

- The development of urban public transport provides an alternative to vehicle usage, thus reducing demand for private transport.
- If the public transport network is more reliable and extensive, helping to transport people from place to place quickly, this will increase the benefit to individuals of taking public transport, instead of driving on the roads. It will reduce the reliance on

cars as a mode of transportation. Hence demand for cars decreases, implying that the MPB (private demand) curve for private vehicles is likely to shift leftward. Market equilibrium output can be reduced towards the socially efficient output.

- In developing the public transport system, there are many possible measures:
    - Construction of new MRT lines will improve the connectivity of the rail network in Singapore and increase the substitutability between trains and cars in getting from one destination to another. Example: the opening of the Circle Line in 2009 and Downtown Line phase 1 in 2013 and phase 2 in Dec 2015
    - The Singapore government has decided to nationalise bus and train assets so that the companies SBS and SMRT could focus on improving service quality and frequency, such that the experience of using public transport is enhanced, thus increasing the substitutability (XED value) between public and private transport. Demand for cars can fall by a greater extent as a result due to changing preferences or a fall in price of public transport (eg. Free MRT rides). In addition, demand for private transport could become more price elastic, thus making the policy of road pricing more effective.

- As an extension of public transport development, the government may also make public transport cheaper for commuters through rebates. An example is the Travel Smart Rewards scheme which rewards public transport users with 1 point for every 1 km travelled on weekdays. Essentially these points will translate to rebates. In addition, the scheme gives more points if commuters travel between 6.15 am and 7.15 am or 8.45 am and 9.45 am. This is also to incentivise commuters to take the trains at these times, reducing crowded trains during peak periods.

Evaluation:

- **Degree of substitutability between public transport and cars could still be low.**
    - Although the convenience factor could be comparable in both options with a wide and extensive public transport network, the use of private vehicles provides more comfort and accessibility.
    - High income earners are very unlikely to take public transport given their high purchasing power, and their possible want of maintaining their reputation and status. Taking public transport could be perceived as a low-grade alternative.
    - This implies that the campaigns to educate the Singaporean public on the merits of public transport must also tackle this misperception that taking public transport is inferior relative to driving their cars to work.

- **The development of an extensive and efficient urban public transport requires a healthy government budget as well as time, which the Singapore government may not have.**
    - The development of an extensive and efficient public transport will incur a strain on government expenditure, for example through the fuel subsidies on mass transit vehicles or the construction of new subway lines. These funds have a large opportunity cost, since it could have been used for other productive purposes such as in the area of education or healthcare. This is very relevant in the case of Singapore which faces ageing population problems.
    - Furthermore, government expenditure is ultimately borne by the taxpayers, so this implies that there may be a higher burden on taxpayers to foot the bill for the development of the urban transport network. Tax rates may have to increase, which could have a detrimental effect on economic growth.

2. Reducing the number of COE quotas

- Although road pricing has added the variable cost component to vehicle ownership, this cost is still negligible once one has incurred the high fixed cost of vehicle purchase. It is therefore necessary for the government to manage car population growth in order to nip the congestion issue in the bud.
- COE represents a right to vehicle ownership and use of the limited road space (for 10 years). The government can manage car population size by tweaking the number of COEs it issues. This provides certainty of outcome by controlling the car population.
- By reducing the number of COE quotas, market forces will cause price of COE to increase. As a result, it will be more expensive to own a car in Singapore. This will reduce the quantity demanded for cars, and hence demand for road usage.
- As with road-pricing, one of the strengths of this measure include having more tax revenue collected. Since demand for private transport is still considered price inelastic, there is a more than proportionate increase in price of COE in relation to the quantity of COEs. Hence tax revenue would increase.

Evaluation:

- While this could address the market failure brought about by car usage, the problem is that it can lead to over-correction, i.e. too blunt, where people who may not use the car often or do not use the car during peak hours, are also required to pay for the COE, discouraging them from buying a car.
- On the other hand, the measure might be counter-productive. After having paid a large sum of premium for COE, Singaporeans might use their cars even more. i.e. to spread the fixed cost. (Car users are subject to sunk-cost fallacy)
- Also, it might result in inequity issues, as those who need the car more may not be able to afford the COE premium.
- As with road-pricing, the increase in price of COE will mean increased fixed costs incurred by companies who need to purchase vehicles to facilitate their operations. Transportation and logistics companies are likely to be most affected by the increase in COE price.

3. Increasing taxes on fuels

- Increasing petrol duties can also be another way to raise the cost of using road space, hence reducing congestion.

Evaluation:

- Households could switch to energy-efficient cars that do not require fuel to operate. Thus this measure might not be effective in reducing the number of cars on the roads, though it does reduce the extent of negative externality generated by car usage since it reduces pollution caused by driving.

- As with road-pricing, this has unintended consequences on the economy as it might cause business costs to rise since transportation costs are higher. This could potentially cause economic growth to slow down.

<u>Synthesis (Making a reasoned judgment on the “best” approach to use)</u>

- All the measures are not perfect and have trade-offs. To decide on the "best" measure, one might have to consider and rank several criteria. This criteria could include appropriateness, effectiveness, and even implications on the budget position.

Criteria	System of road pricing	Development of public transport system	Reducing the number of COE quotas
Appropriateness	Deals directly with usage of cars	Reduces demand for car usage indirectly	Blunt tool that does not tackle car usage
Effectiveness	Difficulty in determining optimal price to charge	Degree of substitutability between public transport and cars may be low and it is difficult to convince the public	Might actually increase car usage due to higher car prices
Implications on budget position	Helps to increase tax revenue collected	Large amount of funds needed, thus strains the government budget	Helps to increase tax revenue collected

- After considering all the suggested measures, perhaps a multi-faceted approach needs to be adopted to reduce Singapore's worsening traffic congestion. Not only should road pricing be developed further, but the public transport system needs to be developed further into an extensive network, so as to achieve a car-lite society.
    - These measures tackle the problem through different approaches. Whilst development of public transport system serves to reduce the demand for car usage, taxation and legislation such as the satellite-based ERP or reduction in COE quotas would work on the supply-side through increasing the marginal private costs of car usage or ownership.
    - While in the short term supply-side measures can help curb congestion, it does not directly tackle the root causes of the worsening traffic congestion in Singapore which has to do with increased demand for cars. In the long term the population must be offered with a comprehensive and quality public transport system as a viable substitute to private vehicles.
- Hence, the development of an efficient and accessible public transport system is needed in the long term to reduce the need for cars by shifting the preference of owning cars among Singaporeans towards public transport usage. This is crucial as both the population and affluence in Singapore is projected to increase further.
- The development of public transport system must also go hand-in-hand with other measures such as education to educate the Singapore public of the merits of public transport.

Further reference: http://www.todayonline.com/singapore/frustrating-motorists-not-way-achieve-car-lite-society-khaw

Knowledge, Understanding, Application and Analysis		
Level	*Descriptors*	*Marks*
High L3	• Wide range of real-world examples used to illustrate policies adopted by Singapore government in tackling the worsening traffic congestion	19 – 21
Low L3	• Highlights the critical ideas as to why traffic congestion is an example of market failure • Accurate and clear economic analysis explaining how three measures (including a system of road pricing) could help to tackle the problem of worsening traffic congestion • Evaluation of the limitations of the three measures by considering the implications of each measure	15 - 18
L2	• Briefly explains why traffic congestion is an example of market failure • Lack of economic analysis in explaining how three measures (including a system of road pricing) could help to tackle the problem of worsening traffic congestion • The limitations of the three measures are mostly stated without considering their implications on other aspects, such as transport costs and equity • Limited references to examples	10 – 14
L1	• Answer is irrelevant in most parts • Answer is largely descriptive and lacks economic analysis (eg. not referring to cost benefit concepts) • Entirely no reference to the context of Singapore as mentioned in the question	1 – 9

Evaluation		
Level	*Descriptors*	*Marks*
E2	• An evaluative discussion of each measure using a set of criteria, such as appropriateness or effectiveness • Essay synthesizes several arguments and makes a reasoned judgment on the "best" way to tackle the worsening traffic congestion in Singapore *Eg. Essay argues that a multi-faceted approach is needed and substantiates it by pointing to the use of each measure in tackling different aspects of the problem.*	3 – 4
E1	• Judgments are made, but they remain largely unsubstantiated. *Eg. Essay argues that a multi-faceted approach is needed but does not argue why.*	1 – 2

3 **Successful firms are able to identify the growing trends of new shopper segments and use new technologies to provide an engaging and seamless shopping experience, in both online and offline spaces.**

***Nielsen Insights,* 29th April 2015**

(a) Explain how technological advancement may improve profits of firms. [10]

(b) In light of technological advancement, discuss whether more markets are likely to be oligopolistic. [15]

(a)

Introduction

- Technological advancement by firms is often meant to improve competitiveness and increase profits. This can be done through investing in new capital or by carrying out further product development to enhance functionality of the good.
- Technological advancement in firms and how it can be carried out:
  - Can be small, simple, non-disruptive and low cost (e.g. going online and engaging in social-media marketing)
  - Firms with sufficient funds may carry out R&D to develop prototypes of new products and subsequently launch them as product innovations.
- Profits = Total Revenue – Total Cost. For profits to improve, increase in TR should be greater than increase in TC.

Note: Students need to link technological advancement that firms have implemented to changes in revenues and/or costs.

Body

1. What technological advancement brings to the market: product differentiation, better quality goods and improvement in customer satisfaction.
   - Consumers may be attracted to the new functions, new look of the good → **increase in demand for good** →increase in total revenue, hence profit.
   - Firms' product can be more competitive, thus making their **demand lower in price elasticity** →the ability to price higher for higher total revenue.
   - Firms need not engage in price-wars which can be debilitating in the long-run.

2. Firms moving into the online space may find greater demand for their products.
   - When DD for a firm's product increases, the firm's revenue increase, leading to higher profits (assume that costs are low or increase in costs due to technological investments are managed).
   - With extensive reach, there is possibility of **EOS** → Lower cost, expect higher sales in a short period.
   - Attractive websites also tend to capture the attention of consumers, leading to greater traffic and demand.

3. New firms with disruptive innovations through technology (for example, new online services through social media) could change the business models of delivering their products or services:
    - Short-run profits supernormal profits may be earned if successful
    - If the technology can be replicated by others, then in the long-run, firms will earn normal profits.

4. Higher technology may install barriers into some markets, and improve profits in the long-run:
    - Large firms which have the capability to conduct R&D on product development would be able to innovate and introduce significantly better products and products with advanced features.
    - → PED: DD becomes more price inelastic → firm may increase price to increase total revenue. Profits increase if the increase in total revenue is greater than the increase in technological costs.
    - Large firms, with better resources, might dominate the market and set up patents applied to these new technologies
    - Barriers to entry will protect supernormal profits of firms, enabling them to continue earning them in the long-run.

5. Technological improvements or R&D activities could improve the efficiency and productivity of factors of production.
    - **Average costs of production fall**
    - Profits per unit will increase even if price remains the same.

Conclusion
Technological advancement would be able to increase profits of firms through the various ways above, working through both enhancements to demand conditions and the lowering of costs.

Knowledge, Understanding, Application & Analysis		
Level	*Descriptors*	*Marks*
L3	• An excellent analysis of the ways in which technological advancement could enhance the profits of firms in the short-run and long-run • Analysis includes effect of technological advancement on PED of firm, market share/barriers to entry and cost efficiency • Answers that are well-organized and coherent, with good examples shown	7 -10
L2	• Answers show coherence but lacked details in economic analysis and application to examples. • Students are able to show the different ways to increase profits through technological advancement but with some inaccurate or superficial economic analysis (for example, no analysis on competitiveness and PED, or long-run impact of technology)	5 - 6
L1	• Mostly inaccurate analysis • Students fail to link profitability to technological advancement	1- 4

(b) In light of technological advancement, discuss whether more markets are likely to be oligopolistic. [15]

Approach

- Analyse the nature of technological advancement, and whether it can or has been applied in monopolistically competitive or oligopolistic markets.
- Considering whether technological advancement will have wide impact on markets to the extent that many will consolidate into oligopolistic nature, putting in the argument that there will be markets that remain monopolistically competitive due nature of goods and costs of production (small scale, highly differentiated).
- *Note that firms in perfect competition should be excluded in this analysis as technology, although allowing access to common information in some contexts, generally makes competition imperfect through modification and upgrade of designs of products.*

Introduction

When firms engage in further technological development, their objective could be to increase their profits and possibly the market share/dominance as well. Whether or not the market is more likely to be an oligopolistic one, we would need to know the type of good or service provided, and also to ascertain the nature of technological advancement and the ability of other firms to respond competitively.

Body

1. Features and behaviour of firms in an oligopolistic market:

- A few very large firms collectively control a good majority of the market share.
- Strong barriers to entry, which may take the forms of high start-up costs, patents for the protection of innovations or operating license from the government.
- With a few big firms dominating, these firms tend to be inter-dependent in their behaviour and methods of competition.

2. Technological advancement that establishes barriers to entry and enhances the incumbent firms' market shares, thus making markets oligopolistic

- As mentioned in part (a), technological advancement can take a few forms; for the market to be transformed from monopolistically competitive into oligopolistic, technological advancement should be of a complex nature and not simply by, for example having an online presence. Patents on new technologies can be a barrier to entry of this nature.
- Firms that have acquired supernormal profits from their initial innovation can build up their capital to embark on R&D to transform itself or its goods.
- With powerful innovation, firms can lower their price-elasticity of demand and protect their supernormal profits into the long run. Market share can be increased further through mergers and acquisition to strengthen their consumer base.

3. Would technological advancement cause many markets to be oligopolistic?

- Technological advancement that opens up the market through disruptive innovations **tend to begin from oligopolistic conditions**.
- New firms entering the market may be able to transform the market by introducing a new business model that does not copy the incumbents. For example UBER and Grab, where they are transport service providers through introduction of new ways of booking taxis or private cars. However, the market to begin with is already an oligopolistic one and not monopolistically competitive. Effectively these new firms merely preserve the type of market structure.
- **Monopolistically competitive firms starts off small, and would not have the resources and ability to undertake costly and transformative technological innovations**. It is more likely that they engage in petty product differentiation and adopt superficial technological changes. Eg. Production of processed food like cookies and frozen dumplings that require simple automation and robotics.
- In monopolistic competition, the ease of entry will erode firms' super normal profit, making it difficult for firms to sustain the revenue brought about by the small scale innovation.

4. Overall Evaluation and Judgement

- The nature and extent of technological advancement tend to be dependent on market structure. It is the large firms in oligopolistic markets that will likely have the resources and scale to embark on transformative technology.
- Firms in monopolistically competitive markets have very limited ability for big scale innovation, in fact the nature of their goods and services (service intensive, highly customised, retailing) itself limits the possibility of R&D.
- It is very much the nature of production, such as low cost production, that determine the nature of market structure and not the sudden impact of technology.
- It can be argued too that technological advancement has increased the level of competition (eg. through online platforms).

Conclusion

It is likely that firms in oligopolistic markets will take advantage of more complex technological advancements to secure their market share and prevent new firms from entering the market. While technology will indeed be a very critical approach for these firms to maintain their market dominance, the superficial nature of innovation which takes place in monopolistically competitive markets will unlikely transform them into oligopolistic ones. The nature of production in monopolistic competition creates the conditions for firms to remain small. It will be very difficult for the large firms to disrupt the market and eliminate the presence of many small competitors through mere innovations.

Knowledge, Understanding, Application & Analysis		
Level	*Descriptors*	*Mark*

L3	• Recognise the difference in the nature of technological advancement between oligopolistic and monopolistically competitive markets • Answers raised the prospect of disruptive technologies on competition in markets but recognise that such disruptions simply preserve the oligopolistic markets • Understand that the nature of production and costs is a primary determinant of market structure, hence making it improbable for transformative technological advancement to occur in monopolistic competition	9-11
L2	• Giving adequate analysis of impact of technological advancement on firms' profits and market share but unable to satisfactorily consider whether this can transform markets • Answers include some analysis of strategic behaviour of firms in either monopolistically competitive markets or oligopolistic markets with the adoption of technology	6-8
L1	• Analysis of oligopolistic and/or monopolistically competitive market practices are raised but not linked to technological changes • Mainly inaccurate and insufficient analysis of behaviours of firms in oligopolistic and/or monopolistically competitive markets	1-5
	Evaluation	
E2	• Answers attempt to provide judgement on the more likely market structure based on reasons attributed to behaviours of firms	3-4
E1	• Answers have insufficient or no basis of evaluation.	1-2

4 Household savings in 2014 as a proportion of the country's GDP was 24% for Singapore and 4.8% for USA.

Source: OECD Economic Outlook 2014

Assess the economic case for raising household savings in a country. [25]

Introduction & framing

- Unpack conceptual terms in the question
  - Definition of household savings: Household income not spent on goods and services, can be in the form of private or enforced savings e.g. Central Provident Fund scheme in Singapore.
  - Raising household savings may refer to an increase in MPS (proportion of each additional dollar of income saved) or APS (proportion of income saved).
- To raise household savings, the government can implement contractionary monetary and fiscal policies that discourage household spending or implement social security plans to enforce compulsory savings.
- Governments may have different reasons for raising household savings:
  - United States: Raising household savings is needed to reduce rising household debt. The economic rationale is to avoid loan defaults which can lead to a collapse of the US banking system if it happens.
  - Singapore: Raising household savings (usually via CPF regulations) is needed to instil financial self-reliance. The economic rationale is to reduce the strain on

government budget when it spends on merit goods such as education, housing and healthcare. Singapore also faces ageing population which requires the government to spend more on elderly-friendly infrastructure.

Thesis: In the short term, countries may raise household savings to address existing economic problems. Countries that wish to sustain economic growth may also choose to raise household savings.

Argument 1: Raising household savings is needed to address existing economic problems.

- In large economies such as US, the larger average propensity to consume (APC) and marginal propensity to consume (MPC) would mean that households spend a greater proportion of their income or increase in income. This will result in a smaller APS and MPS which could explain why household savings as a proportion of the country's GDP is much lower in US compared to other countries such as Singapore.
- As a result, household debt has been rising in US due to many years of over-consumption and over-borrowing. Such a recurring household debt issue needs to be addressed as it increases the risk of indebted households to sudden shocks such as unemployment which can make it even more difficult for them to repay their loan. When this happens, defaults on loans will rise, causing banks to be at risk of making losses.
- FYI for students: It is important to avoid bank runs or a collapse in the banking system because the banking industry is the pillar of the economy – any negative news on the banking front affects confidence and thus a negative spiral effect on the rest of the economy.
- This was seen during the global financial crisis in 2008-09, which actually was triggered by the US - many US households readily took on mortgage loans to buy new property but were not able to pay back their loans later on when they started losing jobs.
- Through contractionary monetary policy where interest rate is raised to increase cost of borrowing, households will be discouraged to consume, hence saving more to reduce debt.
- In developed economies such as Singapore where ageing population is a concern, the need for the government to provide infrastructure such as elderly-friendly facilities and spend on increasingly costly healthcare for the elderly has led to greater strain on the government budget. Raising household savings through social safety nets such as CPF is deemed necessary for these reasons:
    - Manage the expansion of government spending needed for financing the needs of ageing population.
    - Ensure available resources for other critical areas of fiscal spending such as defence, education and skills training.
    - For elderly to have some stream of future earnings to finance their daily needs, eg. CPF Lifelong Income for the Elderly (CPF Life) is a scheme lifelong monthly payout.
- This is in contrast with countries such as UK and Canada where compulsory savings is not enforced and the government ends up running a smaller budget surplus or even deficit as a result of providing free healthcare.

Argument 2: Raising household savings helps countries to grow potential economic growth through the availability of domestic savings to finance investment.

- If household savings are raised in the form of private savings (i.e. deposits at banks), the supply of loanable funds will increase, causing interest rate for borrowing to fall.

- Stability in interest rate creates a sound condition for healthy investment rates. Firms may be more willing to borrow for investment purposes (e.g. purchase of new machines, R &D). High investment rates improve productive capacity (sustain potential growth) and improve international competitiveness.

- High investment rates will also grow AD and generate expansionary multiplier effect in national income.

- All in all, the increase in AD coupled with the increase in AS help in achieving actual and potential growth.

Anti-thesis: However, raising household savings can negatively affect macroeconomic performance in the short term and reduces the effectiveness of demand-management policies as a counter-cyclical approach.

Argument 1: In the short term, raising household savings brings about dampening effects on actual growth and employment.
- Household savings is a form of withdrawal from the country's circular flow of income.
- The fall in consumption expenditure reduces aggregate expenditure and causes a multiplied decrease in equilibrium national output through the reverse multiplier process.
- Explain briefly the reverse multiplier process using the Y-AE diagram*. A decrease in autonomous consumption will cause an initial decrease in income by the same extent. This initial fall in injection would decrease the revenue of firms producing consumption goods, hence inducing a further decline in consumption while part of this decrease in income is withdrawn from the circular flow of income in the form of saving, tax and imports. Eventually after the reverse multiplier process ends, national income would have decreased by a multiplied magnitude. Cyclical unemployment will also rise as producers with unsold inventories resort to firing workers in order to cut operating costs.
- This can be seen in US where the rise in household savings has led to poor retail figures, thus contributing to the country's weak economic recovery.

** Note: Answers that use AD/AS framework will be accepted but reverse multiplier process must be included.*

Argument 2: Raising household savings may not benefit the domestic economy if the funds are taken out of the country.
- An argument supporting high household savings is that the liquidity these add to the domestic funds market (supply of loanable funds) will lower interest rate and encourage investment.
- However, it is possible too that the liquidity will flow out of the country, into places where interest rates or exchange rates are higher. In this case, domestic investment will not rise, unless there is compensatory inflow of foreign funds into the domestic funds market.
- If household savings are raised in the form of private savings (i.e. deposits at banks), the supply of loanable funds will increase, causing interest rate for deposits to fall.

Argument 3: Raising household savings could lead to a rise in the country's marginal propensity to save (MPS), hence reducing the effectiveness of domestic management policies for greater economic stability.

- The size of a country's multiplier depends on the size of MPS.
- Policies implemented to raise household savings may lead to a rise in MPS while reducing MPC and MPT.
- The smaller MPC would mean that households are spending a smaller proportion of the increase in income for consumption.
- Since the size of a country's multiplier k is 1/MPW (where MPW=MPS+MPM+MPT), the fall in MPC will reduce the size of the multiplier, making demand-management policies less effective as a counter-cyclical approach to reduce volatility in economic performance.
- Should there be a recession, the government will therefore have to incur a larger budget deficit in generating the same desired rise in national income compared to before.

Synthesis:

- There are various justifications for a government to adopt measures to raise household savings. While doing so can help to address existing economic problems and bring about positive benefits in both the short and long term, it can also dampen the short term economic performance as saving is primarily a withdrawal.
- Due to the possible dampening effects, the urgency for such a policy direction differs across countries. Examples of such a consideration;
    - Singapore does not face the problem of rising household debt as in the US. Therefore, increasing savings to inculcate greater self-reliance has to be carefully calibrated against forecasts of economic performance in the medium terms, especially in view of the fact that Singapore's economic growth in the recent years has slowed down.
    - In comparison, due to the large household debt in US, the severity of the problem calls for raising household savings to be prioritized despite the economy also facing slowing economic growth.
- That said, a country can still raise household savings if it implements mitigating policies that can help reduce the anticipated negative effects on the economy. It is important too that the government has measures in place to allow domestic savings to be productively channelled for growth-productive uses and not frozen.

Level descriptors for essay question 4		Marks
High L3	• Conceptually accurate, well-developed and balanced analysis which considers the nuances in the policy orientation, such as these: o The need for raising household savings to address existing economic problems such as rising household debt and the need for long term	19 - 21

	financial self-reliance in the face of ageing population o Possible decrease in size of multiplier and how this reduces the effectiveness of demand-management policies as a counter-cyclical approach	
Low L3	• Conceptually sound analysis of the possible effects of rising savings on domestic interest rate, AE components and equilibrium national income, with references to multiplier effect. • Balanced analysis but may be more focused on one side (either on the justifying or trade-offs of the policy orientation)	15 - 18
L2	• Conceptually correct as a whole but lacking in quality of reasoning or arguments are undeveloped • Some use of economic analysis in reasoning i.e. AD/AS framework but primarily descriptive answer	10 - 14
L1	• Answer makes an attempt to address issue of raising household savings but does not use economic analysis in reasoning • Answer contains major conceptual errors	5 - 9
	• Answer entirely irrelevant or points made incidentally to issue of raising household savings	1 - 4
E2	Well-reasoned and supported judgement, using valid criteria to assess whether • Raising household savings is necessary in all countries for domestic pool of savings for investment and economic development • Negative effects of raising household savings can be addressed	3 - 4
E1	• Lack of clarity in focus of evaluation • Evaluative statements given incidentally and not as a focused discussion	1 - 2

Question 5

5a) Explain why low unemployment is one of the macroeconomic objectives for Singapore. [10]

Approach

- Establish that government pursues healthy economic growth, price stability, low unemployment and healthy balance of payment as macroeconomic objectives so as to ensure continual improvement of standard of living in the country.

- Explain the positive effects of achieving low unemployment in the country, with references to how its achievement will help to keep growth sentiments positive.

Introduction: Explaining the meaning of low unemployment

- State what are the 4 macroeconomic objectives
- Explain what is meant by low unemployment:
    - Unemployment rate refers to part of the labour force who are not working but actively looking for jobs. Low unemployment suggests a condition of full employment or very near to it.
    - Low unemployment means labour resources are utilised and not left idle. Low unemployment does not mean zero unemployment but close to the natural rate of unemployment, which is the base level of unemployment that will always exist in the economy. Singapore is having low unemployment as the unemployment rate is at 1.9%.
- Identify that achieving low unemployment have positive effects on economic growth, standard of living and government budget.

Key point 1: Low unemployment means maximisation of standard of living

- Low unemployment ensures that scarce resources are fully utilized → the economy operates closer to the boundary of the PPC → AD is high enough relative to productive capacity.
- The achievement of full employment means that at current available resources and productive capacity, the country is producing the most output possible and income per capita would be at highest possible.
- With large part of labour force gainfully employed, households enjoy purchasing power for consumption.
- Singapore has been able to enjoy low unemployment and positive economic growth in recent years → 2% growth in real GDP and 1.9 % unemployment in 2015
- Low unemployment prevents social unrest and depression which may reduce non-material SOL. High Unemployment rate in some European countries have increased from 34% in 2006-07 to 46% in 2011-12 and the number of strikes, street protest and demonstration has increased significantly. Depression and excessive worry due to inability in finding employment can increase stress levels in the society, leading to a lower non-material SOL.

Key point 2: Low unemployment boosts domestic growth sentiments

- Low unemployment tends to take place alongside positive GDP growth. This boosts economic confidence for consumption and investment – positive effects on AD and equilibrium national income.

- On the other hand, if a country faces high unemployment households will not be optimistic to spend and firms to invest. This will have spiralling downward effects on AD, national income and inflation rate.

Key point 3: Low unemployment reduces strain on government budget

- Low unemployment means greater tax revenue from income tax and consumption tax as well as decreased spending on social assistance. Although Singapore does not have unemployment benefits, households could seek financial assistance. Needy Singaporeans received about S$116 million of financial help between Apr 1, 2014 and Mar 31, 2015 from ComCare, the Government's social assistance scheme. Low unemployment thus reduces the need for Singapore government to divert their budget spending on social assistance and allows for funds to be channelled for other productive uses e.g. improving infrastructure and retraining of workers to move up the value chain. This would allow potential economic growth in the long term – rightward shift of LRAS.

- With sustained low unemployment, a government does not much need to dip into the reserves to adopt a budget deficit, allowing the government to accumulate its reserves and use it when the economy faces problems

Key point 4: Low unemployment prevents loss of labour skills and productive capacity

- Individuals who are unemployed for prolonged periods of time could lose their skills. This is referred to as the hysteresis effect where cyclical unemployment may become structural unemployment. This loss in productivity could adversely affect the productive capacity by decreasing the LRAS in the long-run as quality of workers deteriorates.

- Workers who have been structurally unemployed for a long-time may become discouraged and leave the labour force too. Workers may leave the country in search for better jobs and results in brain drain. This results in a fall in productive capacity as the labour force is shrunk.

Conclusion

- Low unemployment will bring about benefits in term of other macroeconomic aims as well as improvement in SOL. Singapore is a small country with only labour as its only viable factor of productions hence it is important for Singapore achieve low unemployment.

- High unemployment is an economic problem that will lower current standard of living due to lack of job and earnings and if this is prolonged will also weaken the prospects for future economic growth.

	Level Descriptors	Marks
L3	• A well-developed conceptual analysis of the benefits of low unemployment – considering its effects on both standard of living and growth performance with references to AD/AS concepts. • Well-applied to the context of Singapore (labour-constrained country, hence the importance of maximizing labour force potential.	7-10
L2	• Conceptually correct but undeveloped explanation	5-6

	• Limited application to Singapore • Answer may contain minor inaccuracies	
L1	• Smattering of points, without use of economic concepts. • Significant conceptual errors.	1-4

b) Assess whether the policies adopted by the Singapore government to maintain low rate of unemployment remain relevant in view of the challenges faced by the economy. [15]

Approach:

- Identify the challenges faced by Singapore and how they may lead to an increase in unemployment rate.

- Pointing out the current policies adopted by the Singapore government to maintain low unemployment and assess whether they remain relevant using criteria such as effectiveness, sustainability and feasibility of the policies.

Unpacking the context: What are the challenges faced by the Singapore economy?

- Sluggish growth environment → Weak global economic growth as shown by the slowdown in the China, US and EU economy → Singapore as an open economy is hugely affected by the global economy → slowdown in AD due to fall in net export earnings and foreign direct investment → may result in some firms retrenching workers → threats of cyclical unemployment

- Economic restructuring → Singapore faces an ageing population and increase in competition due to globalization, especially on lower skill jobs hence there is need to focus on productivity growth to drive the economy forward → emphasis on automation and innovation to drive productivity and economic growth by moving up the value-added chain→ rising labour costs as Singapore government reduces the ease of employing foreign labour + threats of structural unemployment for labour who get displaced by automatic and technology.

Unpacking the context: What are the policies adopted by the Singapore government to maintain low rate of unemployment?

- Fiscal policy → The Singapore government adopts a counter-cyclical budget policy for the purpose of demand management and the need for fiscal prudence. During times of recession where unemployment rate is high, the Singapore government would adopt a budget deficit to stimulate the economy.

- Exchange rate policy → modest and gradual appreciation at most times to achieve price stability so as to maintain export competitiveness and attract FDI.

- Strong focus on supply side policies which promote efficiency and international competitiveness of domestic producers, such as pro-competition policy, continuing education and skills upgrading as part of labour culture, various support programmes to develop the capacity of SMEs.

Determining evaluation criteria: How to assess the relevance of the policies adopted by the Singapore government to maintain low rate of unemployment?

- To assess the relevance of the current policies, it depends on whether the policies can withstand the shocks from the fluctuations of the external economy and whether the policies will improve workers mobility/employability throughout ongoing structural adjustments which various industries go through in the course of shaping up to the demands of international competition.

Argument 1: Assessing the relevance of fiscal policy in maintaining low cyclical unemployment in Singapore

- Although the multiplier effect in Singapore is small due to high leakages from imports and savings, expansionary fiscal policy is used whenever the economy was threatened by recession and rising unemployment.
- During the recession in 2009, Singapore government implemented the resilience package totalling $20.5 billion to help stimulate the economy. This was funded by tapping on past reserves build from past budget surpluses. The resilience package includes expanding public sector hiring and bringing forward public infrastructure projects, creating more jobs for the economy and reducing cyclical unemployment. The Jobs Credit scheme was introduced then, a short term policy, for the government to subsidise labour costs and prevent retrenchments.
- Fiscal policy remains relevant in maintaining low unemployment in view of the weak global demand. Although the government did not adopt a deficit budget this year (2016) although the economy has been weakening, this must have been considered against the rate of the slowdown. Overall, the use of fiscal policy will still be needed if the economy turns worse.

Argument 2: Assessing the relevance of exchange rate policy in maintaining low unemployment in Singapore

- Singapore has adopted a modest and gradual appreciation of the Sing Dollar to keep imported inflation low. This is important as Singapore is small country with no natural resources and hence it needs to import raw material for its re-exports as well as for domestic production and consumption.
- Stability of costs and wages is needed to keep unit labour costs in Singapore stable and competitive against other countries.
- Amidst the weak global economy, the Monetary Authority of Singapore has eased its monetary policy by adopting a ‘zero appreciation’ stance; not allowing the Sing Dollar to appreciate. Although this may result in higher cost of imported goods, this keeps Singapore’s export more price competitive in the global market, especially in this weak

global environment. This then allows external demand to remain high and prevent cyclical unemployment.

- The exchange rate policy is relevant to Singapore as it is a small and open economy, with total trade amounting to almost thrice its GDP.
- It should be noted that the adjustment of the policy stance based on Singapore's economic conditions suggests that the policy is still relevant. This policy provides MAS with the flexibility to adjust its monetary stance according to the challenges the economy is facing. If global demand picks up in the future, the MAS will revert back to its modest and gradual appreciation stance of the Sing Dollar.
- However, exchange rate policy alone is not enough to keep unemployment rate low in Singapore as it does not tackle structural unemployment where there is a mismatch of skills and jobs. Nonetheless, it remains largely relevant due to the import-dependence of the economy.

Argument 3: Assessing the relevance of supply side policy in maintaining low unemployment in Singapore

- Supply side policy can improve the match between jobs and skills, since Singapore is moving towards innovation-based growth to drive the economy forward.
- The Singapore government has tried to improve productivity growth by encouraging firms to rely on technology and automation instead of foreign manpower. Initiatives include the Productivity and Innovation Credits (PIC) scheme help firms, especially small and medium enterprises (SMEs), with their cash-flow needs for expenditure on innovation and productivity initiatives. Less workers would then be needed in these labour intensive industries such as food and beverages and these workers may not have the appropriate skills to work in other sectors which are booming such as the biomedical and financial industries.
- One key labour initiative is Skills Future, which every Singaporean aged 25 and above would receive $500 credit to enrol in government approved courses. Education policies are also constantly reviewed to meet the changing nature of jobs available in the economy. For example, Singapore University of Technology and Design was set up to equip undergraduates the skills to innovate so as to increase productivity level. New innovation could also help to boost Singapore's international competitive as new innovative products could be exported out and boost Singapore's AD, creating more jobs in the economy, especially in view of the sluggish growth environment.
- Overall, supply side policy is largely relevant (or the most relevant) in maintaining low unemployment in Singapore as it can tackle problems brought by both economic restructuring and weak growth environment. Structural unemployment also appears to be more significant than cyclical unemployment as Singapore is still experiencing economic growth.

- However, supply side policies are considered as an ongoing approach which supports the economy in the long term. These policies are not meant to be counter-cyclical like the budget and exchange rate policies.

Conclusion

- Singapore has adopted a policy mix to maintain the low unemployment in the economy. This is an economically sound approach in view of the challenges of economic restructuring and sluggish growth environment which could bring about both cyclical and structural unemployment. The policies have remained relevant, and it appears that the government has given much more emphasis on supply side measures to boost labour ongoing employability and technology.

- Singapore could refine its policies to enhance their effectiveness in maintaining low unemployment in the economy. Retraining of workers could be more targeted at industries affected most by the economic restructuring. More efforts could also be aimed at changing the mind set of workers by providing more information of the benefits of retraining as well as preparing the workforce to deal with future challenges brought by globalization and increase in competition.

Mark Scheme Knowledge, Application, Understanding, Analysis		
Level	**Descriptors**	**Marks**
L3	• Developed and balanced assessment of the policies adopted by the Singapore government in maintaining low unemployment • Well-connected to context of sluggish growth environment and economic restructuring as current challenges • Demonstrate a sound grasp of Singapore's policy mix	9-11
L2	• Balanced but underdeveloped assessment of the policies adopted by the Singapore government in maintaining low unemployment • Lacking in the grasp of Singapore's current economic challenges Or • One-sided developed assessment of the policies adopted by the Singapore government in maintaining low unemployment • Ideas generally offer sound economic • References to some policy examples	6-8
L1	• Of little relevance to question • With major conceptual inaccuracies in reasoning	1-5
E2	Well-reasoned judgement on the relevance of the policies adopted by the	

	Singapore government in maintaining low unemployment. Judgement is based on sound economic analysis. • Able to judge that while the mix of policy instruments remains the same, what matters is the flexibility of the policy orientations with changing economic conditions	
E1	Mainly unexplained that is not supported by economic analysis. Merely stating the stand with no or little justification. • Tends to be a random evaluation of Singapore's policy instruments	1-2

Question 6

(a) Explain what might cause a deficit in a country's balance of payment on current account to worsen. [10]

(b) Discuss whether currency depreciation or reducing government spending is a more effective policy for a country faced with a worsening current account. [15]

(a) Explain what might cause a deficit on a country's balance of payment on current account to worsen. [10]

Students need to show their understanding of what is included in the current account of the BOP. Factors that explain either falling exports or rising imports or both are acceptable. Falling earnings from investment overseas could also be a reason.

Introduction:

- The balance of payment on CA measures the inflow and outflow of goods, services and incomes such as investment incomes and other secondary incomes

- Question refers to a deficit worsening, which means expanding deficit. The total value of receipts received from abroad (i.e. credit) is less than total payments made to overseas (debit), or simply a reduction in the surplus.

Body: Factors causing worsening CA deficit

(i) Weak economic growth in trade partners' economies

Weakening of external economic environment (global/regional) can also cause a country's trade balance to suffer. Singapore for example is seeing its trade balance worsening this year due to weak growth of its major trade partners such as China and Europe.

(ii) Domestic economy growing faster than trade partners'

Higher economic growth relative to other countries. A country that gets out of the global economic crisis faster than the other countries would mean that it has higher income growth → ↑ imports. This is made worse if the country's MPM (or income elasticity of demand for import) is high, as the economic growth will lead to a larger increase in import.

(iii) Loss of export competitiveness for various reasons

- Extended periods of higher inflation relative to other countries' inflation rates can also lead to rising CA deficit. Higher inflation relative to other countries → the prices of domestic goods and services are rising faster than other countries' goods → domestic production becomes less competitive.
- Currency appreciation → export more expensive in foreign currencies and import cheaper in domestic currency → ↑ imports and exports ↓ → worsens trade balance if sum of the demand for both is price elastic.
- A country's domestically produced goods and services will become internationally uncompetitive as other countries gain the comparative advantage. The country's domestic production could be lagging behind due to lack of investment, innovation or structural rigidities. Such rigidities include labour laws that protect the workers too much, leading to complacencies among workers and rising labour costs for producers. Such countries will find their export competitiveness diminished over time by other countries that implement measures to promote labour efficiency and training to increase productivity and hence lower labour costs.

(iv) Falling investment income from overseas

- For developed countries that have a large concentration of overseas investment, weakening of global economic performance will result in falling inflow of earnings from overseas. This coupled with existing deficits in the current account would worsen the deficit condition.

Conclusion

The worsening CA deficit may be a short term problem if it's caused by some weakening in country's export markets. However, where it is caused by deeper structural rigidities, the problem can be a prolonged one, in which case it will cause severe adverse impact on country's economic growth and employment.

Level	Description	Marks
3	• Well-explained meaning of worsening current account • At least 3 factors well explained with sound economic reasoning, with a combination of domestic and foreign factors.	7-10
2	• 2 factors well explained • Giving 3 factors but not well developed or sound in economic reasoning	5-6
1	• Mostly irrelevant answer or with major conceptual errors • Lack of knowledge of what it means by worsening current account	1-4

(b) Discuss whether currency depreciation or reducing government spending is a more effective policy for a country faced with a worsening current account. [15]

Approach: A comparative evaluation of the two policies will require students to consider these factors

- Whether the CA deterioration is due to domestic or foreign factors (weakening exports due to weak foreign demand may call for exchange rate depreciation as foreign markets have become more price elastic).
- Price elasticity of demand for imports (depreciation induces imported inflation if country is import-dependent).
- Technical factors such as the size of expenditure multiplier and MPM.

Introduction (framing)

- Each policy involves a distinct approach in tackling the worsening CA. Currency depreciation can be considered a switching policy while the reduction of government spending is contractionary fiscal approach that works on dampening AD to improve CA position.
- Evaluation on whether depreciation of currency is more effective than reducing government expenditure on the CA should be discussed based on the objective of improving CA position (whether a reduction of existing deficit or reversing a change of falling surplus).

How each works to improve CA (brief explanation)

- Currency depreciation →exports become cheaper in foreign currencies; imports become dearer in domestic currency →if the Marshall Learner condition is fulfilled (summation of the PED of both exceeds 1), CA can improve.
- Reduction of government spending →assuming tax revenue is held constant, there will be net withdrawal from circular flow →contractionary effect on equilibrium national income →import expenditure declines as this is directly related to national income & the

lowering of domestic inflation may help country's exports to be cheaper too →improvement in CA position.

Thesis: depreciation of currency more effective than contractionary fiscal policy

- An important consideration will be the **economic condition of both the domestic economy and that of its trade partners.**
- The more price elastic the demand for the country's export and import, the more effective the policy of currency depreciation in correcting current account deficit. This can be relevant during soft economic conditions. Overseas demand for a country's exports will tend to be more price elastic as buyers are more sensitive to prices when their incomes are declining.
- Similarly, if the country trying to improve its CA position is also in weak economic conditions, reducing government expenditure will not be appropriate.
- **Depreciation of currency has a more direct effect on imports than reducing government spending**. Reducing government expenditure has to have an impact on AD and national income before affecting imports. Extent of the effect of reducing government expenditure depends on several factors such as the size of expenditure multiplier, and the size of import propensity and income elasticity of demand for imports. The policy can only be effective if these values are high.

Antithesis 1: currency depreciation may not be effective in correcting current account deficit

- Currency depreciation will have **inflationary effects** on an economy (imported/cost push inflation): ↑ cost of imported resources → ↑ production costs → ↑ export prices.
- Depreciation of currency is effective in addressing the worsening of current account deficit so long as it does not lead **retaliation from other countries.** Very often countries that depreciate their currencies are accused of adopting unfair competition and faced with retaliation from their trading partners, causing negative impact on their exports.
- Currency depreciation is ineffective in addressing the worsening of current account deficit for country faced with structural rigidities. E.g. Poor transport system to transport resources to factories and the produced goods to the ports for export, increasing transport costs. The lack of resources due to structural rigidities and inefficiency among firms → **unable to increase production to meet rising export demand.**

Antithesis 2: Reducing government spending can be more effective that depreciation of currency to correct the worsening current account deficit is more effective.

- **Reducing government spending is more effective for countries faced with economic overheating**

  Developing countries import large amounts of resources, machinery and technology to help in their economic development → main reason for their current account deficit. However, with rising growth and → rising household income with the increasing growth of middle income group → rising demand for consumer goods → rising demand for resources

- Reducing government resources will reduce the strain on the country's resources, releasing the resources to be used by the private sector to increase output

- Effectiveness is short-term. **Reducing government spending is a contractionary policy** → slows down economic growth and may lead to rising unemployment → worsens economic outlook → lower investments (less Capital inflow) → no increase in future income flow into the country

Synthesis:

- Whether currency depreciation is more effective than reduction of government spending depends on the root cause of the worsening CA and the economic conditions of the country. If a country is facing both weakening domestic economy and weakening CA, certainly a reduction of government spending is inappropriate.

- Currency depreciation primarily requires PED of exports and imports to be price elastic. This tends to unattainable in the short term and for a country to have depreciation policy for a long period, other economic problems such as domestic inflation or competitive depreciation by its trade partners will set in.

- Very often, the preferred approach to reverse CA deterioration is through supply-side approaches to improve a country's international competitiveness. Such measures in the long term will make domestic production more competitive both in the home and foreign markets.

- Where a government really has to address the CA problem, for example because of a prolonged deficit, then a range of policies will most likely be needed.

Level	Description	Marks
L3	• Demonstrate sound conceptual understanding of the linkage between exchange rate and government spending and CA performance • A sound comparison of the relative effectiveness between both policies • Recognise the importance of addressing structural rigidities to effectively improve CA performance	9-11
L2	• Some clarity on the links between both policies with CA performance but lacking in conceptual analysis • Comparative but undeveloped OR more one policy hence severely lacking in comparison	6-8
L1	• Major conceptual errors • Mostly irrelevant answer	1-5
	Evaluation	
E2	• Evaluation is based on certain criteria (such as state of economy, root causes of problem) • A reasoned judgement, eg. currency depreciation is a short term solution	3-4
E1	Evaluation which is mostly at random and without clear criteria	1-2

ANDERSON JUNIOR COLLEGE

JC2 PRELIMINARY EXAMINATION 2016
Higher 2

ECONOMICS

9732/01

Paper 1

14 September 2016

Additional Materials: Answer paper

2 hours 15 mins

READ THESE INSTRUCTIONS FIRST

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

Write in dark blue or black ink.

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

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

Answer **all** questions.

Fasten your answer to each question **separately.**
Fasten **this cover page** in front of your answers **to Question 1.**

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

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

Name ______________________________ (   )

PDG ______/15

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

[Turn over]

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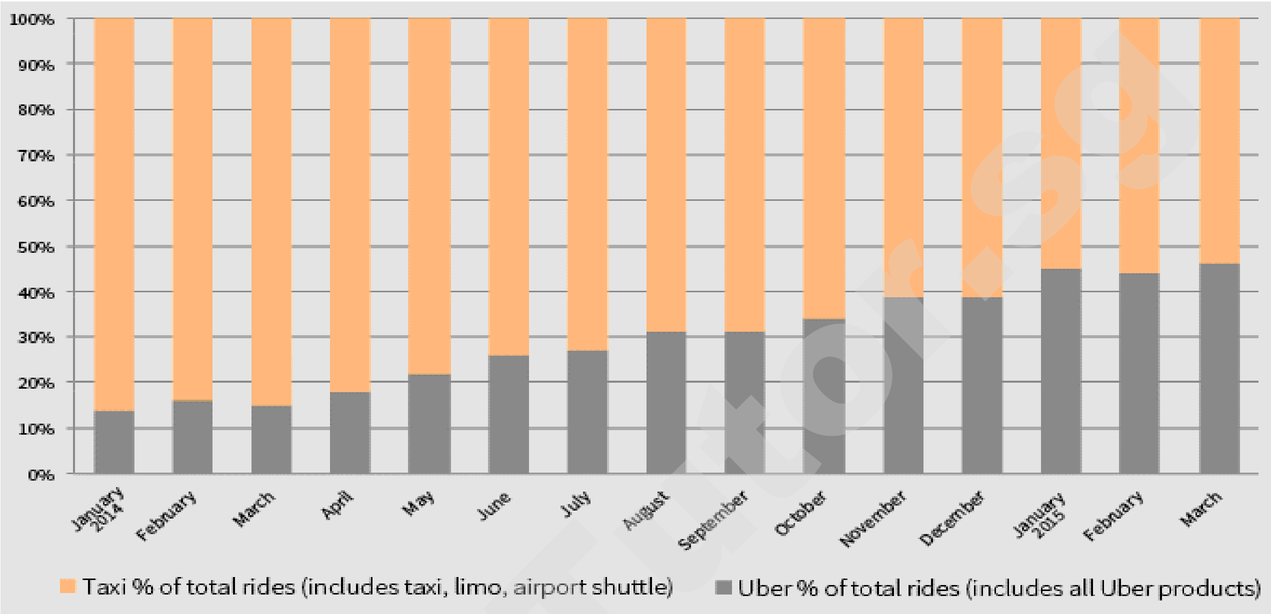
Section A

Answer **all** questions in this section.

Question 1 **The Uber Story**

Figure 1: Share of total paid car rides for business commuters in the United States (US)



Source: *Certify*, accessed 11 August 2016

Extract 1: Uber and its "surge multiplier"

To passengers, Uber is essentially synonymous with taxis, and to drivers, it's basically a referral service. The Android, iOS and Windows Phone app connects riders with drivers using their phone's GPS capabilities, letting both parties know one another's location. In addition, Uber company also processes all payments involved, charging the passenger's credit card, taking a cut for itself and direct depositing the remaining money into the driver's account, all in the background and completely cashless.

Fare estimates can be quoted in advance through the Uber booking app. In addition, operating on supply and demand principles, Uber rides' pricing can be subjected to a "surge multiplier", which can increase the hiring rates considerably. When an excessive number of Uber ride requests are made within a short duration in a given area compared to the number of Uber drivers currently on the road, Uber prices of all rides in that area is increased by a multiple (displayed as 1.5x or 2.1x for example). The degree of the multiple is determined by competitive market forces. Uber Company uses the "surge multiplier" to encourage more drivers to get out and drive during peak hours.

Source: *Time Magazine*, 4 November 2014

Extract 2: Uber is making taxi drivers miserable

Ever since Uber arrived on the scene in 2011, there is circumstantial evidence of the damage Uber has wrought on New York's taxi industry. Taxi drivers are not happy with the impact Uber is having on their business as Uber is attacking on all fronts — it offers less expensive and more convenient rides.

Newly-available data from the Taxi and Limousine Commission show total taxi trips in the first half of 2015 were down 10% compared to same period last year. The data also show declining revenues from taxi fares. The taxis collected US$981 million through June of this year, a 7% drop compared with the US$1.06 billion raked in over the same period last year.

"New drivers are flocking to Uber in part due to the money that they can make and due to the flexibility you have, basically being able to decide when you want and where you want to work," said Rachel Holt, Uber's regional general manager for the East. In an Uber-enabled world, every street corner becomes a virtual cab stand. Uber drivers need not be tested by the city in order to provide their service. Apparently, there is no licence check, at least in the US. But the Taxi Commission of New York City requires new taxi applicants to take a defensive driving course and register at one of several privately operated taxi-driver schools; students must then pass a test, before they can drive the taxi on the road. When taxi drivers eventually get on the road, they still have to pay about US$110 upfront for renting a taxi and pay-out-of-pocket for gasoline and tax. According to the San Francisco Cab Drivers Association, one third of taxi drivers ditched their registered taxis in a 12-month span to drive for Uber.

Source: *Washington Post,* 27 May 2014 and *Business Insider*, 18 August 2015

Extract 3: Is Uber to be blamed for New York City's traffic problems?

A highly-anticipated study was commissioned to examine how the ride-hailing firm is impacting traffic congestion in Manhattan, New York City. The study, which examined the impact of Uber and other ridesharing services on Manhattan's bustling Central Business District, found that Uber is not disproportionately driving congestion any more than other vehicles on the road. "Vehicles of all types play a role in congestion," read the study, which was conducted by consulting firm McKinsey & Co. between August and October.

However, the study noted that services like Uber could have a bigger impact on congestion in years to come. If riders start opting for those services instead of public transportation, that would add to traffic congestion. For now, most people use Uber services to replace taxis. Uber, the most valuable privately held company in the world, will not continue to go unregulated, though. The report states that there needs to be a levelled playing field for all ride services — taxis and Ubers alike. The New York City Council is expected to propose legislative changes to address some of the study's findings in the coming weeks. They will focus on areas like accessibility, driver licensing requirements and consumer protections.

The study also noted the disparity in cost between taxis and Uber services. Taxis are charged tax, which go to the city and the Metropolitan Transport Authority (MTA) that manages buses, subways, trains, bridges and tunnels in New York City; while Uber do pay tax, a much smaller portion goes to the MTA. The study recommended new regulations to make sure mass transit funding did not decrease.

Source: *CNN Money*, 15 January 2016

Extract 4: The social costs and benefits of Uber

Uber has faced criticism of unfairly competing with taxi drivers by entering their market without following regulations or fare schedules. It seems clear that Uber aspires to dominate the paid car rides sector. Yet it would be a real mistake to regulate Uber out of existence on that basis alone. While Uber's app is revolutionary, it is also easy to replicate. Uber may become the Myspace or Netscape of ride sharing — that is, a pioneer that could not maintain its market position. Greater horizontal and vertical integration can also bring certain public benefits.

Other concerns are a bit more complicated. For example, courts in Germany and the United States have restricted some of Uber's services on safety grounds, and not without reason. An Uber driver in San Francisco struck and killed a young girl, possibly at a time when he was distracted by Uber's app. Uber drivers have also assaulted passengers and committed other crimes — most notably when a driver in Washington, DC, took several riders on a high-speed chase.

On the other hand, Uber rides may be enabling far more efficient use of capital that raises productivity and substantially enhance consumer welfare. Uber rides reduces consumers' incentives to purchase automobiles, almost certainly saving them money. As consumers buy fewer cars, this opens up the remarkable possibility of converting parking spaces to new and environmentally sound uses and reduce drunk driving and other accidents. Uber also claimed that its platform is generating 20,000 new driver jobs every month**.** These are all important social goods.

Source: *University of Chicago Law Review*, 2015

Questions

(a) Compare the trends in the share of total paid car rides between Uber and taxis for business commuters in the US from January 2014 to March 2015. [1]

(b) Using economic analysis, explain how the "surge multiplier" can address "an excessive number of Uber car ride requests." [4]

(c) "Taxi drivers are not happy with the impact Uber is having on their business as Uber is attacking on all fronts."

Discuss how the combined effects of a decrease in price for Uber car rides and a fall in petrol price may affect taxi drivers' revenue. [8]

(d) **(i)** With reference to the Extract 2, distinguish between the likely price elasticities of supply of taxi and Uber car rides. [2]

(ii) Extract 3 mentioned that a tax was imposed on taxis and Uber car rides respectively.

Using your answer for (d)(i) and appropriate diagrams, explain the difference in tax burden for drivers and commuters between taxi and Uber car rides. [5]

(e) In light of the issues raised in the extracts, discuss the desirability of the introduction of Uber.

[Total: 30]

Question 2 **Globalisation and Deglobalisation**

Figure 2: World merchandise trade as a percentage of world Gross Domestic Product (GDP)

%

Year

Source: World Bank, accessed 27 July 2016

Table 1: Selected economic indicators for Singapore, 2010 – 2015

Year	2010	2011	2012	2013	2014	2015
S$ per unit of US$	1.29	1.30	1.22	1.27	1.32	1.41
Percent Change in Consumer Price Index	2.8	5.2	4.6	2.4	1	-0.5
Trade balance (Billion S$)	85.1	94.0	85.6	86.9	94.9	108.2

Source: Singstat & Monetary Authority of Singapore (MAS), accessed 27 July 2016

Extract 5: The virtues of deglobalisation

Deglobalisation is the process of diminishing interdependence and integration between certain units around the world, typically nation-states. It is widely used to describe the periods of history when economic trade and investment between countries decline. It stands in contrast to globalisation.

11 Pillars of the Deglobalisation Paradigm

1. Production for the domestic market must again become the centre of gravity of the economy rather than production for export markets.
2. Production of goods at the level of the community and at the national level should be encouraged if this can be done at reasonable cost.
3. Trade policy — that is, quotas and tariffs — should be used to protect the local economy from destruction by corporate-subsidised commodities with artificially low prices.
4. Industrial policy — including subsidies, tariffs, and trade — should be used to revitalise and strengthen the manufacturing sector.
5. Long-postponed measures of equitable income redistribution and land redistribution (including urban land reform) can create a vibrant internal market that would serve as the anchor of the economy and produce local financial resources for investment.
6. De-emphasising growth, emphasising upgrading the quality of life, and maximising equity will reduce environmental disequilibrium.
7. The development and diffusion of environmentally congenial technology in both agriculture and industry should be encouraged.
8. Economic decisions cannot be left to the market.

9. The state must constantly monitor and supervise the private sector.
10. The country should be transformed into a “mixed economy” that includes private enterprises, and state enterprises, and excludes transnational corporations.
11. Centralised global institutions like the International Monetary Fund (IMF) and the World Bank should be replaced with regional institutions built not on free trade and capital mobility but on principles of cooperation.

Source: *Foreign Policy in Focus*, accessed 27 July 2016

Extract 6: Singaporean workers and firms face challenges from globalisation

Globalisation and technological advances are disrupting industries and displacing workers, and these are challenges that Singapore workers and companies will have to face, said Prime Minister Lee Hsien Loong at the opening dinner of the NTUC National Delegates’ Conference.

Mr Lee said that Singapore also faces competition from both developing and developed economies. He noted that in Japan, for instance, starting salaries for graduates are lower than for those in Singapore. He added, "We can't resist globalisation and technology, because if we try to do that our economy will stagnate, our workers will become uncompetitive and Singapore will be left behind. We have to ride the wave, move forward and use the power of free markets to our advantage. We have to depend on free markets because the governments by themselves can't generate wealth. Because with free markets, you can be efficient, you can be nimble, you're under pressure to perform, you have to break even, and businesses have incentives to do well, to grow new opportunities, and workers have the incentives to improve, upskill themselves, earn a little bit more.”

However, Mr Lee said that the state still has a role to play in preparing the country to face future challenges. Besides creating the basic conditions for the markets to operate properly, Mr Lee said that the state should also aim to "mitigate the excesses and negative effects of a market system" and give Singaporeans better protection in a less stable economic environment.

To this end, the government has rolled out the Progressive Wage Model to help upgrade the skills and wages of low-income workers like security guards and cleaners. Mr Lee acknowledged that Singapore's model of a tripartite partnership between unions, employers and the Government is sometimes criticised, especially in the West. But he said that tripartism has worked well in Singapore. "If we had a weak union movement which represent workers properly, but cannot get a fair deal from employers, I think that's not only bad for workers, it's bad for Singapore, and sooner or later, we'll run into trouble. If we had strong unions but (they are) hostile, antagonistic and focused narrowly on short term interests of members, they will hold back the country and eventually workers will get hurt.”

"We need to review our specific measures: how to help our domestic sectors grow, how to attract investments, help companies to develop new markets, how to make best use of foreign workers and talent that we need in Singapore."

Source: *Channel News Asia*, 26 October 2015

Extract 7: The globalisation of pollution

Chinese and American researchers estimated the amount and ultimate destination of smog-forming gases and particulates that Chinese factories pumped out in their production of export goods. Up to a quarter of the sulfate pollution in the western United States wafted over from those factories. Their emissions add a day of substandard air in the Los Angeles area every year.

And those are just the fraction of Chinese emissions associated with world trade. Nations closer to China suffer much more. The health and well-being of many people in many countries, not just those choking on thick, brown air in Beijing, depend on China developing into not merely a great economic power but also one that manages its massive impact on the planet.

There are dozens of cross-border environmental issues, and they will require overcoming global political tensions and short-term economic incentives that discourage different countries from cooperating. The world has already tackled one — the phaseout of emissions that thin the ozone layer — through the highly effective Montreal Protocol. Global leaders have many more to see to.

Source: *The Washington Post*, 27 January 2014

Extract 8: Is government intervention creating the wrong type of new business?

The idea of countries taking a more interventionist approach to fast-tracking the growth of business sectors and ecosystems with high potential is gaining ground around the world. From Silicon Valley to Tel Aviv, there are examples of initiatives that were originally government funded or instigated that have now resulted in the emergence of successful, job-creating new industries.

Whilst it might be obvious which industry sectors will profit from such a future (biosciences especially), it isn't obvious how to go about hot-housing their growth. For example, what criteria define sectors of high potential? How do you go about helping such companies grow? What sorts of milestones would be needed to justify investment and who is responsible for making these happen?

The issue has been brought into focus recently by the United Kingdom (UK) Government's announcement to make £15 million available to establish new University Enterprise Zones across the country. Yet an Oxford academic has warned that too great a focus on short-term innovation could damage its long-term ability to innovate and grow – and that new policies are needed to encourage longer-cycle innovation and local production.

"Liberal market economies such as the UK and the US believe primarily in supply-side policies in which laissez-faire venture capital markets and technology-push research funding drive innovation," said Dr Hiram Samel at Saïd Business School in Oxford. "This over stimulates short-term innovation so we get thousands of app builders, but does less for the long-term, more complex innovation that yields comparative advantage and local employment and growth".

Source: *Forbes*, 11 February 2014

Questions

(a) Describe the trend in merchandise trade as a percentage of world GDP from 2000 to 2014. [1]

(b) Using the concept of opportunity cost, explain one effect on firms and one effect on the government in the home country arising from dumping by a foreign country. [6]

(c) **(i)** What evidence suggests that the world is heading towards deglobalisation? [1]

(ii) With the aid of a diagram, explain why in 2015 there was deflation despite an improvement in the trade balance as shown in Table 1. [4]

(d) Discuss how the change in exchange rate in Table 1 and measures undertaken in Extract 6 might impact Singapore's export competitiveness. [8]

(e) With reference to the data, do you agree that "economic decisions cannot be left to the

[Total: 30]

End of Paper

ANDERSON JUNIOR COLLEGE

JC2 PRELIMINARY EXAMINATION 2016
Higher 2

ECONOMICS

9732/02

Paper 2 **19 September**

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: ____/15

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

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Answer **three** questions in total.

Section A

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

1. Singapore is experiencing sluggish economic conditions. In addition, foreign worker levies will go up across the board from July 2014 and it will affect some businesses more than others.

   Discuss how a rise in foreign worker levy and sluggish economic conditions will impact the various markets for goods and services in Singapore. [25]

2. The table below shows a sampling of ticket prices at Odeon, a cinema operator in the United Kingdom (UK).

	Standard Ticket Price
Off-Peak (2D Movies) Tuesday, Wednesday, and Thursday before 5pm	£6.90
Peak (2D Movies) Tuesday, Wednesday, and Thursday after 5pm All day Friday through Sunday	£8.40
Peak (3D Movies) Tuesday, Wednesday, and Thursday after 5pm All day Friday through Sunday	£10.40

Source: http://www.movietheaterprices.com/, accessed on 18 August 2016

   (a) Explain whether this pricing policy is an example of price discrimination. [10]

   (b) Discuss if price discrimination is beneficial. [15]

3. Street lighting and the early morning rides on the Mass Rapid Transit (MRT) into the city area are provided free by the government in Singapore.

   (a) Explain the economic case for the free provision in each of the above markets. [10]

   (b) Discuss the limitations of providing MRT rides for free to achieve an efficient allocation of resources. [15]

Section B

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

4. A successful economy has been traditionally characterised by sustained positive growth rates, low inflation rates, low unemployment rates and a healthy balance of payments.

   (a) Explain the domestic and external causes of a high rate of inflation for an economy. [10]

   (b) Discuss whether the above traditional measures of success are sufficient for an economy today. [15]

5. Inclusive growth is economic growth that creates opportunity for all segments of the population and distributes the dividends of increased prosperity, both in monetary and non-monetary terms, fairly across society.

   Source: http://www.oecd.org, accessed on 10 July 2016

   (a) Explain why a government might aim to achieve inclusive growth. [10]

   (b) Evaluate the measures adopted by the Singapore government to achieve inclusive growth. [15]

6. Singapore's pattern of trade with the world has changed significantly both in terms of the countries we trade with as well as the type and volume of goods and services we trade in.

   Discuss the factors that have resulted in the changing pattern of trade of Singapore with the rest of the world. [25]

End of Paper

Sample Answers for Case Study 1

(a)	**(i)**	**Describe the trend in the share of total paid car rides for business commuters in the US.**	**[1]**
		*The **proportion** of market share for taxi rides is falling and for Uber rides is rising. [1m]*	
(b)		**Using economic theory, explain how the "surge multiplier" can address "an excessive number of Uber car ride requests."**	**[4]**
		*When too much demand for Uber car ride, there will be disequilibrium in the market where demand for Uber car rides will increase and a **shortage [1m] where quantity demanded exceeds quantity supplied** of Uber rides will be resulted at the initial price. This shortage will result to an **upward pressure on price** and this **increase in price will act as a signal [1m] for commuters to decrease their quantity demanded** for Uber rides. Uber car drivers, recognising the increase in price will also be more **incentivised to increase their quantity supplied [1m]** of Uber rides until the **new higher equilibrium is reached [1m]** where the equilibrium price and quantity for Uber rides increase to address the shortage.*	
(c)		**"Taxi drivers are not happy with the impact Uber is having on their business as Uber is attacking on all fronts."** **Discuss how the combined effects of a decrease in price for Uber car rides and a fall in petrol price may affect taxi drivers' revenue.**	**[8]**
		<u>Change in demand</u> *A decrease in price for Uber car rides means an increase in quantity demanded for Uber car rides. As mentioned in Extract 1, 'Uber is essentially synonymous with taxis", which means that Uber car and taxi rides are close substitutes. The XED between Uber car and taxi rides will be highly positive especially during peak hours {not required of H1 students to mention XED}. This means that there will be a more than proportionate fall in demand for taxi rides from D_1 to D_2 in Figures 1 and 2 below. Assuming ceteris paribus, taxi drivers' revenue will fall.* *<u>Change in supply</u>* *With a fall in petrol price, as petrol is needed for driving taxis, cost of production will fall and taxi drivers will be motivated to increase the number of taxi rides since there is an opportunity to make more profits (which is total revenue minus total cost) there will be an increase in supply of taxi rides from S_1 to S_2 as shown in Figures 1 and 2. Assuming if the demand for taxi is relatively price elastic as there are alternative transportation means such as buses, trains and Uber cars, the increase in supply ceteris paribus, will cause a fall in price of taxi rides and the quantity demanded for taxi rides will increase more than proportionately. This would mean that the*	

total revenue for taxi drivers may increase instead.

<u>Combined effect on total revenue (TR):</u>

There will be negative impact on total revenue for taxi drivers *if the fall in demand is greater than the increase in supply, as shown in Figure 1. The demand curve for taxi rides will therefore shift left to a greater extent to D_2 than the increase in supply to S_2. The outcome in taxi rides market will be a fall in equilibrium price to P_3 and a fall in equilibrium quantity to Q_3. Hence, the total revenue for taxi drivers will fall from $0P_1E_1Q_1$ to $0P_3E_3Q_3$.*

There will be positive impact on total revenue for taxi drivers *if the fall in demand is smaller than the increase in supply, as shown in Figure 2. The demand curve for taxi rides will therefore shift left to a smaller extent to D_2 than the increase in supply to S_2. The outcome in taxi rides market will be a fall in equilibrium price to P_3 but a rise in equilibrium quantity to Q_3. Hence, the total revenue for taxi drivers will rise from $0P_1E_1Q_1$ to $0P_3E_3Q_3$*

Price Per Taxi Ride

S_1 S_2

P_1 E_1

P_2 E_2

E_3

P_3

D_1

D_2 Quantity of Taxi Rides

0 Q Q_1 Q_2

Figure 1: Market for Taxi Rides – Negative impact on TR

Price Per Taxi Ride S_1

S_2

P_1 E_1

E_2

P_2

P_3 E_3 D_1

D_2

Quantity of Taxi Rides

0 Q_1 Q Q_2

Figure 1: Market for Taxi Rides – Positive impact on TR

<u>*Evaluation*</u>

Make a stand on which impact is more likely:

More likely for a fall in tax revenue because:

- *Petrol price may not form the bulk of taxi driver's cost of providing the taxi service, as mentioned in Extract 2. There are other significant costs such as taxi rental and tax as mentioned in Extract 3 where taxis are charged tax, which go to the city and the Metropolitan Transport Authority (MTA). Hence, even with a fall in petrol price, the cost of driving a taxi may not have fallen significantly and will not justify a significant fall in supply.*

- *The fall in demand for taxi rides may be greater as the fall in petrol price will also increase the supply of Uber car rides, thereby further lowering the price of Uber car rides and causing further switching away from Uber car rides to taxi rides.*

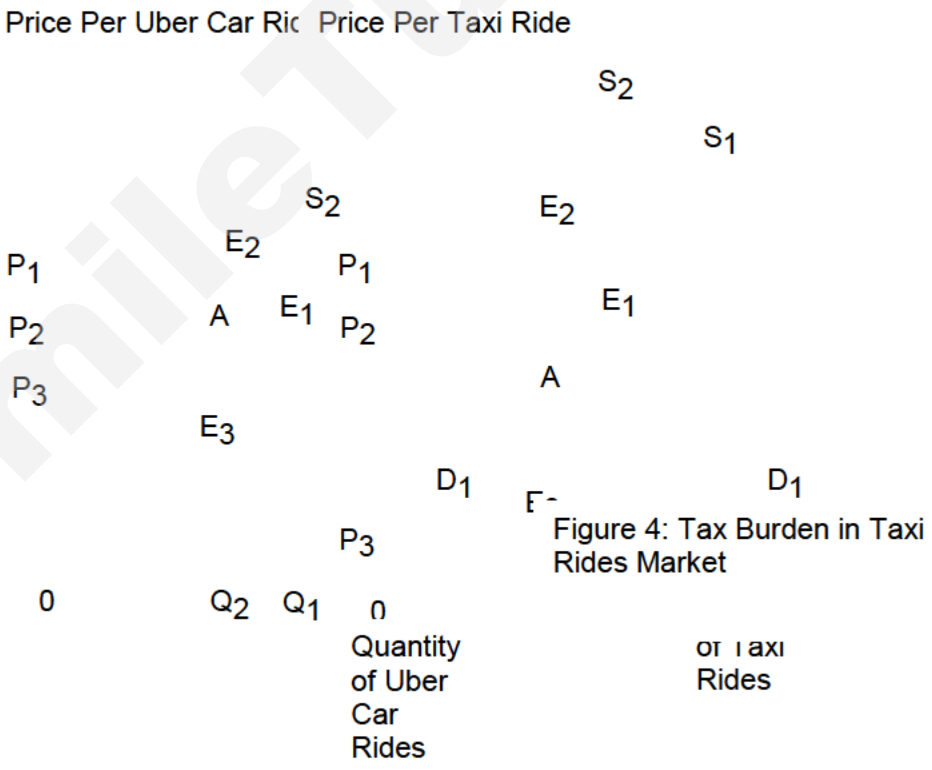
Other possible evaluative points:

- *On evaluation the taxi drivers' revenue may change depending on the substitutability between Uber and taxi rides. For instance, during non-peak hours, commuters might be indifferent between either travelling via Uber or taxi, and the XED value for Uber and taxi may be less positive, the demand for taxi rides may not fall as significantly even if the price for Uber rides fall. Hence, taxi drivers' revenue may not fall as significantly, ceteris paribus.*

- *In addition, as the above analysis encompasses the use of demand/supply and elasticities analysis, there is a need to bear in mind that ceteris paribus conditions may not hold in reality and the elasticities data may not accurately portray the degree of responsiveness of all commuters. With the complexities in the real world context, the impact on taxi drivers' revenue may also be affected by other changing economic conditions such as income of individual commuters (the use of YED (for H2 students) may then come into play) and government policies.*

Level Marks		
L3	*Good use of demand, supply and various elasticity concepts to analyse the various combined impacts on taxi drivers' revenue.*	*5-6*
L2	*An underdeveloped attempt to use the demand and supply framework to explain the combined impacts on taxi drivers' revenue.*	*3-4*
L1	*Brief explanation of demand and supply factors and its implication with errors.*	*1-2*
Evaluation Marks		
E2	*Judgement with clear justification*	*2*
E1	*Judgement without justification*	*1*

(d) (i) With reference to Extract 2, distinguish the likely price elasticity of [2]

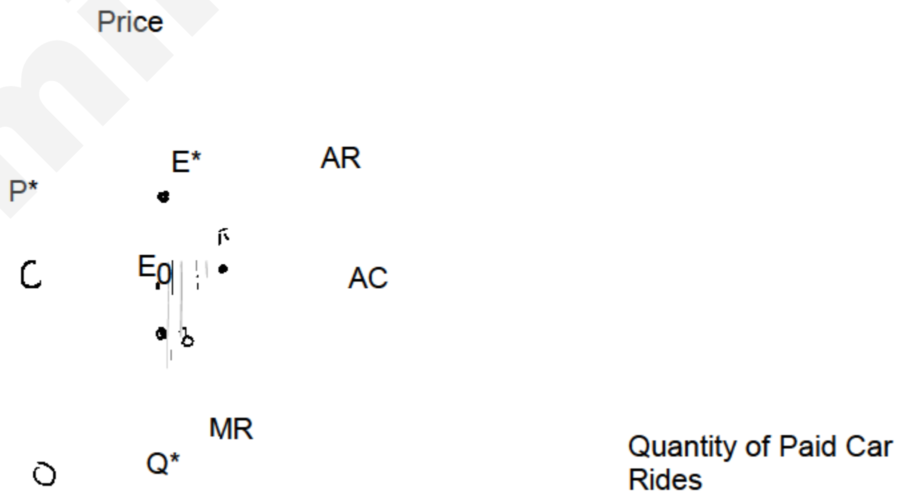
		supply between taxi and Uber car rides.	
		Supply for taxis will be relatively more price inelastic than that of Uber. [1m] *This is due to the PES determinant of mobility of factors of production identified in Extract 2 where it's mentioned that in order for a person (the factor of production [labor] that provides the taxi rides service,) to become a taxi driver, he has to pass a test and pay rental fee. As compared to Uber rides, a person [labour] can easily become an Uber driver without having his license check or the need to pass any test. [1m]*	
	(ii)	**Extract 3 mentioned that tax was imposed on taxis and Uber car rides respectively.** **Using your answer for (d)(i) and appropriate diagrams, explain the difference in tax burden for drivers and commuters between taxi and Uber car rides.**	**[5]**
		The imposition of tax will cause the supply for taxi and Uber car rides to fall and the SS curve to shift to the left [1m] as shown on both Figure 3 and Figure 4 below for the Uber rides marker and taxi rides market respectively.  Figure 4: Tax Burden in Taxi Rides Market Figure 3: Tax Burden in Uber Car Rides Market **2 marks for diagram*	

		As the supply for Uber rides is more price elastic due to the ease of becoming Uber driver to provide the service, the supply curve for Uber market will be relatively gentler in slope as compared to that in the taxi rides market. Assuming that the demand for both Uber and taxi rides are relatively more price elastic with a gentler slope in both markets, consumer will bear a greater tax burden of $P_1E_2AP_2$ to that of the Uber driver' tax burden of $P_2AE_3P_3$ as shown on Figure 2 in the Uber car rides market. [1m] As compared, in the taxi rides market; due to the relatively more price inelastic supply curve that that of demand, the consumer will bear a lesser tax burden of $P_1E_2AP_1$ than the taxi drivers' tax burden of $P_2AE_3P_3$ as shown on Figure 3. [1m]	
(e)	**(i)**	**Using Extract 4, explain the positive externality that may arise when commuting via Uber rides. [H1 only]**	**[2]**
		As mentioned from extract 4, when commuting via Uber rides, this will incentivise consumers to purchase lesser automobiles. Third parties such as pedestrians [1m] will face with external marginal benefit of lesser likelihood of vehicle accidents and a reduction in their medical bills [1m] for treatment. *OR* *As consumers commute via Uber rides and buy fewer cars, this opens up the remarkable possibility of converting parking spaces to new and environmentally sound uses. The parking spaces could be converted into parks for third parties like non-Uber users [1m] to enjoy and these non-Uber users will enjoy an external marginal benefit of healthier living with lesser pollution and a reduction in their medical bills. [1m]*	
	(ii)	**In light of the issues raised in the extracts, discuss the desirability of Uber.**	**H1:8** **H2:10**
		<u>Desirable – Greater Allocative Efficiency & Consumer Welfare</u> *In extract 1, it was mentioned that surge multiplier helps to attract more drivers to drive during peak hours. The surge multiplier works according to the theory of price mechanism and uses price as a signal to allocate resources (drivers) efficiently to meet the needs for paid car rides in the market. This may address the shortage of drivers in the short run and provides more alternatives for consumers at the market price. This raises consumer welfare and their material standard of living as there is now increase in more services available at a lower price for consumption.* *<u>Desirable – Lesser Externalities from Congestion Problem in NYC & creation of jobs</u>* *Extract 4 mentioned that if the commuters who substituted to using Uber are consumers who are previously using their private car for commuting, then this will reduce the congestion problem faced by NYC. The EMC such as higher medical bills from road accidents from negative externalities caused by over usage of road can be effectively reduced. The deadweight loss to society will be reduced as the society will be better off with introduction of Uber.* *In addition, the launch of Uber app also allows more existing car owners to be employed as Uber drivers as mentioned in extract 4. With rising*	

population in NYC, this may mean that there will be more demand for travelling via paid car rides and will lead to a rise in derived demand for more Uber drivers. In addition, with more people employed, the purchasing power of consumers will be increase and consumption will increase leading to increasing in aggregate demand. This will lead to unplanned inventory depletion and assuming US is operating with spare capacity in its economy, there will be a rise in actual growth and fall in demand-deficient unemployment in the economy. Extract 4 also mentioned that Uber brings about greater productivity and efficient use of capital in the economy, this may lead to increase in both short run and long run aggregate supply of the economy and hence even greater actual and potential growth for US.

<u>Not desirable (For H2) - Market Dominance by Uber and reduction in consumer welfare</u>

There is however, likelihood that the Uber company may act like a monopoly in future as extract 4 mentioned that Uber has the market power to compete unfairly via its use of app and surge multiplier that is not regulated by the government. Uber may end up dominating the paid car rides sector and charge a higher price of P*>MC when it has gained a huge enough market share as supported by the rising proportion of its share in the market on Figure 5. If this were to happen, there will be allocative inefficiency in the market and deadweight loss of shaded area EBA. Consumers will then have to suffer a fall in their consumer welfare due to the higher price charged as shown on the diagram below. If the barriers to entry remains high in the future with Uber getting patent for its car-booking technology yet continue to keep their average cost minimal, they may be able to earn a supernormal profits of area CP*E*E_0 at the expense of the riders, hence, worsening the equity issues in US.



<u>Figure 5: Market Dominance by Uber</u>

AR

<u>Not desirable (For H2) – Lower Dynamic Efficiency and Lesser Innovation on Paid Car Rides Services</u>

In extract 2 it was also mentioned that taxi drivers suffer a fall in revenue due to entrance of Uber. Coupled with the higher cost of providing taxi services as mentioned in the extract 2 where taxi drivers needed to incur cost of rental which may increase its average cost. And this may reduce the *profits that the taxi drivers earn and will limit the ability of the taxi company to earn supernormal profits. The taxi company will be unlikely to product innovate and there will be no dynamic efficiency in the market and there will be lesser variability in terms of paid car rides services for consumers, hence reducing consumers' overall welfare. Consumers may also suffer if the taxi company decided to charge a higher price to consumers in order to prevent a further fall in TR especially if demand for taxi is price inelastic during peak hours.*

Not desirable – Greater Allocative Inefficiency in Mass Transit Sector
In extract 3, it was also mentioned that Uber has caused a fall in taxi drivers' revenue as commuters substitute to commuting via Uber rides. This will mean that there will be lesser tax collected by government from the taxi drivers and lesser funds available for the public transport and infrastructures and may result to allocative inefficiency in the mass transit sector (under-production of mass transit and infrastructure services). Consumers' welfare may be compromised and less subsidy for mass transit may translate to higher price of mass transit and will lead to higher price for consumers, lowering their consumer welfare.

Evaluation
On evaluation, the existence of Uber is largely desirable as market dominance by Uber is unlikely. As cited in extract 4, the technology that Uber is using is not exclusive and can be easily replicated. This suggests that the paid car rides industry is highly contestable and with a relatively low barriers to entry. This will motivate more competition in the future to drive down the price of goods and services with consumers benefitting most in terms of greater variety. Society will also benefit as Uber brings about increasing rides that will lead to more sales tax collected by the government that can help improve the mass transit infrastructure in US. With more quality transit infrastructure, the non-material SOL of consumers can be further enhanced. The introduction of Uber can remain desirable as long as government regulate through stringent checks on licensing to Uber drivers. Such regulations may help address/minimise the negative externalities by ensuring that sufficient Uber drivers are providing paid car rides services by complying with safety protocols on the roads, yet not adding to the congestion problem in NYC.

Mark Scheme for H1

Level	**Marks**	
L3	*Clear discussion of desirability in terms of consumers, producers and society/government's perspectives with good reference to case evidence.*	*5-6*
L2	*Some two sided perspectives of desirability with some brief references to extracts.*	*3-4*
L1	*Brief mentioning of desirability without clear explanation or linking to context. Answer is largely one-sided with errors.*	*1-2*

Evaluation Marks		
E2	*Judgement with clear justification*	*2*
E1	*Judgement without justification*	*1*

Mark Scheme for H2

Level Marks		
L3	*Clear discussion of desirability in terms of consumers, producers and society/government's perspectives with good reference to case evidence.*	*6-8*
L2	*Some two sided perspectives of desirability with some brief references to extracts.*	*4-5*
L1	*Brief mentioning of desirability without clear explanation or linking to context. Answer is largely one-sided with errors.*	*1-3*
Evaluation Marks		
E2	*Judgement with clear justification*	*2*
E1	*Judgement without justification*	*1*

Sample Answers for Case Study 2

a (i)	**Describe the trend in merchandise trade as a percentage of world GDP from 2000 to 2014.**	**[1]**
	The merchandise trade as a percentage of world GDP generally increased. (1m)	
(ii)	**Using economic theory, account for the trend identified in (a)(i). (only for H1)**	**[2]**
	*There is an **increasing awareness** of the benefits of specialising based on **comparative advantage.** (1m) The theory of comparative advantage states that even if one country has absolute advantage in production of two goods, specialisation and trade will still benefit both countries as long as each has a comparative cost advantage, i.e. incur lower opportunity cost in producing one good. (1m) Increasing awareness of the benefits of specialising based on comparative advantage thus accounts for the increasing trade activity.*	
b	**Using the concept of opportunity cost, explain one effect on firms and one effect on the government in the home country arising from dumping by a foreign country.**	**[6]**
	Effect on firms in the home country: *Consumers in the home country turn to the cheaper goods dumped by the foreign country. As demand for the goods by the foreign firm is price elastic, the lower price charged will result in a more than proportionate increase in quantity demanded for foreign goods, increasing expenditure on these goods. Demand for domestically-produced goods will fall, lowering total revenue received by firms in the home country. (1m) The opportunity cost of continuing operation is forgone revenue from selling alternative goods that require similar inputs to production. (2m) **OR** the opportunity cost of shutting down operation is totally forgoing the revenue generated from selling the good and the brand image that the firms may have built up. (2m)* *Effect on government in the home country:* *As consumers spend less on domestically-produced goods, AD falls and hence real national income falls. The government will therefore receive lower tax revenue. (1m) The opportunity cost of cutting spending on infrastructure due to the lower revenue is forgoing higher rate of growth from better connectivity. (2m) **OR** the opportunity cost of imposing tariffs on the foreign goods is forgoing good trade relations between the countries. (2m)*	
c (i)	**What evidence suggests that the world is heading towards deglobalisation?**	**[1]**
	From 2011 onwards, there is a consistent decline in merchandise trade as a percentage of GDP. (1m)	
c (ii)	**With the aid of a diagram, explain why in 2015 there was deflation despite an improvement in the trade balance as shown in Table 1.**	**[4]**
	An improvement in the trade balance, which means an increase in X-M, will result in an increase in AD, as illustrated by a rightward shift in AD curve from AD to AD' as shown in the diagram below. This is expected to result in an increase in GPL from P to Pt. (1m) *However, Extract 6 implied that Singapore has been embracing globalisation and technology, and firms and workers are encouraged to improve and upskill themselves. With better productivity due to advancement of technology and better quality of labour, the country's productive capacity increases as illustrated by the shift of LRAS from AS to AS'. The deflation observed must have occurred due to the increase in LRAS outweighing the increase in AD, causing the GPL to fall from P to P'. (2m) Hence the*	

observed deflation from P to P' occurs.

(1m for dig.)

P

d. **Discuss how the change in exchange rate in Table 1 and measures undertaken in Extract 6 might impact Singapore's export competitiveness.** **[8]**

Table 1 showed that Singapore dollar depreciated against US dollar.

As the demand for Singapore's exports is likely to be price elastic given the availability of substitutes in the global market, reduction in foreign price of exports due to the depreciation will result in a more than proportionate increase in the quantity demanded of exports, increasing Singapore's export revenue as our price competitiveness improve.

However, given that Singapore has limited resources, demand for imported inputs is price inelastic. As depreciation will result in an increase in domestic price of imported inputs, the increase in price will result in a less than proportionate fall in quantity demanded of inputs. This results in an increase in expenditure on imported inputs, increasing cost of production. This will result in a fall in SRAS and hence a rise in GPL. Assuming Singapore's inflation rate is higher than other countries', Singapore will lose export price competitiveness.

EV: Overall, the depreciation is likely to cause an improvement in Singapore's export price competitiveness. Cost of production may have risen due to increase in price of imported inputs. However, the firms' total cost of production does not only comprise cost of imported inputs – there are rental and cost of labour as well. Hence the increase in cost of production is unlikely to totally offset the reduction in foreign price of exports due to the depreciation. The increase in cost of production will **reduce the extent of fall in the foreign price of exports** due to the depreciation, hence still maintaining export price competitiveness.

Examples of the supply-side policies mentioned in Extract 6 are 'creating the basic conditions for the markets to operate properly' and the model of tripartite partnership between unions, employers and the government.

Creating basic conditions for the markets to work properly such as protection of property rights and granting of patents to R&D outcomes encourage investment. As firms are more willing to carry out investment spending, better capital equipment in the long run will reduce cost per unit of output, improving price competitiveness of exports. The same granting of patents could also encourage R&D in product innovation, improving non-price competitiveness.

However, these measures may only impact Singapore's export competitiveness in the long run. In addition, the stated measures alone may not suffice in encouraging positive outcomes on R&D. **EV:** Other measures such as deliberate efforts to improve the quality of human capital may enhance the success of the R&D efforts.

The model of tripartite partnership between unions, employers and the government ensures that the rate of wage increase is in line with the rate of productivity improvements, hence helping to maintain competitive wages and cost and eventually, competitive prices of goods and services.

However, despite our tripartite arrangement, as stated in Extract 6, Singapore continues to face competition from both developing and developed countries. It stated that starting salaries for graduates in Japan are lower than in Singapore, making us lose price competitiveness to an extent, as our wage cost is still higher. In addition, Singapore is facing a tight labour market, making it difficult to prevent wage increases as we move towards the full employment level. Hence there is a limited extent to which such tripartite arrangement can continue to contribute to Singapore's export competitiveness.

EV: Overall, though it has been argued earlier that depreciation may help improve Singapore's export competitiveness, particularly for the service sector, it is not a long-term measure. The supply-side policies raised may have a longer-lasting positive outcome on Singapore's export competitiveness in the long run. That being said, a range of supply-side policies should be adopted and modified to continually address the main challenges facing Singapore so as to better maintain Singapore's competitiveness in the long run.

Knowledge, Application, Understanding and Analysis		
L3	For an answer with well-balanced approach and accurate economic analysis.	5-6m
L2	For an answer that is balanced but limited/underdeveloped in explanation.	3-4m
L1	Very superficial analysis. Mere listing of points. Inaccurate knowledge of concepts. Or one-sided answer.	1–2m
Allow up to 2 additional marks for Evaluation		
	Evaluative comments with justification.	2m
	Evaluative comments, unexplained.	1m

e. **With reference to the data, do you agree that "economic decisions cannot be left to the market"?** **[10]**

Thesis: Certain economic decisions cannot be left to the market.

As stated in Extract 7, gases and particulates that Chinese factories pumped out in their production of export goods affected the health and well-being of many people in many countries who are not involved in the production process in China. These are the external costs that are not taken into consideration by those who undertake the economic activity. The producers in China only consider their private cost and private benefit such as the cost of raw material and expected profits from the sale of the good respectively. If left to the free market, the level of production will be at Qe, where PMB equates PMC, as shown in the diagram below. As the producers do not take into account the external cost inflicted to third parties as a result of their production, there is a divergence between social marginal cost and private marginal cost. At Qe, SMC is greater than SMB, indicating that society values an additional unit of the good produced less than what it costs society to produce it. The socially optimum level of production is at Qs where SMB equates SMC. There is therefore a situation of over-production and this caused deadweight loss shown by the shaded area below. Hence there is a need for the government to intervene and regulate the industry.

Cost/Benefit
SMC
PMC
PMB=SMB
Quantity of exports
Qs Qe

Extract 6 also stated that globalisation and technological advances are disrupting industries and displacing workers. In light of globalisation, as another country acquire comparative advantage in the good that we're producing, Singapore will lose price competitiveness and our workers will be retrenched. Technological advances means that better capital equipment can now replace manual labour and employers may be willing to purchase those capital equipment as it can generate higher output per unit of time with less human error and also because of the rising labour costs in the country. If left to the free market, workers are who are displaced from their jobs will face structural unemployment due to occupational immobility. There is allocative inefficiency as the unemployed resource are not utilised to generate output. This situation may not self-correct itself in the free market due to imperfect knowledge of the areas of expansion in the economy or due to lack of financial ability to go for retraining. The government, having an overall view of the areas of expansion in the economy will need to step in to encourage retraining of workers in the relevant industries by lowering the cost of such retraining.

Optional: Students can also talk about income inequality as a source of market failure.

Anti-thesis: Other than intervening to address market failure, economic decisions should largely be left to the market.

Imposing quotas and tariffs to protect the local economy (Extract 5), for example will result in complacency as firms rely on the government to lower its cost and face no competitive pressure to be productively efficient. In contrast, as supported in Extract 6, with free markets, due to high degree of competition, efficiency can be attained as economic agents are under pressure to perform, and both businesses and workers have the incentives to improve. Due to the competition, firms face pressure to adopt the least-cost technique of production. This is productively efficient. As the same time, some firms may be willing to undergo R&D to improve quality of products. This will achieve dynamic efficiency.

The government may also have imperfect information in making economic decisions, possibly leading to government failure. In Extract 8, though it was stated that government funded or instigated initiatives have resulted in the emergence of successful, job-creating new industries, this approach is increasingly questioned and subjected to various cost-benefit analysis issues. As stated in Extract 8, it is difficult to determine the criteria that define sectors of high potential, difficult to identify the method to help those sectors grow, difficult to decide on the outcomes that need to be seen to justify government funding and to hold someone accountable. All these difficulties mean that it is highly possible that a lot of government funding may be allocated to certain sectors (than is necessary) and that these sectors may not generate a high enough returns to justify the use of government revenue. And this inevitably means that the country would incur a high opportunity cost of the use of such funds, crippling the country's ability to improve other aspects of living such as spending on healthcare and education.

In addition, as stated in Extract 8, too much of government focus on short-term innovation may damage long-term ability to innovate and grow. This could possibly be due to high amount of government revenue required to fund such industries, as analysed earlier. This could 'damage long-term ability to innovate' due to either of the following reasons: the government's ability to maintain such government-driven approach is limited in the long run due to rapid use of government budget and lack of returns on funding or the fact that too much government-driven projects make it hard for innovation to come from the private sector as there isn't much support for free market innovations through appropriate grants or incentives.

Conclusion: Though there is certainly a case for government intervention in the free market especially when it comes to addressing market failure and attaining macroeconomic objectives especially in periods of poor economic outlook or in situations of unfair competition like dumping, there is a limit to which the government should intervene under other circumstances as it may still be subjected to government failure due to imperfect information. In addition, as stated in Extract 6, governments cannot generate wealth by themselves and need to use the power of free markets to their advantage. This means that certain economic decisions should still be left to the free market. Nevertheless, even so, **the government's role of creating "the basic conditions for the markets to operate properly" (Extract 6) stays.**

For H2

Knowledge, Application, Understanding and Analysis		
L3	For an answer with well-balanced approach. There is good reference to case material, backed with adequate economic analysis.	7-8m
L2	For an answer that is balanced but limited/underdeveloped in explanation. There is some reference to case material.	4-6m
L1	Very superficial analysis. Mere listing of points. Inaccurate knowledge of concepts. Or one-sided answer.	1–3m
Allow up to 2 additional marks for Evaluation		
E2	Evaluative comments with justification.	2m
E1	Evaluative comments, unexplained.	1m

For H1

Knowledge, Application, Understanding and Analysis		
L3	For an answer with well-balanced approach. There is good reference to case material, backed with adequate economic analysis.	5-6m

L2	For an answer that is balanced but limited/underdeveloped in explanation. There is some reference to case material.	3-4m
L1	Very superficial analysis. Mere listing of points. Inaccurate knowledge of concepts. Or one-sided answer.	1–2m
Allow up to 2 additional marks for Evaluation		
E2	Evaluative comments with justification.	2m
E1	Evaluative comments, unexplained.	1m

Essay Q1

1. Singapore is experiencing sluggish economic conditions. In addition, foreign worker levies will go up across the board from July 2014 and it will affect some businesses more than others.

   Discuss how a rise in foreign worker levy and sluggish economic conditions will impact the various markets for goods and services in Singapore.
   [25]

Schematic Plan for Question 1

Sluggish economic conditions

Increase in foreign workers levies

Fall in demand for normal goods

Increase in demand for inferior goods

Fall in supply

Fall in equilibrium price and quantity

Increase in equilibrium

Increase in equilibrium price and a fall in quantity

Normal goods

Combined

Inferior goods

Decrease in supply and a fall in demand

Decrease in supply and a rise in demand

Equilibrium price uncertain and fall in equilibrium quantity

Increase in equilibrium price and equilibrium quantity to be uncertain

Fall in SS > Fall in DD

Fall in SS< Fall in DD

Using YED <1

Using YED >1

Increase in equilibrium price and a fall in equilibrium price

Fall in equilibrium price and fall in equilibrium quantity

Total expenditure

Fall in total expenditure

Intro

- Define demand and supply
- Define income elasticity of demand
- State that there are many possible effects when looking at combined effects of sluggish economic conditions and a rise in foreign workers levy.

Main Body

- **Increase in foreign worker levy affect supply of goods and services**
- Explain how rise in foreign worker levy cause a fall in supply of both goods and services
- With a rise in foreign worker levy, there will be a rise in cost of production, and a fall in profits.
- Profit-maximising producers are less willing and able to supply goods and services that will in turn result in a fall in supply.
- This is represented in Figure 1 by a fall in supply shown by the leftward shift of the supply curve from SS0 to SS1.

- Price adjustment process [only need to do it once!]
- With a fall in supply, this would lead to a shortage in the free market, hence consumers would bid up prices and place upward pressure on prices on goods, such as higher goods prices.
- As price rises, quantity demanded falls while quantity supplied rises.
- Price in the free market keeps on rising until shortage is eliminated and there will be a fall in equilibrium quantity from Q0 to Q1.
- Impact on both goods and services will be a rise in equilibrium price and a fall in equilibrium quantity.

- **Sluggish economic conditions affect the demand for goods and services**
- **Explain how sluggish economic conditions will lead to a fall in demand for normal goods**
- With sluggish economic conditions, economy is not picking up and it might lead to a fall in national income
- It might lead to a fall in purchasing power of consumers

- Thus, this leads to a fall in demand for normal goods and services
- Impact on normal goods and services will be a fall in both equilibrium price and equilibrium quantity

- **Explain how sluggish economic conditions will lead to an increase in demand for inferior goods**
- As with the fall in purchasing power of consumers
- They will opt for inferior alternative to replace their existing purchases
- Thus, this will lead to an increase in demand for inferior goods and caused an increase in equilibrium price and equilibrium quantity.

- Having seen the effects on single shifts, now we will proceed to explain effects on combined effects of double shifts.

- **Looking at context of inferior goods, there will a rise in demand a fall in supply**
- Using the example of 2nd hand car markets,
- With the sluggish economic conditions, there will be a rise in demand for 2nd hand cars as it is a cheaper alternative to new cars and at the same time, there will be fall in supply as cost of productions have increased
- Thus, with the combined effects of these two shifts, the final outcome will be increased in equilibrium price for sure and uncertain effect on equilibrium quantity.

- **Looking at context of normal goods, there will be fall in both demand and supply**
- **Looking at the context of necessities**
- With the sluggish economic conditions, there will be small fall in demand and a bigger fall in supply in the context of new HDB flats
- The YED value will be less than one as the demand for HDB flats are income inelastic and causing a small fall in demand for HDB flats
- The effect of the increased in foreign workers levy is greater as the construction of these new HDB flats requires many foreign workers
- Thus, the fall in demand is less than the fall in supply as shown in fig 2 below.

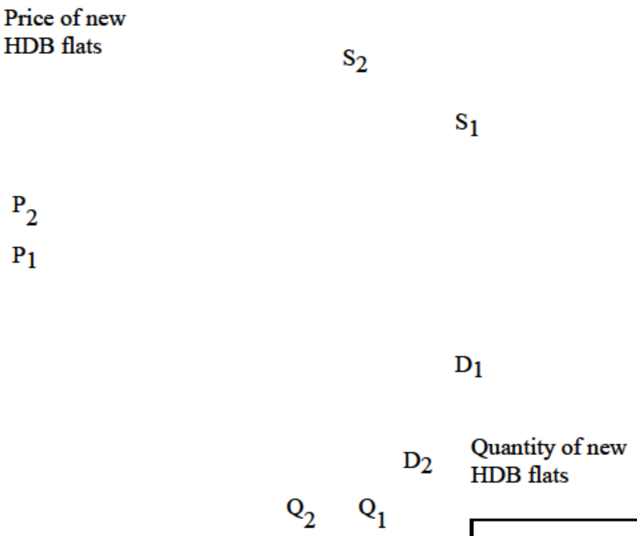


Fig 2: Mkt for new HDB flats

- Effect on this market as shown above, there will a fall in equilibrium quantity from Q1 to Q2 and an increase of equilibrium price from P1 to P2. As the same time, there will be a fall in total revenue.

- **Looking at context of normal goods, there will be fall in both demand and supply**

- **Looking at the context of luxury goods**
- Looking at 5 stars hotel services
- Due to a large fall in demand as the demand for luxury hotel is income elastic and a smaller fall in supply as foreign workers are not the only cost consideration for hotels.
- Hotel still need to account for electricity bills, food costs and land rental costs and foreign worker levy might be just a small part of their total cost.
- Impact: fall in both equilibrium price and quantity and a fall in total revenue as shown in fig 3.

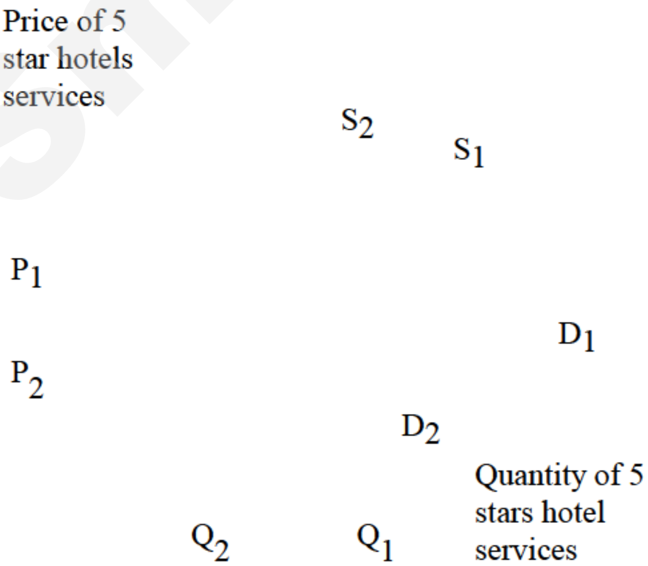


Fig 3: Mkt for 5 stars hotel services

- **Various factors in SG impact different markets differently.**
- Luxury goods experience a fall in equilibrium price and quantity, while inferior goods experience the opposite.
- The equilibrium quantity of necessities fall but the equilibrium prices increase.
- While the extent of the changes in price and quantity in the different markets differ

due to the differences in elasticities, the markets that depend heavily on foreign workers are likely to be affected more than markets that do not.

- **In the long run**, the impact on different markets is also likely to vary due to changes in other factors, such as possible government intervention.
- With a further worsening of economic conditions, it is likely that demand for all goods and services in SG will fall due to worsening consumer confidence.
- Thereby negatively reducing price and quantity, as well as total revenue.
- Or the impact might not hold true as elasticity values are based on past surveys and might not get true response
- Thus, without accurate and reliable data from elasticity values, the various effects might not hold true.

Levels	Descriptors	Marks
L1	Some explanation of demand and supply changes without looking into elasticity concepts.	1-9
L2	Sufficient explanation of demand and supply changes impacting at least 2 markets and some attempt at looking into elasticity concepts	10-14
L3	Detailed explanation of demand and supply changes impacting 3 markets, looking into goods and services markets. Good attempt at explaining impact using at least 2 elasticity concepts.	15-21
E1	Mainly unexplained judgement	1-2
E2	Judgement based on analysis	3-4

Essay Q2

2. The table below shows a sampling of ticket prices at Odeon, a cinema operator in the United Kingdom (UK).

	Standard Ticket Price
Off-Peak (2D Movies) Tuesday, Wednesday, and Thursday before 5pm	£6.90
Peak (2D Movies) Tuesday, Wednesday, and Thursday after 5pm All day Friday through Sunday	£8.40
Peak (3D Movies) Tuesday, Wednesday, and Thursday after 5pm All day Friday through Sunday	£10.40

Source: http://www.movietheaterprices.com/, accessed on 18 August 2016

(a) Explain whether this pricing policy is an example of price discrimination. [10]

Definition of price discrimination: when a producer charges different prices for different units of the same commodity for reasons not associated with differences in cost.

Conditions for price discrimination to occur: market power, markets must be separate and no resale of the good should be possible, price elasticity of demand must differ in each market.

<u>P1: The pricing policy is an example of price discrimination</u>

The cost of providing 2D movies is the same whether it is during the peak period or off-peak period. The costs include the rental for the cinema space, the payment for rights to the movie, and for general upkeep of the cinema.

There is market power because there are, presumably, only a few, large operators. The high start-up costs involved result in high barriers to entry and a lack of competition. These operators would have price-setting ability.

The markets can clearly be separated according to timing, and no resale is possible because a ticket to a particular show cannot be used to gain entry to another show at a different time.

The demand for movies during off-peak periods would usually come from students or adults with flexible working hours. Thus, their demand is price elastic as their schedule allows them to choose many other movie timings (large availability of substitutes). The demand for movies during peak periods on the other hand would come from students or adults with fixed schedules that do not allow them the flexibility of watching movies before 5pm on Tuesdays to Thursdays (few substitutes available).

Hence, there is price discrimination between the different show times for 2D tickets.

P2: The pricing policy is not an example of price discrimination

2D and 3D movies can be considered as different commodities. 3D movies provide users with a more realistic experience of the movie by allowing viewers to perceive depth as well. The costs of screening 3D movies are also higher because of the more advanced projectors required. Hence, the price difference between 2D and 3D movies are justified and not due to price discrimination.

The price difference between peak and non-peak periods can also be justified by differences in costs. During peak periods, cinema operators will need to hire more manpower thus the marginal cost is higher.

The higher price for peak period tickets may be due to higher demand. More consumers would be available to watch a movie after 5pm and during the weekends compared to before 5pm on weekdays. This results in a higher equilibrium price during peak periods. Hence, the price difference between different show times for 2D movies is due to market forces and is not a deliberate business practice (not price discrimination).

Conclusion

In conclusion, there is sufficient reason to believe that the price differences are not a result of price discrimination. (Students can also conclude otherwise or state that it depends on certain factors).

Knowledge, Application, Understanding and Analysis		
L3	Use of economic analysis to give a balanced answer why this is and is not a case of price discrimination with good application of theory to the context of the question set	7 – 10m
L2	Some attempt to use economic analysis to give a balanced answer but analysis is lacking or undeveloped. Weak application to context.	5 – 6m
L1	Largely descriptive answers of price discrimination theory and mere listing of the conditions for price discrimination	1 – 4m

a)

(b) Discuss if price discrimination is beneficial. [15]

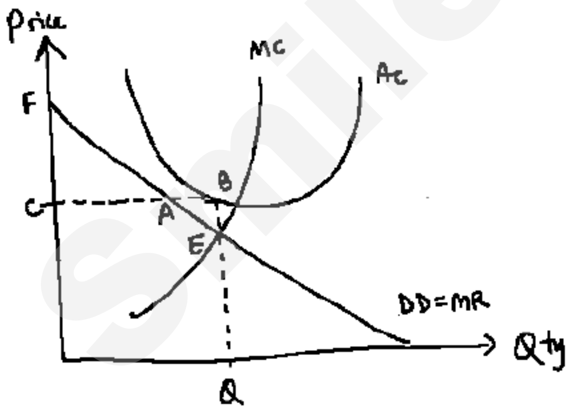
Briefly explain the three types of price discrimination and state that the benefits and disadvantages of price discrimination will be analysed based on its impact on consumers, producers and society.

P1: Price discrimination is beneficial

Price discriminating firms may produce goods or services which would otherwise not have been produced by a single-price monopolist.

- If average cost is higher than revenue at all levels of output, a single-monopolist would not want to produce. In the case of perfect price discrimination, in which every unit is sold at a different price, the MR curve will now be identical to the DD curve. The firm will produce up to the quantity of output where MC = MR (the same quantity of output as the firm in perfect competition).

- Firms would produce as long as ACF > ABE (total revenue exceeds total cost) → consumers welfare increase because of the increase in variety of goods and services available and producers gain profits which would not have been possible without discrimination. [Alternatively, students may show how charging different prices to different groups under third degree price discrimination leads to an overall increase in total revenue.]



- These profits could then be used to innovate and improve the quality of goods/variety of goods → consumer welfare increases.

Price discriminating firms may lead to output being produced at the allocatively efficient level.

- Since output is at the point at which P=MC, it is at the allocatively efficient level. Therefore, price discrimination is beneficial to society.

The discriminating firm can charge a lower price for some people which would otherwise not be possible under a single-price monopoly. Inequity can be reduced.

- For some consumers, the price of the good may take up a large proportion of income. Eg for students, the price of movie tickets would take up a large proportion of their allowance. Under price discrimination, they would be charged a lower price of £6.90 instead of £8.40 since their demand for movies is price elastic. Hence, consumer surplus for this group increases. They might have been unable to afford the movie tickets if they were sold at a single profit-maximising price.
- Consumers with price inelastic demand would pay a higher price. Eg working adults for whom the tickets take up a small proportion of their income. The consumers who are better able to afford the good are charged a higher price → more equitable.

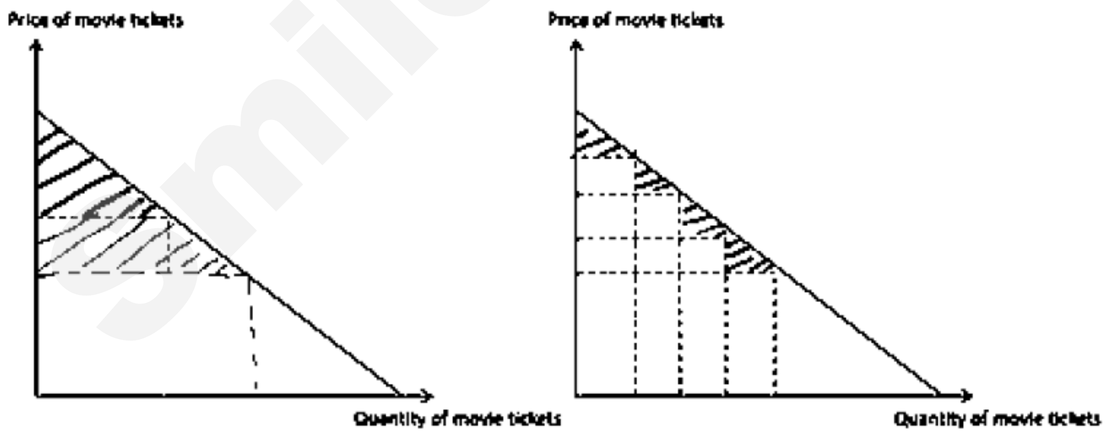
Output under price discrimination will generally be larger than under a single-price monopoly.

- With larger levels of output, firms are also able to reap more significant economies of scale → average cost of production decreases → increase in profits and reduction in productive inefficiency.

P2: Price discrimination is not beneficial

The ability to charge multiple prices gives the firm the opportunity to capture some or the entire consumer surplus (shaded areas).

- The more different prices that can be charged, the more the firm will be able to increase total revenue at the expense of consumers.



- Even though it is allocatively efficient, consumer surplus is completely transferred to the producer. Firms experience an increase in profits at the expense of consumers. This is an undesirable redistribution of income in society.
- Resources are also wasted as producers segregate markets eg manpower required to check details of tickets and ensure that the correct tickets are used to gain entry.
- Some consumers would have to pay higher prices than under a single-price monopolist → consumer surplus falls for this group.

Price discrimination in international markets can lead to a loss of consumer welfare in the long run.

- Dumping is where exports are sold at prices below the marginal costs of production. Consumers in the domestic market of foreign firms will pay a higher price than those in the overseas market. Firms in the overseas market would be driven out of the market. Once the foreign firms gain monopoly power, they may raise prices in order to maximise profits in future. Consumers would experience a fall in consumer surplus and consumer welfare.

Evaluation

The desirability of price discrimination depends on the good in question. In the case of medicine, for instance, it would be more desirable to allow firms to price discriminate because poorer consumers would otherwise be deprived of better health.

Price discrimination is desirable from the firm's point of view. For consumers, price discrimination tends to be undesirable in the short run due to the loss of consumer surplus. However, with improvements in technology and reduction of barriers to entry, firms face more competition nowadays. This would incentivise them to invest their supernormal profits in improving the quality of their products and processes. Thus, consumers can benefit from price discrimination in the long run.

Any other well-supported insight on this issue.

Knowledge, Application, Understanding and Analysis		
L3	A balanced answer that covers the positive and negative impacts on consumers, producers and society. Answer is well-developed and supported by economic analysis.	9 – 11m
L2	For a balanced answer that shows some scope of coverage but does not cover all groups. Answer is undeveloped but conceptually sound.	6 – 8m
L1	One-sided answer which is mainly descriptive or has conceptual errors. Largely descriptive answers of price discrimination theory and mere listing of the conditions for price discrimination	1 – 5m
E2	Evaluative comment that is justified.	3 – 4m
E1	Evaluative comment that is not justified.	1 – 2m

Essay Q3

3. Street lighting and the early morning rides on the Mass Rapid Transit (MRT) into the city area are provided free by the government in Singapore.

(a) Explain the economic case for the free provision in each of the above markets. [10]

(b) Discuss the limitations of providing MRT rides for free to achieve an efficient allocation of resources. [15]

(a) Introduction

A government may provide a good or service without charge because it improves resource allocation in the market.

Street lighting

- Street lighting is a public good with the two properties of non-rivalry in consumption and non-excludability.
- Property of non-rivalry in consumption: Additional users of street lighting do not diminish the benefit to other users. This also implies that the total cost of lighting remains the same whether one or more users use the light ie the marginal cost (MC) to society of an additional user is zero.
- Property of non-excludability in consumption: street lights shine for all. It is impractical to allocate lighting only to people who pay for it. The cost of implementing such an arrangement if at all possible, will be too costly to be feasible.

Implications

- There is no market for street lighting. Due to non-excludable nature, everyone will wait for someone to pay for street lighting (free-rider problem). Thus there is no effective demand to spur firms to supply street lighting.
- Since the MC of lighting to an additional user is zero, the efficient price is zero. Reason: Even if a price could be imposed upon users, it would deter some from using street lighting that does not impose any further cost to society. A potential gain in consumer welfare is not realised: society is not maximising its welfare if a price is charged because consumption is inefficiently restricted.
- Hence, for the above reasons, there is an economic case for government to provide street lighting free.

Early morning rides

- Commuters taking early morning train rides generate positive externalities beside private benefits (more comfortable ride due to less crowding and higher chance to find a seat)
- Positive externalities: early commuters generate sales for shops (3^{rd} party) located near work places as they are likely to have breakfasts before reporting for work or do some shopping.

Implications

- A subsidy equal to EMB to increase consumption to Qs where MSB=MSC will improve allocative efficiency.
- If EMB equal to *ab* as in figure 1, then a subsidy equal to ab will shift PMC curve to PMC=SMC with subsidy, and the efficient price will be zero and Qs where SMB=SMC will be consumed. This is the economic case for zero pricing for early MRT rides.

a

b

Knowledge, Application, Understanding and Analysis		
L3	Both the cases for street lightings and free MRT rides are well-explained and justified. Diagram for zero pricing of early MRT rides	7 – 10m
L2	Both the cases for street lightings and free MRT rides are explained and justified. No diagram for zero pricing of early MRT rides	5 – 6m
L1	For an answer that contains conceptual errors and some irrelevant points.	

(b) Discuss the limitations of providing MRT rides for free to achieve an efficient allocation of resources. [15]

<u>Introduction</u>

- There are some limitations of providing MRT rides for free to achieve an efficient allocation of resources.

- (i) Due to imperfect knowledge on the part of government the positive externality could be significantly over-estimated (*estimated ab versus actual bc)*. Reason: Hard to assess divergence between PMB and SMB due to changing demand condition in the rail transport market eg external benefit of ac difficult to assess due to uncertainty over the extent commuters will shop/have breakfast. A subsidy of ac causes over-consumption by Q1-Qs resulting in a deadweight loss (area abd) greater than the deadweight loss at Qe without subsidy which is the area edf. In this case, there is no improvement in the allocation of resources.

Cost/benefit

- (ii) The subsidy uses tax revenue that could be used for spending in other areas (eg

d

healthcare). The opportunity cost of forgone healthcare services could be greater than the benefits of removal of the deadweight loss caused by the externality of early morning rides. This results in loss of allocative inefficiency.

- (iii) The government may be compelled to raise taxes (eg GST) to finance the subsidy but then this cause supply curves to shift left in other markets and create deadweight losses. Thus create inefficient outcomes in other markets. And moreover, it conflicts with the goal of equity if the poor are disadvantaged by the relatively higher tax burden on them.

- (iv) Even if the government early morning free-ride scheme works to improve efficiency of use of train services, it does not however incentivise the rail transport providers to provide better/improved services (eg increase supply of carriages) or to innovate to reduce congestion during peak hours.

<u>Conclusion</u>

- Free MRT rides for early morning travel may or may not achieve an efficient allocation of resources in the market for rail transport. It depends on ability of the government to assess benefits and costs reliably. Moreover, achieving allocative efficiency may conflict with the goal of equity if taxes have to be raised to sustain the fiscal burden. However, this is not necessarily inevitable: if the economy continues to grow, higher tax revenue collection can fund the train subsidy without a trade-off (ie without sacrificing other areas of government spending).

- To avoid paying for the scheme and the distortionary effects of the taxes, perhaps the government should extract a larger portion of the rail transport providers' profit as tax as a means to fund the free early morning ride scheme or specify (regulate) that the firms set aside a certain portion of their profits aside to fund the free-ride scheme.
- A sustainable solution might be for the government to encourage more firms in the city area to begin work earlier than the usual starting 9am time period. This will help increase the efficient use of train services as the passenger load is spread out over a longer duration of time period.

Knowledge, Application, Understanding and Analysis		
L3	Discussion of the free early ride scheme covers at least 3 points of limitations (scope) and well-explained (depth). Accompanying diagram is well-labelled and referred to as part of an analytical answer.	9 – 11m
L2	Discussion of 2 points of limitations is adequately made and analysis applied mostly in a relevant way. Diagram may be missing.	6 – 8m
L1	A limitation identified with some explanation hampered by incorrect content knowledge. Wrong QA.	1 – 5m
Allow up to 4 additional marks for Evaluation		
E2	Judgment is based on economic analysis and adequately substantiated	3 – 4m
E1	For an unexplained assessment, or one that is not supported by economic analysis.	

Essay Q4

4. A successful economy has been traditionally characterised by sustained positive growth rates, low inflation rates, low unemployment rates and a healthy balance of payments.

   (a) Explain the domestic and external causes of a high rate of inflation for an economy. [10]

   (b) Discuss whether the above traditional measures of success are sufficient for an economy today. [15]

(a)

Possible domestic causes

- Demand-pull inflation (diagram)
    - Rapidly rising domestic income
        - E.g., China and its high growth
        - Significant rise in C as a result of higher income + consumer optimism → coupled with rise in I in response to + in anticipation of high C
        - If economy is near or at full-employment → significant upward pressure on prices of scarce resources → higher prices of g/s → increase GPL significantly
- Cost-push inflation (diagram)
    - Implementation of / A significant rise in GST
        - E.g., Malaysia implement GST across many g/s in 2015
        - Increases all firm's production costs → passed on in the form of higher prices of g/s → increase GPL significantly
    - Domestic government policies
        - E.g., Singapore tightened foreign worker policies in recent years
        - Increase in foreign worker levies + reduction in Dependency Ratio Ceiling (DRC) → higher cost of labour → higher COP → Singapore's falling birth rate and increasing reliance on foreign workers → significant impact expected for increase in COP → passed on in the form of higher prices of g/s → increase GPL significantly
        - Heightened restrictions in entry requirement for foreigners → fall in SS of workers in Singapore → drive up wages → higher COP → passed on in the form of higher prices of g/s → increase GPL significantly

Possible external causes

- Demand-pull inflation (diagram)
    - Global economic recovery
        - E.g., Post-Global Financial Crisis of 2008/09
        - Economies around the world start to pick up in their economic growth → rising incomes around the world → rising X of countries such as Singapore → small and open economy → significantly drives up AD → assuming near or at full-employment → increase GPL significantly
    - Rapidly rising income of other countries
        - E.g., emerging economies like China and India
        - Significant rise in M as a result of higher income + consumer optimism → significant rise in X for countries exporting to such economies →

significantly drives up AD → assuming near or at full-employment → increase GPL significantly

- Cost-push inflation (diagram)
    - Increase in oil prices
        - E.g., sky-high oil prices in 2008
        - High price of oil → fuel for power generation + fuel for most transportation + factor of production for many g/s → rise in COP of most g/s → increase GPL significant (imported inflation) for countries which are net oil-importers (e.g., Singapore)
    - Similarly, rises in other commodity prices

Other acceptable answer includes:
-An increase in FDI (external cause) leading to investment in capital goods may bring about an increase in AD assuming economy operating at full employment level.

Knowledge, Application, Understanding, Analysis		
L3	A well-developed explanation of at least 3 causes, which encompasses both domestic and external causes. There is also consideration of both demand-pull and cost-push inflation. Diagrammatic analysis and concrete examples are also used. There is clear attempt to explain why "high".	**7-10**
L2	An underdeveloped consideration of at least 2 causes, with at least one domestic cause and one external cause. There might be inconsistent/incomplete attempts to use diagrammatic analysis and/or concrete examples.	**5-6**
L1	A weak explanation overall. May be lacking in scope and depth. Multiple errors may be present. May have rehearsed answers to the question as a "demand-pull" vs "cost-push" question for this question. No use of diagrams and examples.	**1-4**

(b)

Introduction

- "Traditional measures of success" → growth rates, inflation rates, unemployment rates and balance of payments
- However, today more measures of success are needed, e.g., measurements of income distribution (e.g., Gini coefficient) and non-material SOL (e.g., pollution level, literacy rates, life expectancy, etc)

Thesis: Traditional measures of success continue to be useful.

- Measure of economic growth
  - Definition of economic growth (actual and potential)
  - How is it measured?
    - Typically measured using GDP
      - Define GDP (per capita)
    - Typical target: sustained + positive
  - Why is measuring economic growth important?
    - Related to SOL
      - "Positive" → indicates increase in amount of g/s produced for an economy → more g/s available for consumption → improve mSOL
      - "Positive" → also means rising household incomes → greater purchasing power to satisfy material needs → improve mSOL
      - "Sustained" → actual and potential growth in tandem → continued consumption levels over time
      - May have some impact on nmSOL too → if greater tax revenue collected and channelled towards sectors like education and healthcare
    - Positive impact on other macroeconomic indicators
      - Reduces demand-deficient unemployment with actual growth
      - Reduces demand-pull inflation with potential growth
  - Therefore, measuring economic growth continues to be useful

- Measure of unemployment
  - Definition of unemployment
  - How is it measured?
    - Typically measured using unemployment rate
      - Define labour force: available for and actively searching for work
      - Define unemployment rate
    - Typical target: low
  - Why is measuring unemployment important?
    - Related to SOL
      - "Low" → minimise wastage of human resources → production as close to the PPC as possible → maximise production of g/s in an economy → ensures mSOL not compromised
      - "Low" → reduce government payment of unemployment benefits + allow more tax collection → reduce strain on scarce government resources + channel towards sectors (e.g., education, healthcare) that may yield positive outcomes on nmSOL
    - Positive impact on other macroeconomic indicators

- High unemployment rates often related to social unrest → "low" will help maintain social stability → may be attractive to foreign investors → positive impact on growth (through FDI, I and AD)

  - Therefore, measuring unemployment continues to be useful

- Measure of inflation
  - Definition of inflation
  - How is it measured?
    - Typically measured using inflation rate
      - First CPI, then changes in CPI over time
    - Typical target: low
  - Why is measuring inflation important?
    - Related to SOL
      - "Low" → income more likely to rise faster than price levels → increase in real GDP (per capita) → value of money is maintained → able to enjoy more g/s
    - Positive impact on other macroeconomic indicators
      - "Low" → reduces uncertainty in decision making → firms can make investment plans more accurately → investor confidence → further stimulate growth (through FDI, I, AD) and unemployment
  - Therefore, measuring inflation continues to be useful

- Measure of BOP
  - Definition of BOP
  - How is it measured?
    - Typically measured using BOP
    - Typical target: healthy (i.e., not large and persistent BOP deficit)
  - Why is measuring BOP important?
    - "Healthy" → indication of external stability (long-term goal) + avoid the problems of large and persistent BOP deficit (example)
    - Positive impact on other macroeconomic indicators
      - Improves investor confidence → further stimulate growth (through FDI, I, AD) and unemployment
  - Therefore, measuring BOP continues to be useful

Antithesis: Not enough to rely on traditional measures; other supplementary measures are needed

- Measure of income distribution
  - Definition of income inequity
  - How is it measured?
    - Gini coefficient (briefly describe what it is)
    - Should aim for: low value
  - Why is measuring income distribution important today?
    - ***Why traditional measures of success may be too narrow***: success of an economy may not mean an even distribution of benefits across individuals in the country → income growth concentrated in the hands of a minority
    - ***Why important <u>today</u>***: globalisation → increased trade, capital and labour flows → further aggravates the income gap (e.g., between workers in sunrise/sunset industries, between low-skilled and high-skilled workers)
    - Price mechanism allocates g/s to those who are willing and able to pay → resources will inevitably be channelled to production of g/s demanded by the rich while the poor may be unable to meet even basic needs

        - Extreme income inequity can lead tensions in society between the haves and the have-nots → social stability and impact on FDI
    - Therefore, measuring income distribution should supplement traditional measures of success

- Measure of extent of negative externalities generated
    - Definition of negative externalities
    - How is it measured?
        - Depends on what the negative externalities are, e.g., level of pollution
        - Should aim for: low value
    - Why is measuring extent of negative externalities generated important today?
        - ***Why traditional measures of success may be too narrow***: success of an economy can come at the expense of environmental well-being, e.g., resource-depletion, pollution
        - ***Why important today***: increasingly materialistic society → rising demand for ever more g/s (globally) → translates into ever-rising demand for non-renewable resources + massive rise in production of g/s which may produce negative externalities
        - Increasing global economic activity is placing heavy stresses on the Earth's natural systems → rapidly rising carbon emissions + global warming at alarming levels + depletion of natural resources → negatively impacting nmSOL
    - Therefore, measuring extent of negative externalities generation should supplement traditional measures of success

- Measure of extent of healthcare provisions
    - How is it measured?
        - Life expectancy; infant mortality rates
        - Should aim for: high; low
    - Why is measuring extent of healthcare provisions important today?
        - ***Why traditional measures of success may be too narrow***: traditional measures tend to focus more on mSOL and emphasise less on nmSOL
        - ***Why important today***: people living longer due to rising global incomes and access to better nutrition → people are living longer lives → quality of life can only be enjoyed with a long, healthy life → quality of healthcare matters now more than before
        - Poor healthcare provision may result in chronic illness and spread of diseases → need to measure standard of healthcare available to individuals in an economy to get a full picture of SOL
        - Healthcare is also a fundamental driver of economic growth → high level of productivity + attractive to FDI → increase both AD and AS → further augment mSOL
    - Therefore, measuring extent of healthcare provisions should supplement traditional measures of success

- Other possible measures:
    - Access to education (literacy rates)
    - Composition of GDP (for example, defence expenditure as percentage of GDP)
    - Level of crime and social unrest
    - Level of political stability and democracy/freedom
    - Amount of leisure hours
      → must use the same stems of elaboration

Conclusion/Evaluation

- Make a stand: traditional measures of success continue to be relevant, but one should also consider supplementing them with other measures for a more holistic picture of a country's development
- Justify: traditional measures tend to be rather narrow in scope and tend to neglect income distribution and aspects of nmSOL, the latter two of which are gaining traction in the form of "inclusive growth" and "sustainable development"
- Extension
    - Weigh importance of measures
        - Developing countries may still continue to place more emphasis on traditional measures, since they tend to be still struggling to keep these stable and favourable in the longer term
        - Developed countries, having achieved long-term stability in traditional measures, may turn their focus away from "growth at all cost" towards a more socially-responsible trajectory of development
    - Recommendation
        - Composite measures that aim to marry both traditional and updated measures of success may be more appropriate, e.g., HDI aims to capture both mSOL (through PPP-adjusted real GNI per capita) and nmSOL (proxied by life expectancy at birth, mean of years of schooling for adults and expected years of schooling for children), though it is limited by a lack of measure of income distribution

Knowledge, Application, Understanding, Analysis		
L3	A well-developed and balanced discussion. Consideration of at least 3 traditional measures and at least 3 other measures of success for the top marks in this range. Explicit mention on what the specific "measures" of success might be. There should also be clear explanations of why the traditional measures may be inadequate, and why alternative/ supplementary/complementary measures may be needed today.	**9-11**
L2	An underdeveloped but balanced explanation which seeks to explain why the various measures of success may be valid. There is attempt to explain what to measure, how to measure (must link to macroeconomic indicators) and why the need to measure (can be linked to macroeconomic goals).	**6-8**
L1	A cursory explanation overall. Multiple conceptual errors may be present. One-sided.	**1-5**
Allow up to 2 additional marks for Evaluation		
E2	Explained assessment based on economic analysis	**3-4**
E1	Unexplained assessment not supported by analysis	**1-2**

Essay Q5

"Inclusive growth is economic growth that creates opportunities for all segments of the population and distributes the dividends of increased prosperity, both in monetary and non-monetary terms, fairly across society."
Source: http://www.oecd.org, accessed on 10 July 2016

(a) Explain why a government might aim to achieve inclusive growth. [10]

(b) Evaluate the measures adopted by the Singapore government to achieve inclusive growth. [15]

Introduction:
Governments are concerned about achieving sustainable economic growth, full unemployment, low inflation, a healthy balance of payment (BOP), efficiency and equity. By aiming to achieve inclusive growth, countries are likely to achieve these economic objectives.

Body:

Higher employment and productive efficiency

- Inclusive growth means sustainable growth by creating job opportunities for all. This means reducing both demand deficient unemployment and structural unemployment.
- An increase in actual growth due to inclusive growth indicates an increase in aggregate demand (AD). In order to meet the increase in AD, firms will have to employ more factors of production including labour. This leads to an increase in demand for labour and a fall in demand deficient unemployment.
- In the pursuit of inclusive growth, the government focuses on investing in human capital so as to create opportunities for all segments of the population, reducing structural unemployment.
- The government will also subsidise programmes to upgrade the skills of the workers so as to create a more productive workforce and retrain workers who skills are redundant so that they can take up jobs in other sectors.
- By ensuring that there is productive employment for all, this means **that scarce resources are fully utilized**, allowing the economy to operate closer to the maximum output it can achieve, leading to productive efficiency.

Low inflation

- Inclusive growth leads to non-inflationary growth, which includes both actual and potential growth. Inflation refers to a sustained increase in general price level. As inclusive growth focus on the pace of growth, the increase in AD is in tandem with the increase in aggregate supply (AS). As the increase in general price level is now matched with an increase in real national income, inflation rate remains low as there is spare capacity to produce more goods and services in the economy.
- To achieve inclusive growth, the government focuses on policies to increase labour productivity. This will mean a fall in the unit cost of labour, an increase in short-run AS (SRAS), bringing about a fall in wage push inflation in the country.

- Inclusive growth is economic growth that creates opportunities for all segments of the population and distributes the dividends of increased prosperity, both in monetary and non-monetary terms, fairly across society.
- Economic growth is defined as an increase in Gross Domestic Product (GDP), which is the total monetary value of the final goods and services that is domestically produced within a year.
- An increase in real GDP means more goods and services are produced. At the same time, there is an increase in households' income leading to higher purchasing power and more consumption of goods and services leading to a higher **material** standard of living.
- With higher economic growth, the government is able to generate more tax revenue. By aiming to achieve inclusive growth, the government is likely to spend more on education subsidies as a means to create productive employment and more on healthcare programs so as to redistribute wealth by making these merit goods more affordable to lower-income households. This contributes to a higher literacy rate and life expectancy, leading to a higher **non-material** standard of living.
- At the same time, the distribution of increased prosperity means that the standard of living for every individual is likely to increase and the value of the Gini coefficient falls.

Healthier BOP
- BOP is a record of a country's economic transactions between its residents and the rest of world over a period of time, usually a year.
- Inclusive growth requires government to increase productivity, which helps to lower unit cost of input, making exports more price competitive. Assuming demand for exports to be price elastic, a fall in the price of exports will lead to a more than proportionate increase in the quantity demanded for exports, leading to an increase in total revenue from exports, which improves the current account.
- In addition, a more productive workforce is likely to attract FDI to the country. This increase in long-term capital inflow brings about an improvement in capital account, ceteris paribus.
- Overall, the BOP position is likely to improve when the government aims to achieve inclusive growth.

Conclusion
In recent years, governments aim to achieve inclusive growth because there is no inherent trade-off in economic policymaking between the promotion of social inclusion and that of economic growth and competitiveness; it is possible to be pro-equity and pro-growth at the same time.

Other acceptable answers:
-Students can explain how in the pursuit of inclusive growth, policies to reduce income gap can also help to reduce distributive failure and therefore, achieve allocative efficiency.
-Students can explain that rapid growth or "grow at all costs" may increase negative externalities and explain the need to aim for inclusive growth to reduce the divergence between SMC and PMC so as to improve the living standards of the third parties (people living around areas with high levels of pollution.

Knowledge, Application, Understanding and Analysis		
L3	Thorough explanation of why government aims to achieve inclusive	7 - 10

	growth, covering the macroeconomic and microeconomic goals.	
L2	An under-developed explanation of why government aims to achieve inclusive growth, covering some macroeconomic and microeconomic goals.	5 - 6
L1	Descriptive explanation on why government aims to achieve inclusive growth, with minimal linkage to macroeconomic/microeconomic goals.	1 - 4

(b)

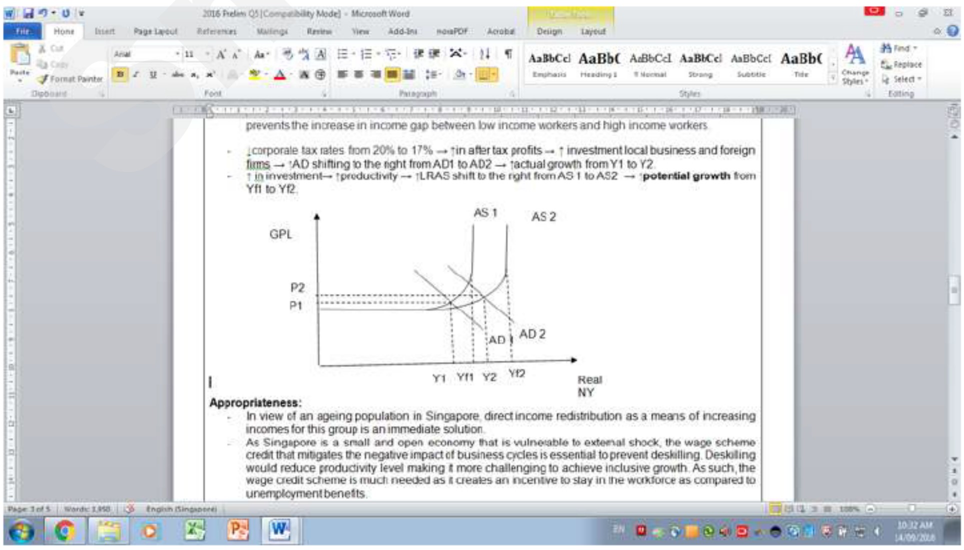
Introduction:

To achieve inclusive growth, the Singapore government emphasize on improving the productive capacity of individuals and creating conducive environment for employment and on income redistribution as a means of increasing incomes for excluded groups.

Measures to achieve inclusive growth include:
- Fiscal Policy
- SS-side policies
- Progressive Tax system

Fiscal Policy to achieve economic growth and reduce income gap
- ↑ in G → ↑ in AD assuming economy operating below full employment level, via muitiplier → ↑**actual growth**, reduces demand deficient unemployment.
- For example, $8 billion Pioneer Generation Package. It helps citizens aged 65 and above in 2014 meet their healthcare costs for life, with further subsidies on healthcare services and medicines.
- → ↑ affordability of healthcare services for senior citizens, **reduce the effects of income inequality.**
- Wage Credit Scheme launched in 2013, which has seen more than $2.2 billion handed out to help local businesses subsidise wage increases for low-income workers. This helps to maintain employment and prevents the increase in income gap between low income workers and high income workers.

- ↓corporate tax rates from 20% to 17% → ↑in after tax profits → ↑ investment local business and foreign firms → ↑AD shifting to the right from AD1 to AD2 → ↑actual growth from Y1 to Y2.
- ↑ in investment→ ↑productivity → ↑LRAS shift to the right from AS 1 to AS2 → ↑**potential growth** from Yf1 to Yf2.



Appropriateness:
- In view of an ageing population in Singapore, direct income redistribution as a

- As Singapore is a small and open economy that is vulnerable to external shock, the wage scheme credit that mitigates the negative impact of business cycles is essential to prevent deskilling. Deskilling would reduce productivity level making it more challenging to achieve inclusive growth. As such, the wage credit scheme is much needed as it creates an incentive to stay in the workforce as compared to unemployment benefits.
- Corporate tax rate is one of the most important factor in attracting FDI in Singapore. FDI makes up a large proportion of GDP in Singapore given the nature of the economy. The move to reduce corporate tax rate is effective in attract foreign firms to invest in Singapore.

Limitations:

- Size of multiplier is small. As MPM is large (import reliant) in Singapore, MPS is large due to high CPF savings. Large leakages in the circular flow of income will result in a small increase in real national income.
- Strained government budget. In the long run, the Singapore government might have to adopt "growth at all cost" instead of inclusive growth to generate tax revenue in order to sustain her fiscal position.
- Singapore's corporate tax rates are competitive, therefore, further cuts would need to be compensated by an increase in GST which is regressive by nature. This will limit the scope for inclusive growth.

SS-side policies to enhance productivity for sustainable growth

- Improvement in Infrastructure in Jurong Island, Biopolis → ↑external EOS→ ↑productivity
  The Productivity and Innovation Credit Scheme (PIC) scheme was introduced by the government to encourage productivity and innovation in Singapore. It creates the incentive to invest in areas to improve their productivity. Businesses enjoy 400% tax deductions/allowances if they qualify.
  The increase in investment → ↑ productivity → ↑AD and AS → ↑sustainable growth.

Appropriateness:

- PIC support local businesses which might not enjoy internal EOS due to the small domestic market and therefore, cannot compete with foreign firms in the global market.

Limitations:

- Expensive to fund and costly to monitor the appropriate use of the PIC.
- Higher global economic uncertainty, leaving little impetus for firms to invest in productivity-enhancing capital despite these SS side policies.

SS-side policies to reduce income gap

- Education subsidy making it affordable to low income family → ↑ labour productivity → ↑demand for labour → ↑wages → reduce income gap
- The Continuing Education and Training Masterplan, aims to ensure a competitive and career resilient workforce. It enables working adults, regardless of their starting qualifications, to continue to build and deepen their skills and competencies, throughout their careers.
- This reduces occupational immobility and helps workers to stay relevant in view of changing demands in the job markets.
- Allows workers in all sectors to remain relevant and generate stable incomes.
- Increases productivity growth which is essential for inclusive growth.

Appropriateness

market. Hence, it is critical to increase productivity to match with the increase in wages.

- The openness of the Singapore economy allows free mobility of capital. This leads to increase in the pace and frequency of structural changes in the economy.
- Therefore, policies focusing on reducing occupational immobility is instrumental to achieve inclusive growth in Singapore as direct income distribution is not sustainable.

Limitations:

- Time lag between reforms and outcomes. For example, there is a time lag between the time when investments in education are made and the time when returns from improved labor skills are collected.

Progressive Tax System

Singapore's personal income tax rates for resident taxpayers are progressive. This means higher income earners pay a proportionately higher tax, with the current highest personal income tax rate at 20%. Tax revenue generated are redistributed as subsidies to make healthcare, education and housing affordable to all. **One limitation** for a more progressive tax system is that it creates a disincentive to work and deter foreign talent, this might lower the quality of labour, reducing potential growth.

Other possible answers:
Exchange rate policy
Wage policy

Conclusion:

Suggested evaluation:

Upon evaluation, government policies focusing on income redistribution to achieve inclusive growth is necessary in the short run but may not be sustainable, especially for a small and open economy like Singapore. As such, SS side policies that focus on productivity growth and productive employment will remain to be the most important approach to achieve inclusive growth in Singapore as it mitigates the negative impact of structural changes and her vulnerability to external shocks.

Knowledge, Application, Understanding and Analysis		
L3	For a thorough and well-balanced answer that evaluates the policies with good application to the Singapore economy.	**9 - 11**
L2	For a balanced but limited and undeveloped answer that has some application to the Singapore economy.	**6 – 8**
L1	For an answer that is largely descriptive and lacks a clear structure. Simple listing of policies to achieve inclusive growth.	**1 - 5**
	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**

Essay Q6

Singapore's pattern of trade with the world has changed significantly both in terms of the countries we trade with as well as the type and volume of goods and services we trade in.

Discuss the factors that have resulted in the changing pattern of trade of Singapore with the rest of the world. [25]

Introduction

Identify the changing pattern of trade of Singapore with the rest of the world

- Pattern of trade should be changing in terms of:
  - The types of goods/services
    - Increasingly, services are taking up a larger percentage of total trade
    - Increase in exports of higher end manufactured goods
    - Top exports: Refined Oil, Electronic Equipment, Machines/Engines, Pharmaceuticals, Medical Equipment
    - Top imports: Electronic Equipment, Oil, Machinery, Gems and Precious metals, Vehicles
  - The volume of goods and services
    - General increase in the volume of trade
  - The import origins and export destinations
    - China experienced the greatest extent of increase in volume of services exported (rose by 10 times from 2000-2014)
      - From 4% (6^{th}) of total exports to 12% (2^{nd})
    - USA was top export destination in 2000 (19%) but sixth in 2014 (4.8%)
    - Japan was top import origin in 2000 but sixth in 2014 (replaced by China who was 4^{th} previously)
      - Top import from Japan was integrated circuits (22%) but in 2014, Japan's share of integrated circuits import was only 3.5%.
    - In 2000, Asian economies received 60% of exports from Singapore (North America- 20%, Europe- 16%) but in 2014, Asian economies received 74% of exports from Singapore (North America- 6.4%, Europe- 10%)

Body

Factor 1 (Internal/Supply): Government policies (signing of FTAs)	*(there are more recent FTAs that have been agreed and signed but it is unlikely that these will account for the changing POT)* China-Singapore FTA signed in Jan 2009. Comprehensive Economic Cooperation Agreement (CECA) (FTA with India) signed in Jan 2005. With more FTAs → removal of tariffs on Singapore exports (GCC: Tariff elimination on approximately 98% of Singapore's exports to the GCC → lowers the distortion of opportunity costs → allows firms to tap on Singapore's CA

	these regions (also accounts for the changing destination for our exports) *[More FTA → Trade creation between new trading partners → Changing export destinations (USA was top export destination in 2000 but sixth in 2014)]* Some countries have experienced major recessions in recent years (EU and US) that has affected Singapore (e.g. Singapore was the first Asian economy to suffer from the 2009 Global Financial Crisis) → there might be a deliberate action by the Singapore government to reduce its dependency or vulnerability to such external shocks by signing more FTAs with countries from other parts of the world → Changing export destinations (USA was top export destination in 2000 but sixth in 2014). However, it is impossible to decouple from the USA as her GDP is still the largest as percentage of World's GDP. Increase in the number of ASEAN members → increase in export destinations → increase in market size and hence demand for exports → account for the increase in trade volume with Asian economies (changes in export destination)
Factor 2 (External/Demand): Different rates of growth experienced by different countries	China has experienced rapid economic growth. With rising income in China, Chinese citizens and firms will be demanding more imports as purchasing power increases, some of which are produced in Singapore. This contributes to an increase in export volume to China as well as an increase in total export volume. With rising income in China, this may also correspond with an increasingly consumerist culture (MPC increases) →higher income induced consumption. Also, with China being more open, her MPM increases as well → contributes to an increase in X from Singapore Relative to China, other countries have grown at a slower rate and hence contributed to their decrease in share of total exports → total X has continued to increase but China is rising to become one of the top trading partners
Factor 3 (External/supply): Foreign governments changing the structure of their economy (e.g. rise of China as a manufacturing powerhouse)	Other neighbouring economies are increasingly producing higher quality goods and services and moving along the value chain → China is increasingly developing new areas of CA (low-end manufactured goods → high-end manufactured goods and capital machineries)→ as Singapore economy does not have to import low-end capital goods from North America or Japan → decrease in % of M from Japan/NA and increase % of M from China
Factor 4 (Internal/Supply):	Government policy to invest in education (encourage

Changing domestic CA (link to changing domestic factor endowments)→ changing opp costs → changing areas of specialisation)	different specialisations at university, especially science and engineering courses) → labour becomes more skilled → increases the opportunity cost of dedicating labour to low skilled jobs→ CA in Singapore changes from production of low-end manufactured goods to high end manufactured goods and capital goods → results in changing types of exports/imports *[e.g. In 1980s, CA was in low end manufactured goods (textiles) due to the relatively higher opportunity cost in producing high end goods as compared to developed countries → Singapore largely exported textiles and imported high end manufactured goods (usually from the West). However, as Singapore upgraded the skills of the labour force → opportunity cost in producing high end goods became relatively lower → Singapore started importing textiles (from emerging/developing economies) instead and exported these high end manufactured goods]* Government policy to develop more factor endowment (SS-side policy to develop infrastructure such as biopolis and Jurong Island) → shifting from providing engineering services to bio-pharmaceutical sector/ petrochemical industry → results in changing CA as Singapore now enjoys a lower opportunity cost of producing goods and services in these industries → pharmaceutical/petrochemical products as % of X increases
Factor 5 (Internal/Demand): Changing tastes and preferences	Increasing intra-industry trade: More variety required Increase in ease of access to foreign markets online that caters to varied tastes and preferences: Chinese retailers on Taobao as opposed to retailers on established online e-commerce platforms i.e. ebay and amazon → increases in volume of imports as well as the variety of import
Students can also mention other factors such as: - changing transportation costs - changing exchange rates Any other factors are acceptable as long as it is linked to a stated change in the pattern of trade of Singapore with the rest of the world.	

Conclusion + Evaluation
Students can evaluate by explaining what is the most important factor attributing to the changing pattern of trade of Singapore with the rest of the world.
<u>Time Period:</u> In the SR, may be taste and preferences as government policies to change CA and negotiate FTAs have a long time lag.

Situation: Singapore's heavy reliance on trade means that the government has a major role to play in international trade and ensuring the relevance of Singapore exports to the global economy. Hence, government intervention may be the most significant factor.

Knowledge, Application, Understanding and Analysis		
L3	For a thorough and well-elaborated answer that shows a range of factors that may have accounted for the changes in the patterns of trade experienced by the Singapore economy. There is good application to the Singapore economy and precise dentification of significant changes to the patterns of trade, in view of external and nternal factors.	**15-21**
L2	For an undeveloped answer that shows some understanding of a few factors that may have accounted for the changes in the patterns of trade experienced by the Singapore economy.	**10-14**
L1	For an answer that does not address the question requirement and did not account for the changes in the patterns of trade of Singapore. The answer is largely descriptive and acks a clear structure.	**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**

CATHOLIC JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATIONS
In preparation for
General Certificate of Education Advanced Level
Higher 2

ECONOMICS

9732/01

Paper 1

19 August 2016
1400 - 1615
2 hours 15 minutes

Additional Materials : Writing Paper

READ THESE INSTRUCTIONS FIRST

Write your name, class and question number on **all** the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use highlighters, glue or correction fluid.
Begin each question on a new sheet of paper.

Answer **ALL** questions.

At the end of the examination, **hand in EACH question separately**.
The number of marks is given in brackets [ ] at the end of each question or part question.

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

Answer **all** questions

Question 1

Globalisation and the Economy

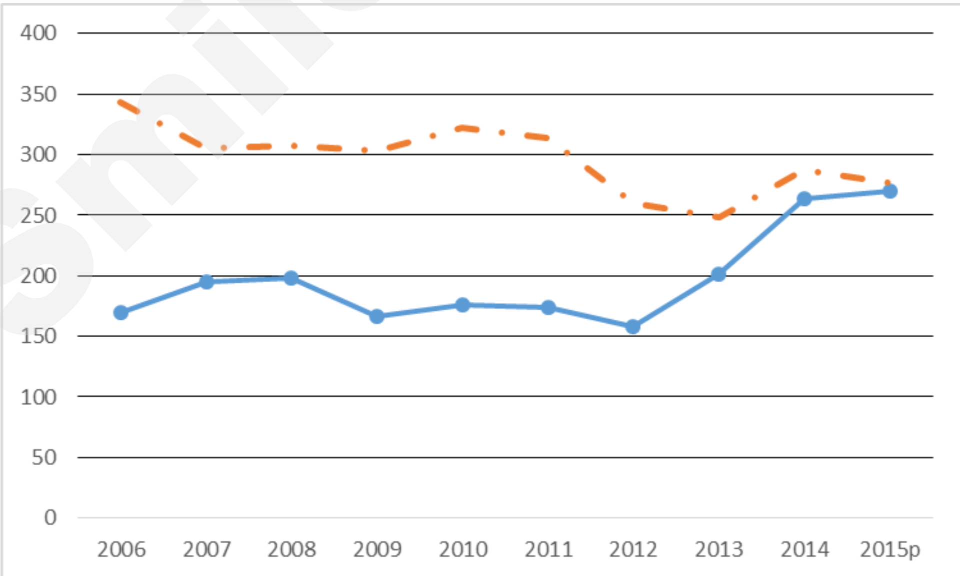
Extract 1: Too many immigrants, too quickly

The story of Brexit is a complex one, but one thread may be familiar to some developed countries today, including Singapore: too many immigrants, too quickly. As the European Union (EU) expanded in 2004 from 15 member states to include 10 more countries - mostly poorer ones from Eastern Europe - then Prime Minister Tony Blair opened Britain's doors to job seekers from these countries. Free to move to Britain to work, many from the new EU countries did, attracted by the prospect of better jobs or higher pay than back home. Some parts of Britain's working class felt the competition and the squeeze. Much of the fury of the 'Leave' campaigners focused around accusations that EU migrants were taking British jobs and depressing wages. Meanwhile, the big businesses and their consumers are gaining from this flow of cheap labour.

Perhaps Britain had not fully considered the evolving ramifications of EU membership and the allowing of sudden mass movement of populations to an island nation. One pressure from mass movement is how immigration is changing the identity of the country and putting pressure on services like the National Health Service. The undoubtable truth is that developed countries need to find better strategies to manage the impacts of migration and promote integration.

Source: *The Straits Times,* July 2016

Figure 1: Labour flow into the United Kingdom (UK), 2006 – 2015p (provisional)



Legend:
Labour Flows from Non-EU countries
Labour Flows from EU countries

Source: *Office for National Statistics*

Extract 2: Will globalisation make everyone better off?

Globalisation has made the planet more equal. As communication gets cheaper and transport gets faster, developing countries have closed the gap with their rich-world counterparts. Basic theory predicts that inequality falls when developing countries enter global markets, especially in the exchange of goods and services. With a larger proportion of their labour force being unskilled, this means that developing countries tend to produce goods that require labour-intensive processes. This increases their trade and thus, increases their wages. But the high inequality seen today in poor countries is prompting new theories. One emphasizes the recent pattern of outsourcing which deviates from the usual practice of creating low-value jobs overseas — rich countries are increasingly shifting parts of the high-value production process to poor countries, creating a larger demand for skilled labour as compared to unskilled labour in the developing countries.

Similarly, in developed countries the heavy costs to industries exposed to cheaper foreign imports offset most of the benefits to consumers and to firms in less vulnerable industries. Economists' assumption that workers would easily adjust to the upheaval of globalisation seems to have been misplaced. Manufacturing activity tends to be geographically concentrated. So the disruption caused by cheaper imports from developing countries was similarly concentrated, in certain hubs of the developed countries. The displaced workers were neither absorbed in the region due to a lack of growing industries, nor were they willing to look for jobs in other prosperous regions.

Immigration and jobs were hot-button issues in Singapore's general election in 2011. The public anger seen then was partly a response to the surge in foreign workers, due to a generous foreign worker policy in the boom years of 2004 to 2007. Deputy Prime Minister Tharman said: "The politics of the centre must stay connected to the challenges that ordinary people face - and address their need for jobs and security, and a balance in immigration that preserves a sense of identity." Tackling this without turning inward, and weakening jobs and society further, is the central challenge everywhere.

Sources: Adapted from *The Economist*, 2014 *and The Straits Times*, 2016

Extract 3: The economic impact of sharing economy platforms

The 'sharing economy' matches people who want to share assets online. Such convenience may come at cost for the traditional economy. Providers of traditional economy might see profits shrink due to the drop in demand and may even be driven out of the market. However the costs and benefits associated with sharing economy platforms depend on the business models in place.

One such 'sharing economy' platform is Uber which is one of the fastest growing start-ups worldwide. Taxi industries tend to be heavily regulated by the governments in order to ensure safety and quality standards. Uber, founded in the United States, used the sharing economy platform to circumvent these regulations by allowing private car owners to become ad-hoc taxi drivers. Furthermore, with countries becoming increasingly connected, Uber has found it easy to succeed commercially in many other countries as well, reducing the market share of the traditional taxi drivers. Uber's success can be attributed to the passengers who prefer diversity in payment options and for lowering their transportation cost. As a result, the incumbent taxi service providers are facing a crisis. Some taxi drivers in Canada complained losing business to the relatively cheap Uber services. Additionally, the government is concerned about drivers not declaring or paying taxes on their income.

In other businesses, homeowners internationally have earned extra cash by using another popular sharing service, Airbnb. Since the recession, more and more people have been looking for economical alternatives, increasing the demand for Airbnb. Likewise, the recession pushed significantly more segments of the American workforce into positions where they must string together part-time gigs and find alternative ways to bring in income. The leading businesses that are advancing the concept of the "sharing economy" are in many aspects no longer insurgents and newcomers.

The 'sharing economy' has managed to capture the market through great apps, social media marketing and aggressive links to the asset owners who are attracted by the minimal requirements to work for the likes of Uber and Airbnb. With the economic power of these technology-driven firms growing, there needs to be considerations as to whether regulation is needed.

Source: Adapted from *Time,* November 2014

Questions

(a) Describe the trend of labour flow from EU countries into the UK between 2006 and 2014. [2]

(b) (i) Explain why poor countries tend to specialise in and export goods that require large amounts of unskilled labour. [2]

(ii) Discuss if globalisation will always be beneficial for workers in different countries. [8]

c (i) What can you conclude about the income elasticity of demand for the services offered by Airbnb? [2]

(ii) Using economic analysis, explain the impact of the recession on the market for Airbnb. [4]

d) Explain one possible impact of globalisation on the level of competition in the market for transport. [2]

e) Discuss the factors that determine the need for regulation of the growing technology-driven firms in the 'sharing economy'. [10]

[Total: 30]

Question 2

Oil and the Venezuelan Economy

Extract 4: Venezuela, a nation in a state

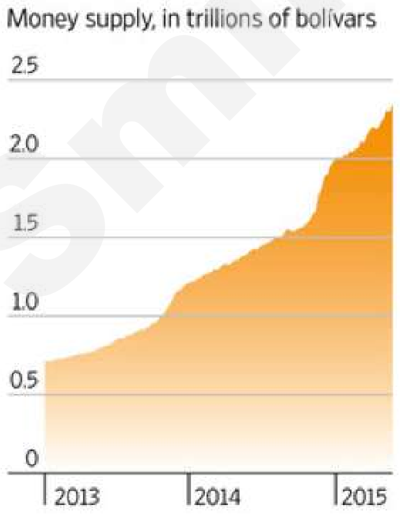
Under the watch of Venezuela's president, the nation has entered a steep decline. A global oil boom, which provided money to lavish on Venezuela's once neglected poor, is over. Venezuela sits on the world's largest proven oil reserves. Oil makes up 96% of the country's export earnings and 25% of its GDP. The government's income from oil in the year to November 2015 was two-thirds lower than during the same period the year before. The oil price has fallen further since then. With less money coming in and demand for imports still strong, the value of Venezuela's foreign-exchange reserves has dropped alarmingly.

The current oil slump would be painful, whoever was in power. The regime has greatly compounded the damage with policies that, though designed to favour the poor, end up impoverishing them and the state. Price controls have led to acute shortages of basic goods, forcing people to queue for hours to buy necessities. Although the official price of goods is correspondingly cheap, many are available only at inflated prices in the black market.

Inflation is officially running at 121.7% last year. Analysts believe the true figure is at least 200% a year; some predict hyperinflation in 2016 as the Central Bank continues to print money to finance the massive budget deficit.

Source: Adapted from *Time*, December 2015 and *The Economist*, February 2016

Figure 2: Venezuelan money supply



Source: *Wall Street Journal*, May 2015

Figure 3: Venezuelan bolivar per US dollar

Source: *Wall Street Journal*, May 2015

Table 1: Venezuela: Selected economic indicators 2011 – 2015

Economic Indicators	**2011**	**2012**	**2013**	**2014**	**2015**
Gross Domestic Product (GDP) Growth (annual %)	4.2	5.6	1.3	-3.9	-5.7
Exports of goods and services (% of GDP)	29.9	26.2	24.8	-	-
Imports of goods and services (% of GDP)	19.7	24.2	29.5	-	-
Gross capital formation (% of GDP)	23.1	26.6	27.3	-	-
Inflation, consumer prices (annual %)	26.1	21.1	40.6	62.2	121.7
Unemployment, total (% of total labour force)	8.3	8.1	7.5	8.6	-

Source: *World Bank*, July 2016

Extract 5: Oil price plunge continues

The price of oil continued its precipitous fall on Friday, hitting five-and-a-half-year lows after the International Energy Agency (IEA) predicted demand next year would be lower than expected.

The oil price has plummeted in response to a massive build-up of shale-derived oil in the US, reduced fears of fighting in Iraq disrupting supplies, and slower growth in demand as the world economy falters. The IEA warned: "The resulting downward price pressure would raise the risk of social instability or financial difficulties if producers found it difficult to pay back debt."

The Paris-based IEA singled out oil-producing countries such as Russia and Venezuela as potential flashpoints for trouble and the warning came as the rouble, which has lost 40% in value against the dollar so far this year, hit a fresh record low. One dollar now buys more than 57 roubles, compared with 35 in the summer.

But while the oil-producing countries face lost revenues and budget shortfalls, lower energy prices are expected to have a beneficial impact on the world economy.

Many countries, particularly in Asia, are desperately dependent on foreign oil and gas imports, so cheaper prices should cut inflation and give impetus to manufacturing output and consumer spending. Analysts at investment bank ING said: "The recent fall in oil prices may not be sustained but, in the meantime, it provides a very welcome boost to real incomes for most major economies."

Lower energy prices will cause havoc in the UK North Sea, where companies such as BP and Shell are cutting jobs at a time when exploration levels have already dropped to very low levels.

But households will welcome the falling gas price cutting heating bills, while motorists will be glad of lower costs at the pump. High home and transport costs are a big influence on inflation and affect the production and distribution of food and other items.

There are strong signs in the US that lower energy prices are having a big effect on consumer spending with store and restaurant sales rising by 5% in November against the same month the previous year.

Tom Kloza, co-founder of the US-based Oil Price Information Service, has warned that the world could be heading for $45 per barrel oil, although he maintained that this kind of price was not sustainable long term.

Source: *The Guardian*, December 2014

Extract 6: The true cost of oil production

Every link in the chain of oil production, from exploration through consumption, generates profound damage to the local environment and communities. As the industry moves towards increasingly risky forms of fossil fuel production, the impacts become more pronounced.

A notable Harvard Medical School study identifies impacts from many aspects of oil production. Exploration for new oil and gas often brings seismic explosions and the clearing of huge swaths of forest; drilling produces toxic drilling muds and waste waters; oil extraction still often results in routine gas flaring at the point of extraction. Oil transport creates additional hazards, as oil spills from pipelines, tankers and tank farms are still routine, despite industry claims of safety measures.

Source: Adapted from *Oil Change International*, April 2014

Questions

(a) (i) Using Table 1, describe the trend of Venezuela's general price level between 2011 and 2015. [1]

(ii) Explain the statement: 'Although the official price of goods is correspondingly cheap, many are available only at inflated prices in the black market'. [3]

(b) Explain the inefficiency in resource allocation in the market for oil. [4]

(c) Explain how the change depicted in Figure 2 may have led to the outcome in Figure 3. [4]

(d) Given the challenges in the oil exporting market, discuss if Venezuela should respond by being less globalised. [8]

(e) Assess whether, on balance, lower oil prices can be beneficial.

[Total: 30]

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2016

Catholic Junior College
H2 Economics / 9732

Preliminary Examination
Mark Scheme
Paper 1

Paper 1 – Case Study Questions

Question 1

Globalisation and the Economy

Extract 1: Too many immigrants, too quickly

The story of Brexit is a complex one, but one thread may be familiar to some developed countries today, including Singapore: too many immigrants, too quickly. As the European Union (EU) expanded in 2004 from 15 member states to include 10 more countries - mostly poorer ones from Eastern Europe - then Prime Minister Tony Blair opened Britain's doors to job seekers from these countries. Free to move to Britain to work, many from the new EU countries did, attracted by the prospect of better jobs or higher pay than back home. Some parts of Britain's working class felt the competition and the squeeze. Much of the fury of the 'Leave' campaigners focused around accusations that EU migrants were taking British jobs and depressing wages. Meanwhile, the big businesses and their consumers are gaining from this flow of cheap labour.

Perhaps Britain had not fully considered the evolving ramifications of EU membership and the allowing of sudden mass movement of populations to an island nation. One pressure from mass movement is how immigration is changing the identity of the country and putting pressure on services like the National Health Service. The undoubtable truth is that developed countries need to find better strategies to manage the impacts of migration and promote integration.

Source*: The Straits Times,* July 2016

Figure 1: Labour flow into the United Kingdom (UK), 2006 – 2015p (provisional)

Legend:
Labour Flows from Non-EU countries

Source: *Office for National Statistics*

Extract 2: Will globalisation make everyone better off?

Globalisation has made the planet more equal. As communication gets cheaper and transport gets faster, developing countries have closed the gap with their rich-world counterparts. Basic theory predicts that inequality falls when developing countries enter global markets, especially in the exchange of goods and services. With a larger proportion of their labour force being unskilled, this means that developing countries tend to produce goods that require labour-intensive processes. This increases their trade and thus, increases their wages. But the high inequality seen today in poor countries is prompting new theories. One emphasizes the recent pattern of outsourcing which deviates from the usual practice of creating low-value jobs overseas — rich countries are increasingly shifting parts of the high-value production process to poor countries, creating a larger demand for skilled labour as compared to unskilled labour in the developing countries.

Similarly, in developed countries the heavy costs to industries exposed to cheaper foreign imports offset most of the benefits to consumers and to firms in less vulnerable industries. Economists' assumption that workers would easily adjust to the upheaval of globalisation seems to have been misplaced. Manufacturing activity tends to be geographically concentrated. So the disruption caused by cheaper imports from developing countries was similarly concentrated, in certain hubs of the developed countries. The displaced workers were neither absorbed in the region due to a lack of growing industries, nor were they willing to look for jobs in other prosperous regions.

Immigration and jobs were hot-button issues in Singapore's general election in 2011. The public anger seen then was partly a response to the surge in foreign workers, due to a generous foreign worker policy in the boom years of 2004 to 2007. Deputy Prime Minister Tharman said: "The politics of the centre must stay connected to the challenges that ordinary people face - and address their need for jobs and security, and a balance in immigration that preserves a sense of identity." Tackling this without turning inward, and weakening jobs and society further, is the central challenge everywhere.

Sources: Adapted from *The Economist,* 2014 *and The Straits Times,* 2016

Extract 3: The economic impact of sharing economy platforms

The 'sharing economy' matches people who want to share assets online. Such convenience may come at cost for the traditional economy. Providers of traditional economy might see profits shrink due to the drop in demand and may even be driven out of the market. However the costs and benefits associated with sharing economy platforms depend on the business models in place.

One such 'sharing economy' platform is Uber which is one of the fastest growing start-ups worldwide. Taxi industries tend to be heavily regulated by the governments in order to ensure safety and quality standards. Uber, founded in the United States, used the sharing economy platform to circumvent these regulations by allowing private car owners to become ad-hoc taxi drivers. Furthermore, with countries becoming increasingly connected, Uber has found it easy to succeed commercially in many other countries as well, reducing the market share of the traditional taxi drivers. Uber's success can be attributed to the passengers who prefer diversity in payment options and for lowering their transportation cost. As a result, the incumbent taxi service providers are facing a crisis. Some taxi drivers in Canada complained losing business to the relatively cheap Uber services. Additionally, the government is concerned about drivers not declaring or paying taxes on their income.

In other businesses, homeowners internationally have earned extra cash by using another popular sharing service, Airbnb. Since the recession, more and more people have been looking for economical alternatives, increasing the demand for Airbnb. Likewise, the recession pushed significantly more segments of the American workforce into positions where they must string together part-time gigs and find alternative ways to bring in income. The leading businesses that are advancing the concept of the "sharing economy" are in many aspects no longer insurgents and newcomers.

The 'sharing economy' has managed to capture the market through great apps, social media marketing and aggressive links to the asset owners who are attracted by the minimal requirements to work for the likes of Uber and Airbnb. With the economic power of these technology-driven firms growing, there needs to be considerations as to whether regulation is needed.

Source: Adapted from *Time,* November 2014

Questions

(a) Describe the trend of labour flow from EU countries into the UK between 2006 and 2014. [2]

(b) (i) Explain why poor countries tend to specialise in and export goods that require large amounts of unskilled labour. [2]

(ii) Discuss if globalisation will always be beneficial for workers in different countries. [8]

c (i) What can you conclude about the income elasticity of demand for the services offered by Airbnb? [2]

(ii) Using economic analysis, explain the impact of the recession on the market for Airbnb. [4]

d) Explain one possible impact of globalisation on the level of competition in the market for transport. [2]

e) Discuss the factors that determine the need for regulation of the growing technology-driven firms in the 'sharing economy'. [10]

[Total: 30]

Suggested Answers

a) **Describe the trend of labour flow into from EU countries to the UK between 2004 and 2014.** **[2]**

<u>Answer</u>
Labour flow from EU countries is generally increasing. (1m)
There was a dip between 2008 and 2009 from the EU countries. OR sharp increase from 2012-2014 (1m)

bi) **Explain why poor countries tend to specialize in and export goods that require large amounts of unskilled labour.** **[2]**

<u>Answer</u>
According to the theory of comparative advantage, countries should specialise and trade in goods and services in which they have lower opportunity cost of production. (1m)
Developing countries are usually well endowed with low skilled workers and have a lower opportunity cost in producing goods that require lower skills. As seen in extract 2, "*with a larger proportion of their labour force being unskilled, this means that developing countries tend to produce goods that require labour-intensive processes"* -(1m)

ii) **Discuss if globalisation will always be beneficial for workers in different countries.** **[8]**

<u>Answer</u>

Introduction

Globalisation refers to the increasing integration and interdependence of the world's economies arising from increased trade and increased international mobility of factors of production such as labour, capital and enterprise. Traditionally, international movement of labour has always been moving from developing to developed countries and usually in the low skilled sector. However, with rapid pace of technology driven globalisation, movement of labour now does not necessary involve physical movements. Thus, the impact of globalisation on labour on different countries may be quite hard to gauge with all these dynamic factors at play. Countries will be categorised in terms of developed and developing countries in this essay.

Body

<u>Thesis: globalisation may be beneficial for the labour in some countries</u>

Labour in Developing countries may benefit.
With globalisation and increasing integration of the countries in terms of trade, demand for goods produced by developing countries is increasing as well. This is because previously the countries would only be producing for the domestic market as compared to a bigger world market now. This is seen in extract 2 which says "*Basic theory predicts that inequality falls when developing countries enter global markets, especially in the exchange of goods and services".* This evidence shows that there will be rise in production of goods and services in the developing countries, and as seen in extract 2 (and mentioned in b i), these countries tend to focus on production of goods that require low skilled workers, thus, demand for such low skilled workers would rise. This will lead to a rise in wage rates for the low skilled workers in the

developing countries, thereby benefitting them.

Better job opportunities.
With the technology driven globalisation, as developed countries outsource part of their production processes to the developing countries as they offer lower cost of production, there will be creation of more and newer jobs in the developing countries. This is seen from the evidence in extract 2, "the recent pattern of outsourcing which deviates from the usual practice of creating low-value jobs overseas — rich countries are increasingly shifting parts of the high-value production process to poor countries"

In the developed countries, skilled labour may benefit from
By similar argument as the one for developing countries, developed countries will tend to specialise in goods and services requiring higher skilled workers. As a result, demand for such labour would rise and so will their wages.

Developed countries would also enjoy lower cost of production from outsourcing. As the developing countries have a bigger pool of labour, relocating parts of the production processes helps to reap advantage of this large resource base which lowers the cost of production for the developed countries. This helps them to sustain their growth by boosting their potential growth.

(Any other relevant advantages for developing or developed countries will be accepted. However, for the analysis of the developing countries it is advised that the students use the arguments they have evidence for).

<u>Anti-Thesis: globalisation may not be beneficial for the labour in some countries</u>
Although outsourcing has created job opportunities in developing countries, these opportunities often benefit only a privileged minority- those with relatively higher skills. This is because the developed countries specialise in high skilled production processes, thus they demand workers who can match up to those skills. This means that the wage rates of the highly skilled workers increase much faster than the expected increase for the unskilled workers, exacerbating the income gap in those countries. This is evidenced by, "*But the high inequality seen today in poor countries is prompting new theories. One emphasizes the recent pattern of outsourcing which deviates from the usual practice of creating low-value jobs overseas — rich countries are increasingly shifting parts of the high-value production process to poor countries, creating a larger demand for skilled labour as compared to unskilled labour in the developing countries." as seen in extract 2.*

The outsourcing of production to low cost developing countries as well as hiring cheap labour from developing countries has led to fall in demand for the local workers/labour in the developed countries. This has created the problem of resident unemployment of certain groups of workers in the developed countries. This problem is faced by developed countries like Singapore where job security has become a real issue for the local workers. This is seen from the evidence in extract 2, *"The politics of the centre must stay connected to the challenges that ordinary people face - and address their need for jobs and security..".* The increased competition for employment from the developing countries also leads to more job seekers competing for the same jobs, thereby depressing wage rates for the workers in the developed countries.

Moreover, with globalisation and increased trade, as the developed countries become more open to the cheaper imports from developing countries, many industries which are in direct competition with those goods and services tend to lose out in terms of cost advantages. These industries are notably low-skilled. As such industries start scaling down, many low skilled workers in those industries get displaced and suffer from rising unemployment and fall in income levels. Due to occupational and sometimes, geographical immobility (especially in the large economies) of these workers they cannot move to the industries where the demand for labour is still relatively high or increasing. As a result, they may lose skills over time.

Synthesis:
Whether globalisation benefits the workers depends on which sectors are workers are at and in which country are they based. Generally, the high skilled workers in both types of countries are likely to benefit based on the evidence available. However, it also depends on the govt. policies adopted to balance out the income levels for different types of workers and in different countries. For example, govt. in the developing countries may impose higher income taxes on the high skilled workers and transfer it to the low skilled workers in terms of social benefits. Similarly, govt. in the developed countries may focus on using supply side policies to improve job security of the local workers by enhancing the occupational mobility of the workers and improving their productivity.

L2: 4-6	Well-balanced answer that considers different types of labour in different types of countries. The answer analyses the impact of globalisation on labour (which also includes international trade and not just labour flow between countries). Must use extract evidence in order to access higher marks.
L1: 1-3	Answer is largely one-sided with some occasional flaws. The answer does not show different types of labour or different types of countries in the analysis.
E2-2	Makes a well justified stand
E1-1	Makes a stand.

c i) **Explain the income elasticity of demand for the services offered by AirBnB.** **[2]**

Answer
YED is negative or YED <0 (1m),
Extract 3: "since the recession, more and more people have been looking for economical alternatives, increasing the demand for AirBnB. This means that as incomes fall, demand rises indicating that they are inferior goods, consistent with a negative YED value. (1m)

No need to define YED. No need to state inferior goods to get the second mark

ii) **Using economic analysis, explain the impact of the recession on the market for AirBnB.** **[4]**

Answer

Recession has led to a rise in demand for services offered by AirBnB. This is because these are deemed to be inferior goods. As shown in extract, "*Since the recession, more and more people have been looking for economical alternatives, increasing the demand for Airbnb*" , the options offered by AirBnb are considered to be more value for money as compared to normal hotels. This is shown by a rightward shift of the demand curve from D0 to D1. [1]

Recession has also led to a rise in supply due to an increase in number of suppliers of economical accommodation as more individuals are looking for part time options of earning income. This is seen from the extract which says, *"the recession pushed significantly more segments of the American workforce into positions where they must string together part-time gigs and find alternative ways to bring in income"*. This leads to a rightward shift of the supply curve from S0 to S1. [1]
Diagram [1]

Impact on P and Q [1] P is indeterminate as a conclusion or a specific outcome based on the extent of shift of DD/SS as per explanation.

Alternative:
Up to 3m for both DDSS explanation, last mark to acknowledge that P is indeterminate OR to state which is the outcome based on the extent of shift.(no need to proof)

d) Explain one possible impact of globalisation on the level of competition in the market for transport. [2]

Answer
Globalisation → More firms enter(1m)
Increase competition and reduces market power of the traditional taxi drivers → Extract 3: Uber has reduces the market share of the traditional taxi drivers (1m)

e) Discuss the factors that determine the need for regulation for the growing technology-driven firms in the 'sharing economy'. [10]

Introduction

The sharing economy as the extract explains matches people who want to share assets online. Examples of which are Uber and Airbnb. Uber uses technology to help private car owners to use their car for taxi services and likewise Airbnb has allowed homeowners to rent out their private accommodation to travelers.

However the economic power of the above type of firms has raised the question of need for regulation. This essay will discuss several factors which would determine the need for regulation e.g. Efficiency (Allocative Efficiency), Equity, Safety and Consumer choice.

Body

Thesis: There are factors that justify the need for regulation of the sharing economy.

Paragraph 1(Possibility of inefficiencies)
As seen in extract 3, 'Uber has found it easy to succeed commercially in many

other countries as well, reducing the market share of the traditional taxi drivers.' This point to the possibility of Uber gaining such a large market share over time that would make it the dominant firm as far as provision of taxi services are concerned. Monopoly power leads to the possibility of allocative inefficiency.

A monopoly will have high degree of market power and is able to restrict output or raise prices to maximize their profits.

Figure 1

Equilibrium of the Industry under PC industry and Monopoly
(assuming same DD & cost conditions)

Assume similar demand and cost conditions in both market structures. For example, suppose some taxi firms initially operate under perfect competition, but subsequently the entrance of Uber drives out most firms and thus Uber acts as a monopoly supplier. Assuming the production costs would not have changed, given that it is the same taxi services as before.

As a monopolist, the profit maximising monopolist would produce at Q_m and P_m where MC cuts MR from below. Thus, the price charged is higher than the marginal cost of production (P_m>MC).

The monopolist produces at the level of output whereby price is greater than marginal cost (P>MC). This means that consumers' valuation of the goods is greater than marginal cost of production and that too few units of this good are produced. Hence there is a large under production of QmQpc, and consequently a large DWL as shown in the area BCD of figure. This leads to **allocative inefficiency.**

Hence price mechanism will fail to allocate scarce resources in the most efficient manner when there is market dominance. This factor of allocative inefficiency can justify the need for regulation of the growing technology-driven firm.

<ins>*Paragraph 2(Possibility of inequity)*</ins>
Equity deals with the notion of fairness in distribution of income and wealth. Even if current levels of production and consumption might be efficient, they might be regarded as unfair, if some people are rich while others are poor.

In the case of technology-driven firms in the ‘sharing economy’, firms may become dominant over time leading to the issue of inequity. When there are many firms, profits are shared among large number of small firms. Hence, distribution of income tends to be widely spread. However as seen in extract 3, due to the entrance of sharing economy firms, “Providers of traditional economy might see profits shrink due to the drop in demand and may even be driven out of the market.” This will mean profits are likely to be enjoyed by a small group of shareholders of one firm at the expense of a large group of traditional firms, aggravating inequity.

*Paragraph 3 (*Other problems for the economy*)*
The other concerns that may lead to a need for regulation would be that the sharing economy asset holders are not paying taxes on their earnings. E.g in extract 3 “The government is concerned about drivers not declaring or paying taxes on their income.” This will lead a loss in potential government revenue that could have been used for development of infrastructure or provision of merit goods such as education and healthcare.

Finally safety and quality standards may be severely compromised in the new sharing economy as they have managed to use technology to circumvent these regulations. In extract 3, “Taxi industries tend to be heavily regulated by the governments in order to ensure safety and quality standards. Uber, founded in the United States, used the sharing economy platform to circumvent these regulations by allowing private car owners to become ad-hoc taxi drivers.”

Anti-Thesis: Certain factors may not lead to the need for regulation for the growing technology-driven firms in the ‘sharing economy

Paragraph 4 (Lower Prices)
Despite the earlier disadvantages that may justify the need for regulation, technology-driven firms in the shared economy can have some advantages. This new business model allows for the industry to operate on low levels of costs as the assets are already available via the asset providers e.g. private cars and homes or apartments that asset providers live in. Furthermore the operating costs are also lower than the traditional firms as most of the business is run on technology e.g. apps and social media marketing.

The consumers would benefit if the lower costs are translated into cheaper goods. This seems to be the reality in the case of Uber as in extract 3 “Uber’s success can be attributed to . . . .lowering their transportation costs.”

Paragraph 5(Alternative Source of Income)
Such firms are giving more people alternative sources of incomes by providing a platform for them to rent out their apartments/homes via Airbnb and use their private cars to earn extra dollars in their spare time via Uber. This is especially beneficial in a time where many are affected by the recession.

Paragraph 6(Greater Consumer Choice)
Finally, such firms have improved consumer choice as they offer passengers diversity in payment options and alternatives to the traditional goods e.g. hotels to homestays and at cheaper rates too.

For the above reasons, it may be in the society’s best interest not to regulate these sharing economy firms.

Synthesis

While technology-driven firms in the ‘sharing economy’ may have many advantages, the factors such as need for ensuring safety and quality standards and the issue of equity are more important considerations.

The growth of these new firms has had a destabilizing effect on traditional firms and can cause large disruptions to the firm owners and the workers as seen in the extract. As such regulation is needed to ensure that traditional firms have the chance and time to adapt to the new business model so as to minimize disruptions in the economy via massive and sudden shut downs of traditional firms and unequal distribution of profits to just one company. Furthermore regulation is needed to ensure safety and quality is not compromised in the provision of goods and services by the new firms in the ‘sharing economy’.

As such while there is no need to quash these new firms, however there is a need to regulate them to ensure safety, quality standards and to minimize disruptions.

L3: 7-8	Well balanced answer that considers the various factors and different economic agents, and hence, the need for regulation. Good use of extract evidence
L2:4-6	Two sided answer which considers various factors and at least ONE economic agent, to analyse the need for regulation Some attempts to use extract evidence
L1: 1-3	An one-sided answer that does not take into consideration the factors determining the need for regulation (i.e., the answer does not specify the factors of EFFICIENCY, EQUITY or any other indicators/aims that the economy needs to consider)
E2-2	Well justified stand with attempt to provide new perspective
E1-1	Stand without justification

Question 2

Oil and the Venezuelan Economy

Extract 4: Venezuela, a nation in a state

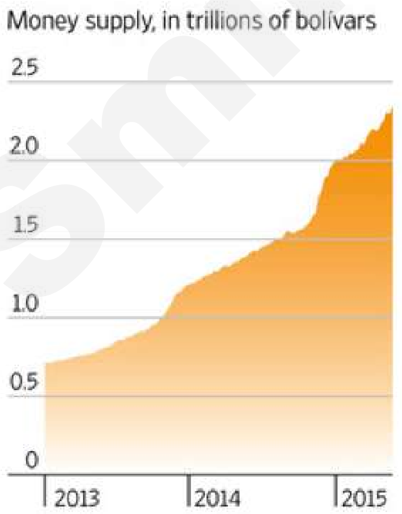
Under the watch of Venezuela's president, the nation has entered a steep decline. A global oil boom, which provided money to lavish on Venezuela's once neglected poor, is over. Venezuela sits on the world's largest proven oil reserves. Oil makes up 96% of the country's export earnings and 25% of its GDP. The government's income from oil in the year to November 2015 was two-thirds lower than during the same period the year before. The oil price has fallen further since then. With less money coming in and demand for imports still strong, the value of Venezuela's foreign-exchange reserves has dropped alarmingly.

The current oil slump would be painful, whoever was in power. The regime has greatly compounded the damage with policies that, though designed to favour the poor, end up impoverishing them and the state. Price controls have led to acute shortages of basic goods, forcing people to queue for hours to buy necessities. Although the official price of goods is correspondingly cheap, many are available only at inflated prices in the black market.

Inflation is officially running at 121.7% last year. Analysts believe the true figure is at least 200% a year; some predict hyperinflation in 2016 as the Central Bank continues to print money to finance the massive budget deficit.

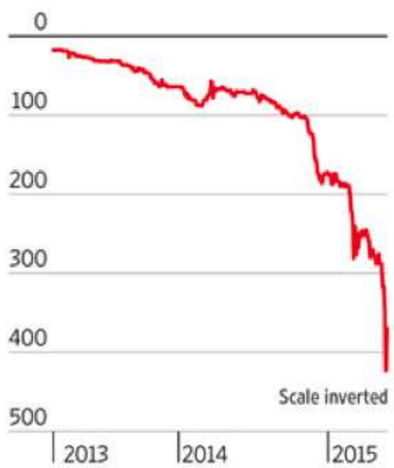
Source: Adapted from *Time*, December 2015 and *The Economist*, February 2016

Figure 2: Venezuelan money supply



Source: *Wall Street Journal*, May 2015

Figure 3: Venezuelan bolivar per US dollar



Source: *Wall Street Journal*, May 2015

Table 1: Venezuela: Selected economic indicators 2011 – 2015

Economic Indicators	2011	2012	2013	2014	2015
Gross Domestic Product (GDP) Growth (annual %)	4.2	5.6	1.3	-3.9	-5.7
Exports of goods and services (% of GDP)	29.9	26.2	24.8	-	-
Imports of goods and services (% of GDP)	19.7	24.2	29.5	-	-
Gross capital formation (% of GDP)	23.1	26.6	27.3	-	-
Inflation, consumer prices (annual %)	26.1	21.1	40.6	62.2	121.7
Unemployment, total (% of total labour force)	8.3	8.1	7.5	8.6	-

Source: *World Bank*, July 2016

Extract 5: Oil price plunge continues

The price of oil continued its precipitous fall on Friday, hitting five-and-a-half-year lows after the International Energy Agency (IEA) predicted demand next year would be lower than expected.

The oil price has plummeted in response to a massive build-up of shale-derived oil in the US, reduced fears of fighting in Iraq disrupting supplies, and slower growth in demand as the world economy falters. The IEA warned: “The resulting downward price pressure would raise the risk of social instability or financial difficulties if producers found it difficult to pay back debt.”

The Paris-based IEA singled out oil-producing countries such as Russia and Venezuela as potential flashpoints for trouble and the warning came as the rouble, which has lost 40% in value against the dollar so far this year, hit a fresh record low. One dollar now buys more than 57 roubles, compared with 35 in the summer.

But while the oil-producing countries face lost revenues and budget shortfalls, lower energy prices are expected to have a beneficial impact on the world economy.

Many countries, particularly in Asia, are desperately dependent on foreign oil and gas imports, so cheaper prices should cut inflation and give impetus to manufacturing output and consumer spending. Analysts at investment bank ING said: “The recent fall in oil prices may not be sustained but, in the meantime, it provides a very welcome boost to real incomes for most major economies.”

Lower energy prices will cause havoc in the UK North Sea, where companies such as BP and Shell are cutting jobs at a time when exploration levels have already dropped to very low levels.

But households will welcome the falling gas price cutting heating bills, while motorists will be glad of lower costs at the pump. High home and transport costs are a big influence on inflation and affect the production and distribution of food and other items.

There are strong signs in the US that lower energy prices are having a big effect on consumer spending with store and restaurant sales rising by 5% in November against the same month the previous year.

Tom Kloza, co-founder of the US-based Oil Price Information Service, has warned that the world could be heading for $45 per barrel oil, although he maintained that this kind of price was not sustainable long term.

Source: *The Guardian*, December 2014

Extract 6: The true cost of oil production

Every link in the chain of oil production, from exploration through consumption, generates profound damage to the local environment and communities. As the industry moves towards increasingly risky forms of fossil fuel production, the impacts become more pronounced.

A notable Harvard Medical School study identifies impacts from many aspects of oil production. Exploration for new oil and gas often brings seismic explosions and the clearing of huge swaths of forest; drilling produces toxic drilling muds and waste waters; oil extraction still often results in routine gas flaring at the point of extraction. Oil transport creates additional hazards, as oil spills from pipelines, tankers and tank farms are still routine, despite industry claims of safety measures.

Source: Adapted from *Oil Change International*, April 2014

Questions

(a) (i) Using Table 1, describe the trend of Venezuela's general price level between 2011 and 2015. [1]

(ii) Explain the statement: 'Although the official price of goods is correspondingly cheap, many are available only at inflated prices in the black market'. [3]

(b) Explain the inefficiency in resource allocation in the market for oil. [4]

(c) Explain how the change depicted in Figure 2 may have led to the outcome in Figure 3. [4]

(d) Given the challenges in the oil exporting market, discuss if Venezuela should respond by being less globalised. [8]

(e) Assess whether, on balance, lower oil prices can be beneficial. [10]

[Total: 30m]

Mark Scheme

a) i Using Table 1, describe the trend of Venezuela's general price level between 2011 and 2015. **[1]**

Between 2011 and 2015, Venezuela's general price level is increasing. [1]

ii Explain the statement: 'Although the official price of goods is correspondingly cheap, many are available only at inflated prices in the black market'. **[3]**

The reason why the 'official price of goods is correspondingly cheap' is due to the price ceiling implemented by the government, which is below the market equilibrium price [1] **OR** diagram depicting a price ceiling placed under the market equilibrium price [1]
This resulted in a shortage (Qs-Qd), which created an upward pressure on prices [1]
Since only Qs is available for sale, a black market may be created where prices charged are higher than the official price [1].

b) Explain the inefficiency in resource allocation in the market for oil. **[4]**

Oil production generates negative externalities + extract evidence [1]
this creates a divergence between MPC and MSC [1]
in the free market, Qf is produced as producers seek to maximize their net benefit at MPC=MPB. However, the socially efficient quantity is at Qs where MSC=MSB, leading to overproduction [1]
creating a deadweight loss to society [1]

Full credit is available for students who do not draw diagram

c) Explain how the change depicted in Figure 2 may have led to the outcome in Figure 3. **[4]**

Figure 2 indicated that Venezuela's money supply has been increasing between 2013 and 2015 [1]
This increase in money supply would have caused interest rates to fall [1]
This may have led to an outflow of hot money [1]
Leading to an increase in supply of currency in the foreign exchange market, causing the exchange rate to fall as shown in Figure 3 [1]

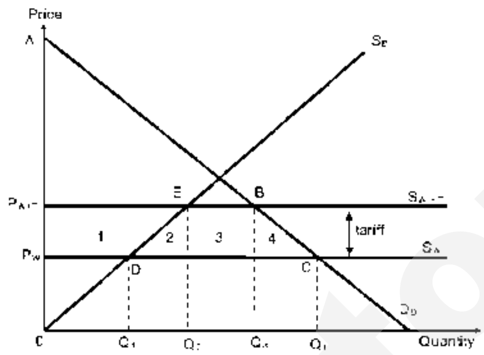
d) Given the challenges in the oil exporting market, discuss if Venezuela should respond by being less globalised. **[8]**

Suggested Answer
Venezuela has been negatively affected by the challenges in the oil exporting market. Given the substantial fall in oil prices (Extract 2 Para 1), and coupled with the fact that the demand for oil is price inelastic due to it being a necessity in many production processes, export revenue (X) received by Venezuela has fallen (Extract 1 Para 2). This has led to a fall in AD, leading to a multiplied fall in national income, as evidenced by Table 1, where it shows that Venezuela is suffering from negative economic growth rates in recent years. Additionally,

Venezuela is very reliant on oil exports for growth, which makes the fall in export revenue received from oil even more impactful (Extract 1: "Oil makes up 96% of the country's export earnings and 25% of its GDP").

Thesis: Venezuela should respond by being less globalized and engage in protectionism (e.g. import-substitution strategies)

Venezuela can impose tariffs on its imports (Extract 1 Para 2 and Table 1 shows Venezuela's reliance on imports) in order to encourage expenditure-switching behaviour.



An imposition of a tariff, T, will reduce world supply from Sw to Sw+T, and cause prices of imports to increase from Pw to Pw+T. As a result, imports fall from Q1Q4 to Q2Q3. Assuming that the PEDm>1, the imposition of a tariff will cause prices of imports to rise, and the quantity demanded of imports to fall more than proportionately, leading to a fall in import expenditure.

This fall in import expenditure can help to offset the fall in export revenue faced by Venezuela as an outcome of falling oil prices, allowing its net exports and national income to remain relatively unchanged.

Anti-Thesis 1: However, there are costs of engaging in protectionism. The imposition of protectionist measures such as tariffs may invite retaliation from Venezuela's trading partners, who may similarly slap tariffs on Venezuelan's exports. If this occurs, Venezuela may face a further reduction in export revenue, on top of the fall in export revenue due to falling oil prices.

Anti-Thesis 2: Additionally, by becoming less globalized Venezuela may lose out on benefits of globalization it could have reaped. According to the theory of comparative advantage, when countries export the goods they have comparative advantage in and import the goods they do not have comparative advantage in, there is a greater output produced. There is a more efficient allocation of resources because countries specialise in producing goods which they have a comparative advantage in and thus is able to produce at lower cost compared to other countries. This is further enhanced by the fact that with specialisation and large scale production, firms will be able to reap economies of scale thus reducing cost of production. Lower costs translate to lower world prices. However, by imposing an import tariff, Venezuela artificially causes the price of imports to be higher than what it is supposed to be. Consumers in Venezuela will suffer from the high prices and the reduction in consumer surplus.

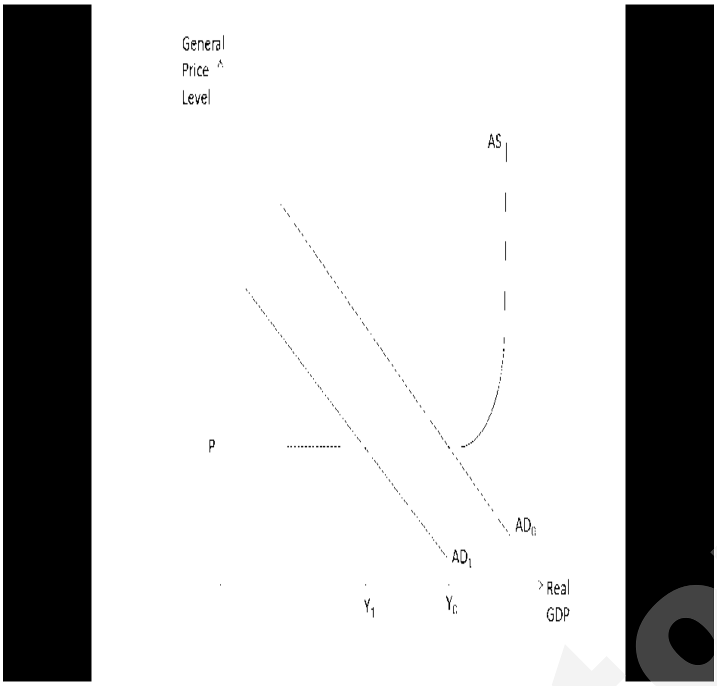
Synthesis: Venezuela should not respond to the falling oil prices by becoming less globalized. From the above analysis, it is clear that the benefits gained from becoming less globalized is only temporary (short term) and will eventually be outweighed by the long-term costs. Therefore, becoming less globalized is a short-term solution to Venezuela's troubles. Venezuela should look towards diversifying its economy and reducing its reliance on oil exports for a more sustainable solution.

Level	Description	Marks
L2	A well-balanced response that looks at both the costs and benefits of becoming less globalized. Answer also includes extract evidence.	4-6
L1	One-sided response that looks at either the costs or the benefits of becoming less globalized. Response may not have included extract evidence as support.	1-3
E	Overall stand on the issue with/without justifications based on economic analysis.	1-2

e) **Assess whether, on balance, lower oil prices can be beneficial.** **[10**

Thesis: There are costs incurred by major oil-producing countries from lower oil prices.

From Extract 5 Para 3: Oil producing countries face falling export revenue (X) because of falling oil prices, assuming that the demand for oil is price inelastic. With a fall in X-M, AD falls from AD0 to AD1 thus reducing national income by a multiplied amount via the negative multiplier effect (from Y0 to Y1). Unemployment rises as well, since the economy would be operating further away from full employment output. (Extract 5 Para 6: "Lower energy prices will cause havoc in the UK North Sea, where companies such as BP and Shell are cutting jobs at a time when exploration levels have already dropped to very low levels"). The evidence suggests that the fall in oil prices has resulted in unemployment of the oil exploration workers. This has the immediate effect of reducing the SOL of these workers. If these workers cannot re-train and move to another industries, they may face structural unemployment that will take a long time to address. If they are discouraged and move out of the labour force, they become hidden unemployment which will affect the productive capacity of the economy.

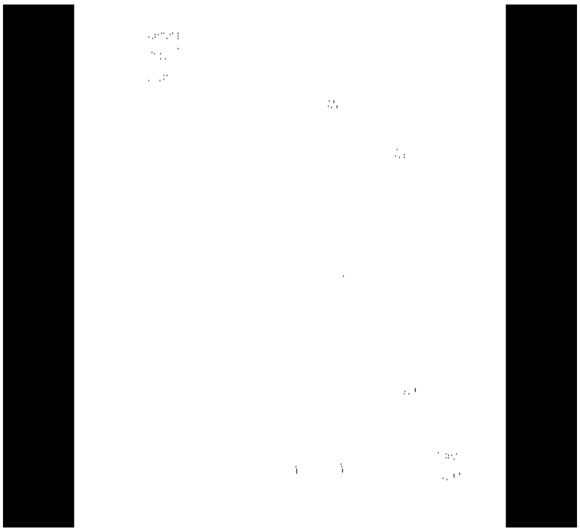


From the extract: “Rouble, which has lost 40% in value against the dollar so far this year, hit a fresh record low.” Since there is a fall in expenditure on oil due to the falling oil prices, there will be a fall in demand for oil producing countries’ currencies. This thus led to a currency depreciation for these countries, leading to external instability and possibly shakening investor confidence.

From Extract 5 Para 4: “Oil-producing countries face lost revenues and budget shortfalls”. When there is a fall in the revenue and profits of oil producing firms in the oil producing countries, the corporate tax revenue received by these governments will fall, which can lead to budget deficits and the inability for government to finance social (e.g. education and health) and infrastructural developments. Although the fall in tax revenues is a short term cost, there are long term implications for these economy as a fall in infrastructural and social development may result in a fall in AS as the productive capabilities and capacity of the economies may fall. This will result in future decline in NY and increase in GPL.

Antithesis: However, there could be benefits to lower oil prices as well, particularly to oil consumers.

As suggested in Extract 5, many countries, particularly in Asia, are dependent on foreign oil and gas imports, so cheaper prices should cut inflation, give impetus to manufacturing output, consumer spending and boost real incomes. The fall in costs of production as a result of falling oil prices will lead to an increase in AS (AS shifts downwards from AS0 to AS1), causing GPL to fall from P0 to P1 and increasing NY from Y0 to Y1, through an increase in consumption and investment (illustrated as a movement along AD). This is further justified by what is mentioned in Extract 5: “There are strong signs in the US that lower energy prices are having a big effect on consumer spending with store and restaurant sales rising by 5% in November against the same month the previous year”. Furthermore, Extract 5 also mentioned that “high home and transport costs are a big influence on inflation and affect the production and distribution of food and other items”, which suggested that this benefit is very significant as oil prices affect GPL very significantly and in a wide-ranging manner. Any fall in oil price will reduce transport costs thus increase AS drastically.



Counter-argument: However, Extract 5 indicated that "this kind of price was not sustainable long term" which implied that any benefits derived from the lower oil prices may not be sustained in the long term.

Mini-Synthesis: Therefore, while there are many benefits to lower oil prices, many of these benefits may not be long term as once the oil prices increase, these benefits will be reversed/eliminated.

Overall Synthesis: There are many benefits and costs associated with lower oil prices but it is clear that the ones who gain are the consumers but the ones who lose will be oil producers and oil exporting countries.

Alternative Synthesis: Although there are benefits and costs to lower oil prices to different countries and different groups of economic agents, given that the price is not expected to be sustainable in the long term, the long term benefits will be limited, even for those who may gain from the lower prices. On the other hand, the costs essentially will have longer term effects, thus on balance it is not so beneficial given that the benefits do not last.

Note
Students are not expected to include all points presented in this suggested answer.

Other possible costs – (i) fall in oil price leading to fall in price of petrol thus increasing consumption of petrol, which generates negative externalities.

Other possible benefits – (i) fall in oil exploration, which generates negative externalities, will help to reduce inefficient allocation of resources; (ii) fall in oil price may induce oil producing countries to re-structure and diversify to other industries that is more sustainable and less volatile in growth.

L3	A well-balanced response that looks at both the costs and benefits of lower oil prices to different parties in the economy (i.e. consumers and producers of oil, or oil-producing vs oil-consuming countries). Answer also includes extract evidence.	**7 - 8**

L2	One-sided response that looks at either the costs or the benefits of lower oil prices. Well elaborated response that includes extract evidence as support. OR Two-sided response that looks at the costs and the benefits of lower oil prices. May not have elaborated completely or no extract evidence as sipport.	**4 - 6**
L1	One-sided response that looks at either the costs or the benefits of lower oil prices. Response may not have considered the impact of lower oil prices on different parties within the economy. Response does not include extract evidence as support.	**1 - 3**
E	Overall stand on the issue with/without justifications based on economic analysis.	**1 - 2**

CATHOLIC JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATIONS
In preparation for
General Certificate of Education Advanced Level
Higher 2

ECONOMICS

9732/02

Paper 2: Essay Questions

25 August 2016

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 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 EACH questions separately**.
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) Based on economic theory, explain how society deals with scarcity. [10]

(b) The free market should always be left alone. Comment. [15]

2 Domestically, rising costs and competitive prices offered by regional rivals are eroding Singapore's appeal as a medical tourism hub. At the same time, incomes in Asia, where a large portion of the clients come from, has suffered from the slowdown in China's economy.

Source: Perspectives@SMU

Using economic analysis, discuss the impact these events are likely to have had on consumers' expenditure on medical services in domestic and foreign markets. [25]

3 Singapore Airlines, caught between the rapid emergence of airlines from the Gulf countries (for example, Emirates) and low cost Asian rivals, is attempting to revive growth by cutting prices.

Source: CNBC

(a) Using appropriate examples, explain the various internal economies of scale enjoyed by an airline company. [10]

(b) Given the market structure Singapore Airlines is operating in, discuss if the business strategy used is the best way to survive the threats in the airline industry. [15]

Section B

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

4 Assess the importance of external stability in achieving an improvement of standard of living for different economies. [25]

5 (a) Explain what determines the effectiveness of fiscal policy in achieving economic growth in Singapore. [10]

(b) Discuss whether conflict in macroeconomic objectives is the most important factor in determining policy decisions in Singapore. [15]

6 To what extent is there a greater need for smaller countries to be globalised? [25]

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2016

Catholic Junior College
H2 Economics / 9732

Preliminary Examination
Mark Scheme
Paper 2

Question 1

(a) Based on economic theory, explain how society deals with scarcity. [10]

Question Interpretation

Command Word	• "Explain how" – to elaborate in detail, the processes that lead to eventual effects/outcomes
Content:	• Central Problem of Economics - Scarcity • Rational decision-making by Consumers (to maximise satisfaction) & Producers (to maximise profits) using Marginalist Principle • Price adjustment process in Price mechanism
Context:	• Give examples of decisions made by consumers and producers

Suggested Answer

Introduction
The central problem of economics is scarcity whereby the limited resources are unable to fulfil the unlimited wants of economic agents in the society. This situation necessitates choice making where rational decisions are made by consumers and producers.

Consumers and producers will make rational decision based on the marginalist principle: Consumers choose how much to consume to maximize satisfaction; Producers choose how much to produce, how to produce and which goods to produce to maximize profits.

The interactions between consumers and producers give rise to the market forces of demand and supply, where the price mechanism in the free market will help to allocate the resources efficiently. In this essay, we will be exploring how all these will be achieved in the society.

Body Paragraph 1 – Consumers' Perspective

P: In order to decide on how much good to consume, consumers will try to maximize the welfare (consumer surplus) / satisfaction from the consumption of the good.

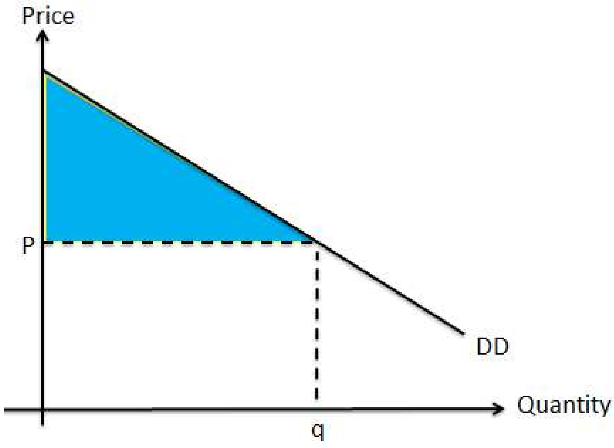


Figure 1: Demand Curve of a Consumer

E: Consumers buy an additional unit of the good (for eg, a plate of chicken rice) if the satisfaction derived is greater than (or equal to) the price (P) he/she has to pay for the good (marginal cost).

E: According to the law of diminishing marginal returns, as the consumers consumes greater quantity of a good the marginal satisfaction (or marginal benefit, MB) keeps falling and hence the willingness to pay additional price falls. This also explains the downward slope of the demand curve.

E: At any quantity lesser than q, the consumer's MB (measured by the demand curve) is higher than the MC (measured by the market price, P) they are paying. Therefore it is optimal for them to increase consumption until MB=MC, i.e. until q. This is where MC=MB and the consumers have the greatest consumer surplus as illustrated by the shaded area on the diagram. Thus given price, P, consumers will decide to consume up to q.

E: This is also the same for quantity beyond q, where the MC is more than the MB for consumption of additional plate of chicken rice, thus consumers will decrease consumption till q to maximize their consumer surplus.

L: The similar principle also helps the producers to decide how much of the goods to produce using the scarce resources in order to maximize their profits.

Body Paragraph 2 – Producers' Perspective
P: Firms aim to maximize profits and they will allocate scarce resources to achieve that by using the marginalist principle.

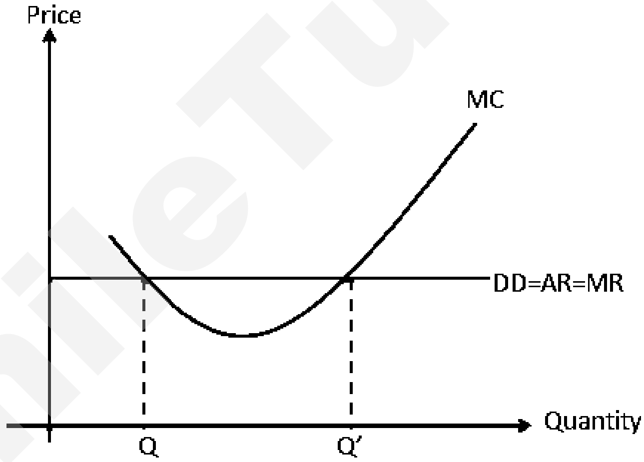


Figure 2: PC Firm Profit Max Condition

E: Using an example of an ice cream stall in a perfectly competitive industry, when producers are thinking of selling an additional cup of ice cream, they consider the additional revenue (marginal revenue, MR) they can earn from selling an additional cup. However, the firm also incurs a marginal cost (MC) of selling that additional cup of ice cream.

E: Thus, as long as the marginal revenue of selling an additional cup of ice cream exceeds the marginal cost, the producers' profits will increase and the firm should continue to sell more cups of ice cream. They will reach the maximum profit when the marginal revenue of the last cup of ice cream sold is exactly equals to the marginal cost, MC=MR.

E: The marginalist principle also helps producers to decide how much to produce. When the price of a good increases, the new P becomes greater than MC, profits will increase by producing more, which explains the upward slope of SS curve.

L: The interactions of consumers and producers in the free market will give rise to the forces of demand and supply. The price mechanism will act as a signal in allocating scarce resources efficiently.

Body Paragraph 3 – Price Mechanism in allocating resources
P: Combining the self-interest driven decision making consumers and producers, resources in a perfectly free market are said to be allocated efficiency when there are no shortage and surplus.

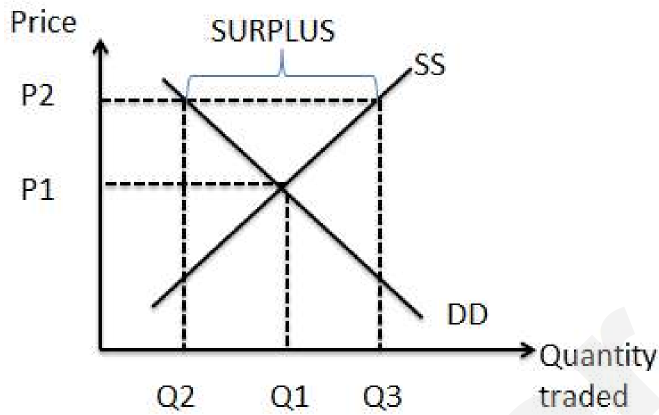


Figure 3: Price Mechanism in a Free Market

E: Imagine an initial disequilibrium at P2. There is a surplus created as Q3 > Q2. This exerts a downward pressure on price. As prices fall, there is a fall in MC (from consumers' point of view) from consuming an additional unit as compared to MB (i.e. MC<MB at Q2) and therefore consumers should increase consumption from Q2. Similarly, as prices fall, there is a fall in MR received (from producers' point of view) from producing an additional unit as compared to MC (i.e. MR<MC at Q3) and therefore producers should cut back on production from Q3. Eventually, this price adjustment process, aided by marginalist thinking will eliminate the surplus and create a new equilibrium at P1 and Q1, where consumers and producers maximize their consumer and producer surplus respectively.
L: This leads to efficient allocation in the free market.

Conclusion
In conclusion, the rational decisions by producers and consumers creates the forces of demand and supply, which then enables the free market to allocate a scare resource so that any shortage or surplus is eventually eliminated. This will help to address scarcity as wastage of resources is prevented, where the both the consumer and producer surplus is maximized.

LORMS

Level	Descriptors	Marks
L3	For a well-developed answer that demonstrates scope and detailed economic explanation of how the marginalist principle framework is being applied by consumers AND producers in maximising their satisfaction (CS) and profits (PS) respectively. Explanations of how the price mechanism allocates scarce resources efficiently are also well developed. Clear reference of the above concepts made to the relevant diagrams.	7 - 10
L2	For an under-developed answer that demonstrates a narrow scope and weak economic explanation of how the marginalist principle framework is being applied by consumers AND/OR producers in maximising their satisfaction (CS) and profits (PS) respectively.	5 - 6

	(Either consumers OR producers ONLY, Max 6m) Explanations of how the price mechanism allocates scarce resources efficiently are missing or under- developed. (No mentioning of price mechanism: Max 6m) Reference of the above concepts made to relevant diagrams is unclear.	
L1	For an answer that shows some knowledge of the concepts of scarcity and marginalist principle and how they are applied in the context of consumers and producers. Answer is lacking in economic analysis. No reference to relevant diagrams in explanations.	1- 4

(b) The free market should always be left alone. Comment. [15]

Question Interpretation

Command Word	• Comment - Requires multiple perspectives on issue(s). Usually involves using a TAS framework
Content:	• Conditions for Price Mechanism to allocate resources efficiently • Sources of Market Failure • Government Intervention & Government Failure
Context:	• Give examples in the context of sources of market failure – for eg: consumption of alcohol in negative externalities.
Approach:	To develop the thesis of the essay by explaining the conditions where price mechanism will lead to efficient outcomes. Next, identify and explain 2 sources of market failure where price mechanism will no longer be able to allocate resources efficiently. These situations necessitate intervention by the government to improve resource allocation. Lastly, students are expected to make a justified stand of the question and provide additional perspectives.

Suggested Answer

Introduction

Free market uses the price mechanism to allocate resources to their various uses (i.e. to decide what, how much to produce, how to produce) and as a rationing device (i.e. to decide for whom to produce).

The price mechanism will achieve efficiency in resource allocation only if the conditions of a perfect market are met (e.g. a perfectly competitive market, no externalities). Otherwise some form of government intervention is necessary to achieve efficiency in resource allocation. Efficient allocation of resources occurs the limited resources of a country are allocated in accordance to the desires of consumers.

In this essay, we will seek to explore if the free market ought to be always left alone without government intervention by considering whether resources will be allocated efficiently.

Thesis: Price mechanism in a free market may achieve efficiency in resource allocation, assuming that the conditions necessary hold true.

E: The price mechanism is a system of price signals that is sent between consumers and producers. Consumers send to and receive price signals (prices of goods and services) from producers in the goods market.

E: Price mechanism ensures allocative efficiency as it assumes that both the firms and households are rational and aim to maximise their benefits when making a decision. Goods and services are therefore produced according to consumers' willingness and ability to buy, thus it reflected consumers' preferences. The demand curve is equal to the marginal benefit curve i.e. the (private) benefit of the additional unit, while the supply curve is equal to the marginal cost curve i.e. the (private) cost of the additional unit. With the assumptions that in a perfect market where there are no externalities and sources of market failure, the demand curve is also equal to the marginal social benefit while the supply curve is equal to the marginal social cost of society.

E: Therefore, with reference to Figure 4, the market equilibrium, where demand meets supply, is also where marginal social benefit meets marginal social costs. At this point, net social benefit is maximised, meaning this is the allocative efficient outcome.

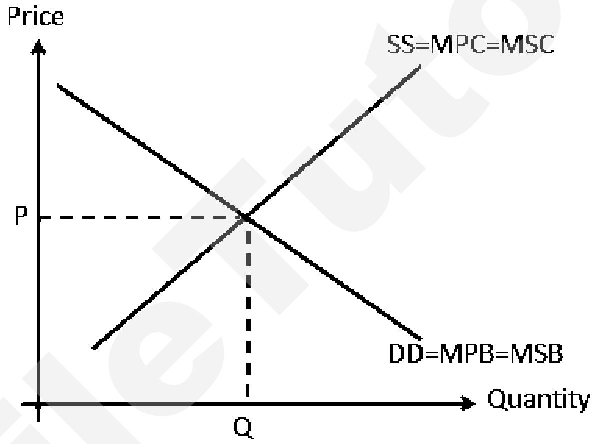


Figure 4: Perfect Competitive Market

<u>OR</u> The price mechanism will ensure that any shortages or surpluses are eliminated and the equilibrium price and quantity is achieved. At the equilibrium, DD=SS and P=MC/MSB=MSC. With P=MC→ it means that there is no under or over allocation and the right amount of the goods have been produced.

E: Hence, in theory, assuming a perfect market with the no sources of market failure, allocative efficiency can be achieved as the price mechanism ensures that resources are allocated to produce the right quantity according to the desires of the society.

L: But in reality, this might not be the case as various sources of market failure will not enable the price mechanism to allocate resources efficiently.

Antithesis: Price mechanism in a free market will not achieve efficiency in resource allocation in reality; some form of government intervention will be necessary [Any 2 sources of market failure]

P: However, the conditions of a perfect market cannot be met in a real world context. Without perfect information, it is not possible to expect price mechanism to achieve efficiency in resource allocation.

E: In addition, other forms of market failure occur due to existence of externalities, public goods, merit and demerit goods, imperfect market structure etc. When a market fails to achieve allocative efficiency and resources are not allocated efficiently, market failure occurs. Thus, the price mechanism in the free market will no longer allocate resources efficiently.

Antithesis Paragraph 1: Negative Externalities

P: Price mechanism does not take into account external cost or benefit in the consumption/production of certain goods.

E: When negative externalities are present, there is a divergence between a consumer's MPC vs the society's MSC, and therefore when the consumer uses the marginalist principle to consume at where MPC=MPB, it is not allocatively efficient.

E: In a free market economy driven by self-interest, firms will produce at the point whereby **MPB=MPC**, where their net private benefit is maximized – at Q_f in Figure 5. In this example, private costs borne by the firm will include labour costs, overhead costs and equipment. Private benefit accrued to the firm is the revenue they are able to enjoy. For simplicity we assume there are no external benefits in the production of power (MEB = 0), hence MSB=MPB. External costs such as environmental pollution during the production of power, as well as the adverse health impacts of people who live nearby, are not taken into account.

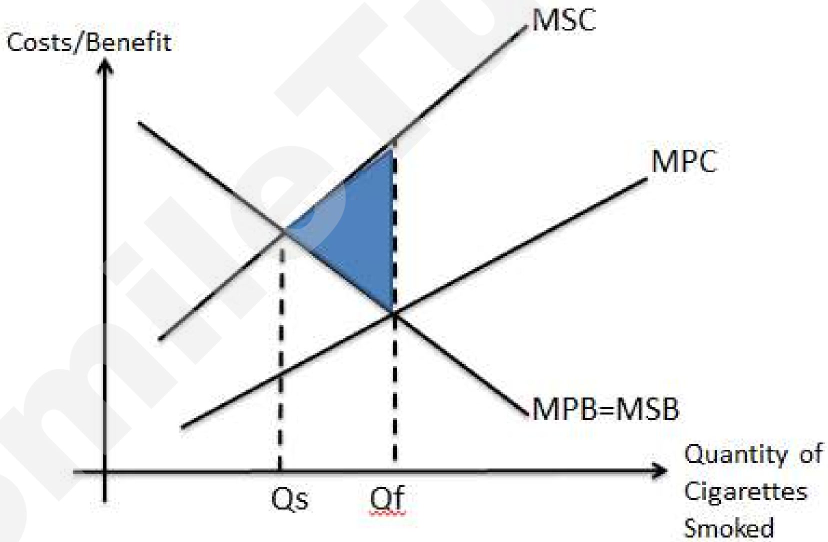


Figure 5: Negative Externalities in Cigarettes Consumption

E: Therefore, this leads to a divergence between MSC and MPC in Figure 5, where MSC is higher than the MPC of running power plants at all levels of production. This means that the socially efficient equilibrium is at MSB = MSC, and the socially efficient quantity should be Q_S. Therefore, there is **overproduction** of power by the amount Q_SQ_f under free market forces. As a result of this overproduction by the amount of Q_SQ_f, MSC exceeds MSB over this output and a deadweight loss to society results. This is given by the shaded area in the diagram. The market fails as a result and the government could improve resource allocation through the use of taxes or legislation.

L: Besides the presence of externalities, public goods will also lead to market failure.

Antithesis Paragraph 2: Public Goods

P: Due to the non-excludable and non-rivalrous characteristics of public goods, consumers may not voice their demands or producers may not be willing to produce such goods. Thus, markets of such goods are missing although the entire society will be better off if there is provision.

E: Since consumers can consume a public good (for eg, national security) without paying for it (in effect acting as a *free rider*), there is no feasible way of excluding non-payers from enjoying the benefits of the good (non-excludability). Consumers would not be willing to pay for the good. There is no effective demand. Hence, in a free market, private firms will not produce national security as the firms are unable to derive the effective demand for it since no consumers will reveal their willingness and ability to pay for national security.

E: To achieve allocative efficiency, MSC = MSB. Since marginal social cost of providing national security to an additional person is zero (non-rivalry), price must be zero if the economy is to allocate resources efficiently. No private producer will be willing to provide national security for free for the sake of allocative efficiency. As the private firm is unable to effectively charge a price for the product (non-excludability in consumption feature) and the price should be zero from the society's point of view (non-rivalry in consumption feature), no private firm will provide national security.

E: Thus in the market of public goods, government will need to supply these goods through direct provision in order to improve resource allocation.

L: The presence of market dominance in an imperfect market structure will also lead to market failure.

Antithesis Paragraph 3: Market Dominance

P: Due to imperfect knowledge and barriers to entry, price mechanism may fail to work efficiently in some markets.

E: When there is monopoly power, for example De Beers group in the market for diamonds, the monopolist will pursue their own self-interest by maximizing their profit at where MR=MC (according to the marginalist principle. Profit motivated producers (for eg: a monopolist) may choose to restrict the output (Q) and charge a higher price (P), leading to inefficient allocation of resources (P>MC) as illustrated in Figure 6.).

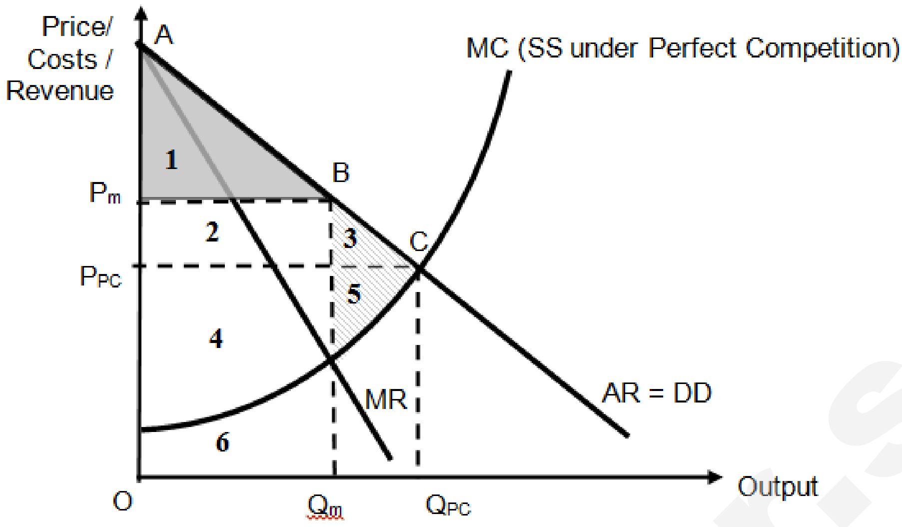


Figure 6: Market failure due to market dominance

E: Under perfect competition, the equilibrium price and output occurs at P_{PC} and Q_{PC} respectively, whereby market demand intersects market supply. Consumer surplus is shown by areas 1+2+3 and producer surplus by areas 4+5. Total surplus is maximised at this output Q_{PC}.

E: The monopolist (De Beers) demand curve would be the former market demand curve AR, while the monopolist's marginal cost curve would be the former market supply curve MC (assuming that there are no economies of scale). The monopolist maximises profit by producing at the point where MC=MR, thus resulting in the equilibrium price and output of Pm and Qm respectively.

E: At the new level of output Qm, producer surplus is areas 2+4 (note that area 2 has been transformed from consumer surplus previously under perfect competition to producer surplus now). Consumer surplus falls drastically to area 1. Total surplus under monopoly is areas 1+2+4. Monopolisation of the industry has resulted in a loss of surplus of areas 3+5. This is known as the deadweight welfare loss to society. Society's welfare is not maximized.

E: Therefore, under imperfect markets, firms are able to dictate prices, and if left entirely to the price mechanism may lead to a misallocation of resources. Hence government will need to set competition laws for the market to work

Synthesis

Price mechanism will lead to an efficient allocation of resources only under several strict assumptions, which usually do not hold in reality. Therefore, the free market should not always be left alone under such conditions where sources of market failure are present.

This means that there is usually room for government intervention to improve resource allocation. However, there is always a possibility of government failure since the government may also suffer from imperfect information. If government intervention results in a worse outcome as compared to the original market failure, the free market may be better off left alone.

LORMS

Level	Descriptors	Marks
L3	For a well-developed answer that demonstrates scope and detailed economic explanation of the role of price mechanism in achieving efficient resource allocation in theory and but not in reality due to the various forms of market failure. The answer illustrates an ability to recognise the underlying assumptions and conditions for efficiency to be achieved. At least 2 sources of market failure are well elaborated with appropriate diagrams.	9 - 11
L2	For an undeveloped explanation that explains the concepts of efficiency and inefficiency due to market failure without referring to the role of price mechanism. OR An answer that explains the role of price mechanism in terms of resource allocation without reference to efficiency. Expect an explanation of why efficiency in resource allocation cannot be achieved in reality due to various forms of market failures. Reference of the above concepts made to relevant diagrams is unclear. Max 8: Only 1 source of market failure is well elaborated.	6 - 8
L1	For an answer that shows some knowledge of concepts of efficiency, and/ or price mechanism or / and market failure without explanation. Answer contains several conceptual errors. No reference to relevant diagrams in explanations.	1- 5
E1 (1 – 2)	Stand with no/weak justification.	
E2 (3 – 4)	Stand with good justification	

Question 2

Domestically, rising costs and competitive prices offered by regional rivals are eroding Singapore's appeals as a medical tourism hub. At the same time, incomes in Asia, where a large portion of the clients come from, has suffered from the slowdown in China's economy.

Source: Perspectives@smu

Using economic analysis, discuss the impact these events are likely to have had on consumers' expenditure on medical services in domestic and foreign markets. [25]

Command: Discuss the impacts on domestic (Singapore) and foreign (Malaysia, Korea, Thailand) medical services markets. The discussion stems from changes in circumstances such as the reduction of prices by rivals, rising incomes in Asia and rising costs in Singapore.
Content: Demand and Supply, PED, YED, XED and TE.
Context: Medical services market in Singapore and foreign countries.

How to attempt this question:
Firstly we need to establish:

1. How the rising costs will affect supply of medical services in Singapore. Relate change in supply to impact on consumer expenditure i.e. total expenditure with the use of price elasticity of demand concept.

2. How the fall in prices of substitutes (rival prices) will affect demand for medical services in Singapore. To bring in cross elasticity concept here.

3. How the fall in income levels will affect demand for medical services in Singapore with the use of income elasticity concept.

4. Relate above change in demand in point 2 and 3 to impact on consumer expenditure i.e. total expenditure.

5. How will the simultaneous shifts of demand and supply above affect the Singapore medical services market in terms of equilibrium price and quantity and total expenditure.

6. How the fall in income levels will affect demand for medical services in foreign countries with the use of income elasticity concept. Relate this change in demand to impact on consumer expenditure.

<u>**Suggested Answer**</u>
Introduction
In economics, the market for a particular good can be analysed using the concept of demand & supply. A market is defined as a convenient arrangement whereby buyers and sellers can negotiate in order to exchange (buy and sell) goods, services, or factors of production at an agreed price.

Demand is defined as the amount of a good or service that consumers are both willing and able to buy at each possible price during a given period of time, ceteris paribus. Supply is defined as the amount of a good or service that producers are both willing and able to sell at each possible price during a given period of time, ceteris paribus

The price elasticity of demand (PED) measures the degree of responsiveness of quantity demanded of a good to a change in its price, ceteris paribus. The cross elasticity of demand

(XED) measures the degree of responsiveness of demand of one good to a change in the price of another good, ceteris paribus. The income elasticity of demand (YED) measures the degree of responsiveness of demand of a good to a change in income, ceteris paribus.

With an increase in costs, it will decrease the supply of goods/services. The competitive prices of rivals will cause demand for Singapore goods to fall and falling incomes in Asia will have an adverse impact on demand for normal goods and increase demand for inferior goods/services. Thus given the circumstances in the preamble there will be changes in both demand and supply of the various markets for medical services. This essay will use the concept of demand, supply & elasticity to determine how the price, quantity and total expenditure for various products (namely domestic and foreign medical services) will be affected.

Body

Singapore Medical Services Market

$DD_{\text{s'pore med svcs}}$ fall

Singapore and foreign medical services are substitutes. Substitutes in consumption are goods that can be used in place of one another for the satisfaction of a particular purpose/want i.e. goods which are alternatives for each other. For e.g. they are deemed as substitutes as they render similar services to satify similar medicals needs of people. Their cross elasticity of demand would be **positive**. This means that an *increase in price* of one good brings about an *increase in demand for its substitute*. In the context of competitive prices offered by foreign medical services i.e. decrease in price of foreign medical services, the demand for Singapore medical services will decrease and the total expenditure (TE) on Singapore medical services will fall.

However the extent of the fall in TE depends on whether Singapore and foreign medical services are close or weak substitutes.

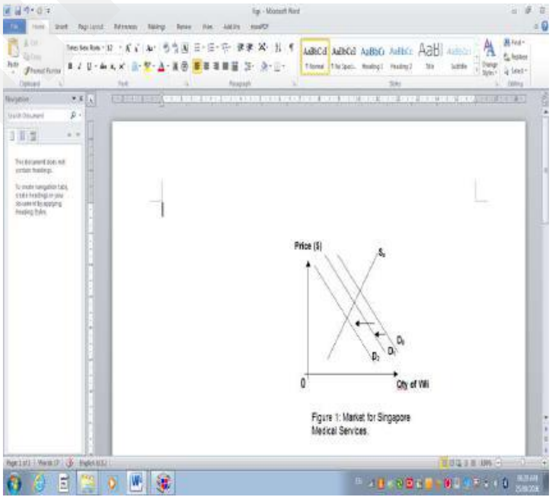


Figure 1: Market for Singapore Medical Services.

If the quality of services offered by foreign rivals are much lower compared to Singapore's medical services i.e. in terms of quality of after-care and use of latest medical technology it will be deemed as a weak substitute. So in the case where rivals were to lower prices the demand for Singapore's medical services will decrease but to a less than proportionate extent from D_0 to D_1 (As seen in Figure 1). Consequently the equilibrium price and quantity will fall. As total expenditure is equal to price x quantity, total expenditure on Singapore medical services will fall. However this fall will not be as large as compared to a fall in TE if the goods were close substitutes as close substitutes would have seen the demand fall to D_2 instead.

A decrease in demand from D_0 to D_1 in Fig 2, ceteris paribus, creates surplus of Q_0Q_2 at the initial price P_0. A surplus drives the price down which in turn causes Q_d to rise and Q_s to fall according to the Law of Demand and Supply respectively. The adjustment process continues until the new equilibrium P_1 and Q_1 is reached where Q_d equals to Q_s.A fall in demand for a good, ceteris paribus, will cause a <u>fall in both equilibrium price and equilibrium quantity</u>. The total expenditure falls from area P_oQ_o to area P_1Q_1.

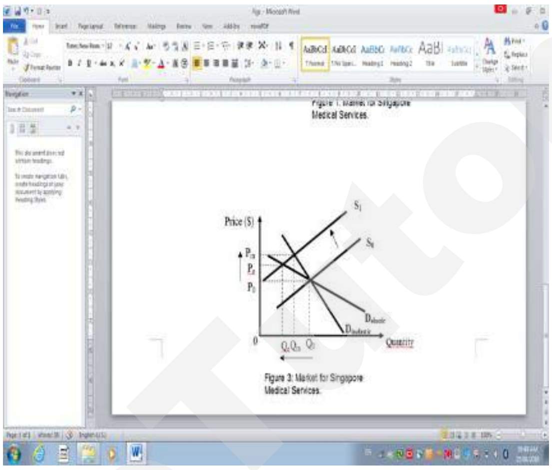
Falling incomes in Asia will also cause TE for Singapore medical services to fall since medical services are generally considered to be normal goods with YED > 0. However the extent of fall in TE depends on whether Singapore medical services are regarded as luxury items or necessity items. Fall in incomes will mean consumers have less ability to buy goods and services which will lead to a fall in demand for normal goods. Singapore medical services can be viewed as a normal good i.e. an increase in income will lead to an increase in demand for the goods ceteris paribus and vice versa. The impact of falling incomes in Asia will be as seen in figure 1 where demand falls from D_o to D_1 or D_2.. In either case this will lead to a fall in equilibrium price and quantity and a fall in total expenditure.

The extent of the fall in TE will be large for luxury items as income elasticity of demand will be greater than 1. This means for a given fall in income there will be a more than proportionate fall in demand from D_o to D_2. Medical services like cosmetic surgery for beauty enhancements would fall into the category of luxury items. So such services will see a large fall in demand and consequently large falls in TE. However if the good is considered a necessity e.g. Skin grafting surgery for burn victims, it will have income elasticity of demand which will be greater than 0 but less than 1. Such medical services will not see such a large drop in demand from a fall in income levels and thus TE will fall to a lesser extent for such goods.

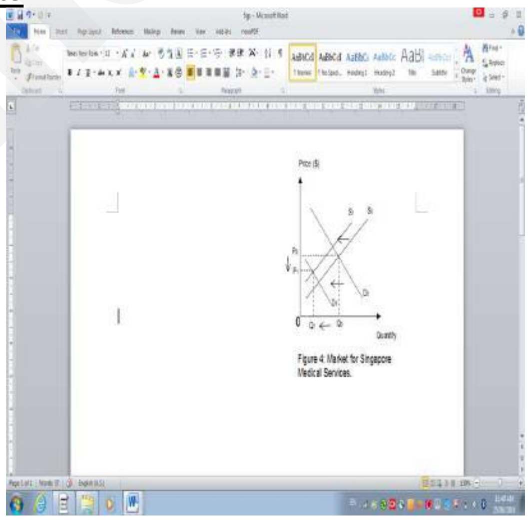
<u>$SS_{s\text{'pore med svcs}}$ fall</u>

Besides demand forces, there are supply forces at play in the case of medical services in this context. Domestically rising costs possibly from higher rental for office space and the shortage of labour will cause the supply of Singapore medical services to fall. This is because the cost of production in the provision of the above service will rise with e.g. rising input cost which will mean producers will be less willing and able to produce at every price level, causing the supply to fall from S_o to S_1 as seen in figure 3.

The impact on TE will depend on the price elasticity of demand (PED) for Singapore medical services. Price elasticity of demand for Singapore medical services can be both price inelastic and price elastic. For e.g. demand for heart surgery and cancer treatments will be considered price inelastic as there will be little substitutes for such services besides traditional medicine treatments and alternative therapies. Such services will see a less than proportionate fall in quantity demanded from Q_o to Q_{in} to a rise in prices P_o to P_{in}. This implies that the fall in total expenditure due to a fall in quantity traded will be less than the rise in TE due to the rise in prices. Overall TE will rise for consumers of such services. However if the service is for facial reconstruction or body enhancements then demand is most likely to be price elastic as the proportion of income spent on such services will be very large. As such the rise in prices P_o to P_e will trigger a more than proportionate fall in quantity demanded, Q_o to Q_e leading to an overall fall in TE by consumers of such goods.



Combine SS & DD Effects



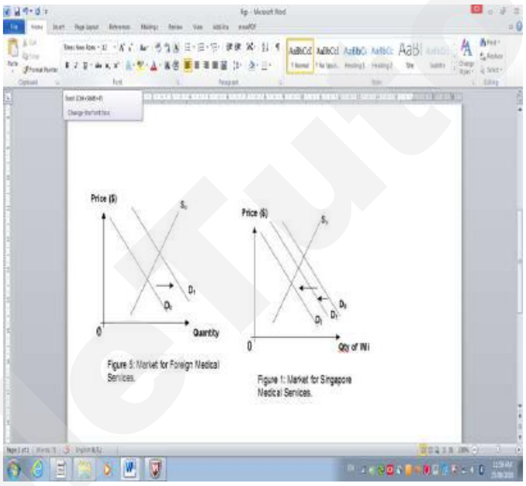
When the demand and supply changes are taken into account the combined shifts are represented in figure 4. Demand will shift more than supply as there are more demand factors at work compared to supply. As seen in Figure 4, price will ultimately fall from P_0 to P_1 and quantity will fall from Q_0 to Q_1.

The overall effect on consumers in the form of total expenditure depends on the type of medical service in question. In the case of goods with price inelastic demand e.g. heart surgery the fall in supply would cause TE to rise but the fall in demand from falling incomes and substitution to foreign goods will see the TE fall. So the overall impact on TE is indeterminate. However in the case of goods with price elastic demand e.g. cosmetic surgery TE will fall due to changes in demand and supply as analysed earlier. This means overall TE will fall for these services.

Foreign Medical Services Market

$DD_{\text{foreign med svcs}}$ rises

Falling incomes in Asia will cause TE for foreign medical services to rise. This is based on the assumption that foreign medical services in the South East Asian region e.g. Indonesia and Cambodia will be considered inferior goods compared to services offered in Singapore (YED<0). Hence the fall in incomes will mean there will be a rise in demand for foreign medical services. Thus Indonesians who may have opted to come to Singapore for an eye surgery will now choose to stay in Indonesia to get the same medical procedure done as there is a general fall in income levels in Asia. With reference to figure 5 this would be represented by a rise in demand from D_0 to D_1. Hence there is a rise in equilibrium price and quantity and a rise in total expenditure P_0Q_0.



Conclusion

To conclude, the impact of the contexts given in the preamble would impact consumer's expenditure differently for Singapore medical services and foreign medical services. In summary impact on consumer expenditure for Singapore medical was either a fall in TE or indeterminate while in the case of foreign services it was an overall rise in TE. The impact on consumer expenditures for medical services depended not only on the demand and supply factors that were taking place. The impact was also determined by price elasticity, cross elasticity and income elasticity of demand. However these impacts may well turn out differently if the ceteris paribus conditions did not hold or the assumptions about the two markets were different e.g. foreign medical services may not be inferior after all hence TE may fall overall.

LORMS

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	6-9 marks

		theory and/or and inadequate development of analysis may be evident. Answers that are not answered in context to Singapore and no use of examples related to medical services.	
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 two markets. Elasticity concepts were used with little development.	10-11 marks
	High	The answer has a more thorough relevance to the question but the theory is incompletely explained. Some of use of elasticity concepts within the answer will fall into this category. Total expenditure is covered with some development.	
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 3 elasticity concepts, PED, YED and XED. Both markets are well analysed. Candidates are also able to comment on the direction and extent impact on the consumers of the two markets. Candidates are able to combine impacts from single shifts to arrive at a conclusion on overall impact on consumer expenditure from the simultaneous shifts.	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

Question 3
Singapore Airlines, caught between the rapid emergence of airlines from the Gulf countries (for example, Emirates) and low cost Asian rivals, is attempting to revive growth by cutting prices.

Source: CNBC

a) Using appropriate examples, explain the various internal economies of scale enjoyed by an airline company. [10]

Command Words:
a)'Using appropriate examples'- just stating the examples are not enough. The question requires you to make use of the examples to develop the points
b) 'explain'- give detailed analysis of

Content: Various (more than 1) Internal Economies of Scale: cost savings resulting from EXPANSION of a firm. You need to clearly explain what the expansion is in terms of. The answer requires the use of a diagram that shows how LRAC falls (movement along the curve) with increase in output.

Context: Airline company

Approach:
• Explain what it means for an airline company to expand.
• Followed by this, explain 3 sources of IEOS, using examples, which can result from such an expansion.
•Explain using a diagram how LRAC is lowered when there is such an expansion.

Introduction
Internal economies of scale (IEOS) are the cost savings a firm experiences as it increases its scale of production/operation. Thus, as the scale of production/operation increases, the long run average cost will fall (as the total cost is spread over a larger range of production/operation).

Body
Paragraph 1
There are different types of IEOS that an airline company can enjoy when they expand their scale of operation. Expansion of scale of operation in this case may refer to the number of passengers they carry, the number of flights they operate or even the number of airports they serve/fly to.

Paragraph 2
There are IEOS from organizational economies. As an airline company grows its operation, there is greater flexibility to employ specialists to be in-charge of customer service management, sales and advertisement, human resource management, training of the crew, finance etc. This will help the airline company to achieve higher managerial efficiency and lower average cost of operation.

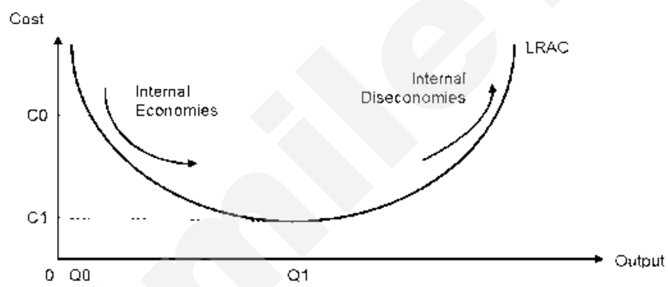
Paragraph 3
There are IEOS from spreading overheads and indivisibilities. As an airline embarks on R&D for more fuel efficient planes or better quality of in-flight experience, they will incur significantly large costs of embarking on such investments. Similarly, for each airline company the fleet of aircraft constitutes a huge fixed cost. An airline company also has to

up of the facilities (especially in terms of logistics) at different airports. Thus, all these investments in fixed costs tend to be viable and cost efficient only with a large scale of operation (such that the long run average cost is lowered with increase in scale of operation).

Paragraph 4
There are financial IEOS that can be enjoyed by an airline company. An airline company may have to obtain funds from financial institutions to carry out their operations and research projects. The larger the scale of operation (for example, SIA or Emirates which not only have aircrafts with large (passenger/seat) capacity but also serves many airports), the lower is the interest rate on loans. This is because the scale of operation directly affects their credit worthiness as a borrower (less risk of default). Thus, a lower interest rate will help to lower the average cost of the firm. Similarly, the administering of the interest rate can be spread over a large scale of output which will lower long run average costs.

Additional point that can also be used
Commercial IEOS- An airline company may want to invest in advertisement to attract many tourists and gain market share both in the domestic market as well as the international market. As the advertisement cost can be considered to be a fixed cost, the average cost of advertising will be lower for SIA which has large scale of operation over long run.
(*any 3 of the above IEOS*)

The IEOS enjoyed by a firm can be shown using a LRAC curve. As the airline company expands/has a higher scale of operation from Q0 to Q1, the long run average cost falls from C0 to C1. [diagram must be used]



Conclusion
Thus, an airline company will enjoy different IEOS from large scale of operation and move down along the LRAC. However, the assumption is that the company will choose to operate on the LRAC at any given level of operation. It is important to note that as the airline company keeps expanding their scale, they may incur higher long run average cost after expanding beyond a certain scale of operation (i.e. internal diseconomies of scale).

LORMS		
Levels	Descriptors	Marks
L3	Answer explains at least 3 reasons/sources of IEOS very well in the context of an airline company and there is clear link made to cost advantage. Examples have been used consistently to support these explanations. The answer is able to explain that the IEOS can be enjoyed only with expansion of a firm and thus, uses relevant example of such expansion in the context of an airline company. Diagram for IEOS has been used to	7-10

	support the explanations.	
L2	Answer explains some reasons/sources of IEOS but they may not be always supported with examples in the context of an airline company. Te reasons of IEOS are clearly linked to the cost advantage enjoyed by a company. The answer may not have made explicit reference to the expansion of an airline company to explain the IEOS. Attempts made to draw a diagram to support the explanations.	5-6
L1	Answer lists different reasons/sources for IEOS without adequate explanation in the context of an airline industry. The reasons for IEOS are not clearly linked to cost advantage enjoyed by the company. The answer may contain some error and diagram has not been used to explain IEOS.	1-4

b) Given the market structure that Singapore Airlines is operating in, discuss if the business strategy used is the best way to survive the threats in the airline industry. [15]

Command Words:
a)Discuss if- requires multiple perspectives
b)'best'- requires comparison with two other strategies by using a criteria

Content:
a)'Given the market structure'- identify and justify of the market structure using characteristics
b) 'business strategy' to survive- behavior of market structure (different ways of competition)

Context:
a)Singapore Airlines
b)current threats

Approach
•Identify and justify the market structure that Singapore Airlines is operating in and analyse the current threats
•Identify the 'business strategy' based on preamble as price competition
•Set criteria to decide what is 'best'
•Thesis: Given the market structure, price competition is a good strategy to survive the threats based on the criteria – show how the strategy helps Singapore airlines to meet the criteria and respond to the threats
•Anti-Thesis 1: Given the market structure, price competition is not a good strategy to survive the threats based on the criteria- show how the strategy may actually worsen the problems for Singapore Airlines
•Anti-Thesis 2: Given the market structure, other strategies are better to survive the threats based on the criteria- show two other relevant strategies that can be used by Singapore Airline
•Synthesis

Introduction
The market structure that Singapore Airlines (SIA) is operating in is oligopoly. This is due to the high BTE in the form of huge start of cost especially, in terms of investing in the fleets of aircrafts. This results to very few dominant firms in the market who capture a significant market share. This allows the firms to enjoy long run supernormal profit.
However, with the entry of new competitors in the market as mentioned in the preamble, the market share of Singapore Airlines may fall and due to the availability of substitutes including the low cost carriers, PED>1 [*AR may fall and become more price elastic*]. Thus, with this new threat of competition, over time, SIA may face a declining profit level. To revive their growth and profit, SIA is engaging is price-cutting strategy which is a form of price competition. Profits can be defined as the excess of total revenue over total costs.
It is important to examine if this strategy is the best strategy for SIA, assuming that their main goal is to effectively revive and sustain their profit levels.

Note: identification and explanation of the industry as a monopolistic competition market structure is also accepted but the analysis must match the identification

Body
Thesis: Given the market structure, price competition is a good strategy to survive the threats based on the criteria set

- SIA can give discounts to attract more customers to avail their services. The fall in price should increase the quantity demanded of their services. This is especially if SIA is engaging in predatory pricing to keep threats of competition from Emirates and low cost carriers at bay.

- It is important to note that given that PED<1 in the oligopolistic market structure that they are operating in, the total revenue may fall initially as quantity demanded rises less than proportionately, however, as they reduce substitutability and regain their market share, they can increase price to increase total revenue. Temporarily, they may be earning sub-normal profit, but as they may have accumulated long run super normal profit, they may be able to survive the short run fall in profit levels. Moreover, the IEOS enjoyed by SIA is significantly large as mentioned in part a, thus, they may still be able to break even while charging lower prices.
- Thus price-cutting strategy may be effective for SIA especially to preserve market share and revive profit. This is true assuming that the price cuts are not matched by the rivals.

Anti-Thesis 1: Given the market structure, price competition is not a good strategy to survive the threats based on the criteria

- SIA is operating under oligopolistic market structure as explained before. This means there is existence of mutually interdependent behavior. Thus, a price-cut by SIA may be followed by Emirates for the long haul flights and by low cost carriers for the short haul flights, especially on routes served by both of these airlines. They can do so by announcing special offer price or discounts. Due to the presence of few dominant firms, there is a presence of very high degree of rival consciousness, whereby, an increase is price is not followed by rivals but a reduction in price will make the rivals to follow suit. This makes the PED<1 below the price-output combination decided in the market. And a fall in price will only increase quantity demanded less than proportionately as competitors are also offering lower prices.
- Thus, as SIA cuts price and other rivals follow, there will be an aggressive price war which ultimately results to lower total revenue of all firms [as fall in price leads to less than proportionate rise in quantity demanded, total revenue falls]. Assuming total costs don't change, this will lower the profit level of SIA.
- Due to the characteristic of mutual interdependence, prices tend to be stable in oligopoly and so, it may not be a prudent decision for SIA to engage in price-cutting as it is not a sustainable policy and may not be effective in reviving growth/profit.

Anti-Thesis 2: Other strategies (non-price competition) may be better for SIA to revive their growth and profit.

- **Advertising** (or product differentiation by adding in-flight services like free WiFi etc.) could be a better alternative. SIA is already very well known for its safety, on-time arrivals and departures as well as comfort. However, they can still continue engaging in advertising to create brand loyalty among the customers. This helps to increase AR and make PED<1 (and XED<1 as well) such that they can charge higher price to increase TR. Assuming that the rise in TR exceeds the advertisement costs, profits will increase. Such brand loyalty will also increase the BTE making PED even more inelastic, and help them to preserve market share and long run profit. This is also a feasible strategy considering the accumulated long run super normal profit.
- **Business partnership** with other airlines and expanding regional network to tap on to the growing economics in the neighbouring economies may be a possible solution (for example, AirVistara in India). This will help them to increase AR and increase profit (Assuming rise in TR > rise in cost). It is safe to assume that expanding into the regional markets, especially the developing ones, will help them

company. Thus, overall profit levels will increase.

- **Introducing low cost services** especially for short-haul travels [to compete with the low cost airlines] like Scoot or Silk Air to achieve market share even in the low cost segment and increase AR to increase profit. By such diversification, they can also ensure that they are more equipped to at least maintain their profit level, even if demand falls in the market they have traditionally served.
- **Cost Reduction** can also be a feasible strategy. Considering the dominance that Singapore Airlines has had, it is expected that they have past supernormal profits that they can use to invest in more fuel efficient aircrafts. This will help them to lower the fuel cost and as Profit= TR- TC, lowering of their total costs, will also help them to increase profit. However, as TR is already expected to fall because of the threat of competition in the market, the lowering of TC may not lead to a rise in profit, but may only allow to at least not reduce the profit significantly or maintain the current profit levels.

Synthesis : Price-cutting is not the best strategy over long run as it may lead to a price war, given the nature of the industry. However, if they really want to engage in price war temporarily, they may have to cut cost simultaneously to be able to survive the price-war. Given their IEOS, it may be feasible for SIA to use price-cutting as a strategy for a short period of time. However, due to the nature of the industry non-price competition may be more preferred over the long run.

LORMS		
Levels	Descriptors	Marks
L3	A well balanced answer that presents different perspectives to analyze if price-cutting is the best strategy and compares it to other strategies. These analyses are clearly grounded on the aim of reviving growth and profit in the context of the market structure identified and the threats faced by SIA. Different strategies analyzed are linked to either TR or TC to explain the outcome on profit. Examples have been used to support the explanations. Diagrams have been used to aid the explanations.	9-11
L2	Answer attempts to present different perspectives to analyze if price-cutting is the best strategy in the context of the market structure identified. However, these analyses may not be well linked to reviving growth and/or profit of SIA. As a result, there was no/inadequate link made to TR and TC in the analysis. There may not be enough comparison made to other strategies. Some attempts have been made to use examples.	6-8
L1	Answer is largely one-sided with insufficient analysis on price-cutting strategy. These analyses are not based upon any identified market structure and/or a specific objective of SIA. As a result, the link to TR and/or TC has not been made. Examples have not been used to support the explanations.	1-5

E1: 1-2	Stand with some justification
E2: 3-4	

Question 4

Assess the importance of external stability in achieving an improvement of standard of living for different economies. [25]

Command Word	Assess: evaluate the significance of external stability based on different criteria and relative to other factors
Content Required	Macroeconomic Indicators and Problems, Standard of Living (Material & Non-Material)
Context	"different economies" e.g. Small & open versus Large & less open Developed versus Developing
Approach	1. Candidates should first establish what external stability implies about the BOP and exchange rates and its impact on SOL. 2. Before T/AT arguments are made, candidates should come up with possible comparisons of 'different economies' as suggested above. 3. T/AT arguments will hence be made based on criteria such as the characteristics and nature of different types of economies. i.e. each point should be contextualised to the type of economy and linked to standard of living. 4. T/AT arguments should also distinguish between material and non-material SOL.

Introduction

Establishing external stability w.r.t indicators

Internal stability: low inflation rate, sustainable rise in GDP, sustained periods of low unemployment

External stability: no excessive BOP deficit/surplus leading to stable exchange rates

Standard of living: Material SOL in terms of ability to consume g/s; non-material SOL in terms of inequality, quality of education and healthcare etc.

Different economies: *developing/developed; small & open VS large & less open*

Body

Explain how external instability leads to decrease in SOL

Persistent trade imbalances

1. Persistently large Trade surpluses => inflationary impact on economic growth => overheating => decrease in real GDP growth rate -> negative impact on employment, income levels and hence SOL
2. Persistently large Trade deficits => deflationary impact on economic growth => economic slow-down -> negative impact on employment , income levels and hence SOL
3. 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.

Currency volatility

1. Depreciation => cost push inflationary pressures -> decrease in AS due to increase in COP -> undermine the confidence of foreign investors; capital flight ->negative impact on economic growth, employment, income and hence SOL
2. Appreciation => erodes export price competitiveness -> negative impact on economic growth, employment and income and hence SOL.
3. Ideally neither sharp nor sudden depreciation or appreciation to prevent negative impact on economic growth and hence SOL

4. 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$) could easily end up with unexpected losses due to adverse currency movements when converting his sales proceeds into the domestic currency. Assuming the exporter marked up (profit-margin) is 10% in SGD, a depreciation of the foreign currency proceeds e.g. US$ by say 10% would have wiped out the entire profit-margin -> Negative impact on economic growth and therefore SOL

Overall: Stability increases predictability – facilitates investments, resource allocation decisions and therefore sustainable growth

Thesis Point 1: External stability is more important to small and open economies
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. For e.g., SG ensures exchange rate stability through a gradual appreciation of the SGD to curb imported cost push inflation, while ensuring export competitiveness is not eroded over time as the economy moves up the value chain, producing exports whose demand is price inelastic. External stability allows an increase in (X-M) and FDI and hence increases in AD and NY, employment and material SOL in the LR.

Anti-Thesis Point 1: External stability is less important to large economies
In contrast, 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. E.g. an appreciation of USD may lead to a fall in (X-M) assuming MLC holds. However, this can be offset by an increase in domestic consumption. Likewise, reduction in FDI or capital outflows can be offset by an increase in domestic I and C (via a fall in i/r due to capital outflows).

Hence, the macroeconomic priority in America is to focus on stimulating their domestic economy so as to raise SOL e.g. use of counter cyclical fiscal stimulus and monetary stimulus such as QE or quantitative easing.

The relative importance of internal and external stability is determined by whether an economy is able to withstand external shocks. Although there are economies that are more open than others, in a globalised world, trade can potentially become a more important engine of growth for most economies and hence none can truly be totally immune from negative impact of external shocks. However, large economies are able to offset the impacts from external shocks by rebalancing its economy to rely on internal demand, whereas small economies rely more on external stability to minimise impacts of external shocks.

Thesis Point 2: External stability is more important to developed economies
Most developed economies are faced with the following trends

- The demographic of an ageing population and/or
- Production situated at the top of the supply chain/value add chain and hence relying on developing lower-cost economies for factor inputs/intermediate goods.

External stability is important as with an ageing population, domestic demand will decline and become a less significant engine of growth. External stability in terms of trade flows and exchange rate stability will ensure a sustainable export led growth and hence an increase in NY, employment and material SOL.

Producers in developed economies are exposed to exchange rate risks as most of their factor inputs or intermediate goods are imported. Exchange rate stability will ensure less volatile changes in costs of production, which can impact investment decisions, AD, NY, employment and material SOL.

Anti-Thesis Point 2: External stability is less important to developing economies
Developing economies may have to accept some volatility in its BOP as the economy develops through foreign aid, international loans and imports of capital goods. Developing countries may have to import a large amount of capital goods in the initial stages of its development, leading to BOP deficits. Although these may be offset by inflows of foreign aid and international loans, these have to be repaid eventually, leading to outflows in the current account. Despite this volatility, the increase in quantity/quality of capital leads to increases in AS, increase in domestic and foreign consumption also leads to increases in AD. NY, employment and material SOL increases.

Anti-Thesis Type 2: External stability may not lead to improvements in non-material SOL

1. Focusing on external sources of growth via trade and FDIs might be harmful to attaining a clean and liveable environment.

In China, Negative externalities like pollution have 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. It is not external stability that determines the long run improvement in SOL but rather, the adoption of growth strategies that are green or sustainable that determines the impact on the environment and hence impact on non-material SOL.

2. Focusing on external sources of growth may worsen non material SOL because it accentuates income inequality.

This is especially for open economies and city states that attract foreign talent and enterprises. 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. It can be argued that in the case of Singapore, income inequality has risen due to the over-reliance on the import of cheap foreign labour, which led to depressing wages of unskilled labour. The constant need to move up the value chain in order to maintain export competitiveness also meant a bias towards skilled labour, whose wages have risen faster than unskilled labour.

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). ***Mini***

synthesis/ evaluative comment: As explained in Thesis Point 1, external ability may lead to LR increases in material SOL for small and open economies, but may be derailed by decreasing non material SOL due to rising income inequality. Negative side effects of relying on external sources of growth will have to be prevented or mitigated in order to sustain long run improvements in SOL.

Overall synthesis

In a globalized world as more and more countries tap 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 importance of external stability will increase.

However, external stability in itself does not ensure that the fruits of growth are shared equitably between foreign and local firms/residents, skilled/unskilled labour. An improvement in SOL is only sustainable if governments are aware of the trade-offs made when deciding its growth strategies – between different segments of the population and between material and non-material SOL – and devise policies to prevent or mitigate such negative side effects.

Mark Scheme	
L 3 : 19-21	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, hence developing scope in terms of different economies AND different aspects of external stability AND material vs non-material SOL.
15-18	Able to focus clearly on the link between external stability (both exchange rate and trade stability) and (material and non-material) SOL. Adequate scope and depth. However, lacking in terms of good overall structure. Contextualisation of different types of economies is appropriate but mundane.
L 2 : 13-14	Able to focus on the link between external stability and SOL with much more depth and clarity. However, discussion is incomplete which lack of scope or some major issues omitted. Analysis is well developed but one sided OR two sided but underdeveloped. Arguments are based on trade instability AND exchange rates instability linked to either material SOL OR non-material SOL but not both. Arguments are based on trade instability OR exchange rate instability linked to both material AND non-material SOL.
10-12	Able to focus on the link between external stability and SOL, however lacking generally in depth and scope. Analysis is one sided such as either focus is on trade instability or exchange rates instability but not both and focus is on material SOL or non-material SOL but not both.
L1: 6-9	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
1-5	Mostly irrelevant or out of focus – unable to link external stability to SOL. Major conceptual errors.

E2: 3-4	Judgment supported by analysis Pretty strong conclusion demonstrating clear understanding of characteristics/nature of economies and material/non material SOL.
E1: 1-2	Unexplained judgment Conclusion that is either missing or not supported by analysis. Unexplained stand.

Question 5

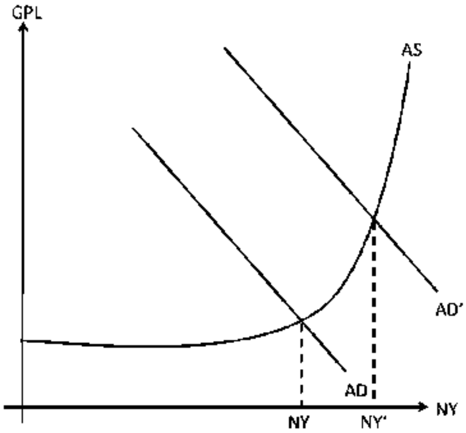
(a) Explain what determines the effectiveness of fiscal policy in achieving economic growth in Singapore. [10]

Question Analysis

Command Word	Explain what – candidates will need to *identify* and *elaborate* in detail certain *factors*
Content	Effectiveness of fiscal policy, increasing national income
Context	Singapore
Approach	Candidates will need to explain in detail <u>three</u> factors that will affect the effectiveness of fiscal policy in increasing national income in Singapore. Since the context is Singapore, the key factor limiting the effectiveness of fiscal policy – the size of the multiplier – must be explained as one of the factors. The other two factors can be any reasonable factors that would foreseeably affect the extent to which national income can be increased in Singapore.

Suggested answer

Introduction	Fiscal policy is defined as the use of either government expenditure (G) or taxation (T) to influence the level of economic activity in an economy. An expansionary fiscal policy can increase national income and thereby achieve economic growth. This can be done by either increasing G or decreasing T – when G is increased, for example, by spending on improving infrastructure in Singapore, such as the expansion of the Downtown Line, this will increase AD since G is a part of AD. Similarly, when income and corporate taxes are reduced, this increases disposable income for consumers, as well as after-tax profits for firms, such that they have more funds available for re-investment. This may also increase consumption and investment levels, similarly increasing AD. When AD increases from AD to AD' as shown in the diagram, this results in a multiplied increase in national income through the multiplier process – where the initial spending by the government, or firms, leads to additional rounds of spending which generates additional income for other parties in the economy. National income thus increases from NY

	 However, the effectiveness of fiscal policy depends on several factors, which I will explain in this essay: first, the size of the multiplier; second, the amount of spare capacity available; and finally, consumer and investor confidence.
Body	In Singapore, the effectiveness of fiscal policy largely depends on the size of the multiplier. The multiplier (k) shows the relationship between an initial change in spending and the final rise in GDP, and is influenced by the marginal propensity to withdraw (MPW), which comprises the marginal propensity to save (MPS), the marginal propensity to import (MPM), as well as the marginal propensity of taxation (MPT). The larger the MPS, MPM and MPT, the smaller the multiplier, and the smaller the final effect on national income (effect). This is because with a larger MPW, this means that with every additional round of spending that is triggered by the initial spending (for e.g. due to an increase in G), less of the additional income received is being passed on to create more rounds of spending. Therefore, the final increase in national income will be smaller than if the MPW were smaller. In Singapore, the government does not put emphasis on using fiscal policy to influence AD, income and employment. This is due to our high marginal propensity to import (MPM) due to our lack of resources and high marginal propensity to save (MPS) due to our Central Provident Fund (CPF) structure. This means that our marginal propensity to withdraw (MPW) is high and thus our multiplier effect is small. Thus, any autonomous change in AD due to fiscal policy will only lead to a small change in equilibrium income levels. Therefore, the size of the multiplier determines the effectiveness of fiscal policy in achieving economic growth in Singapore.

the effectiveness of fiscal policy in Singapore.

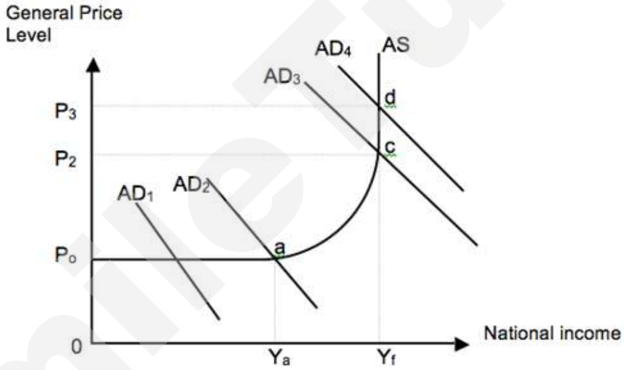
Spare capacity refers to the availability of unemployed resources. An increase in AD as a result of an expansionary fiscal policy will lead to an increase in NY only if the economy has sufficient spare capacity.

Between a and c section of the AS curve, firms are operating closer to capacity. A rise in AD (e.g. from AD2 to AD3) increases output and employment with general price levels starting to rise.

Increasing output may require that less efficient standby machines and plants are used and less efficient workers are employed. Thus, the cost per unit of additional output increases due to the utilisation of less efficient resources. Therefore prices must rise to act as a signal for firms to increase supply.

The AS curve is vertical from point c to d indicating the economy has reached full employment.

Over this "classical" range, any increases in AD (e.g. from AD3 to AD4) will not lead to a rise in real GDP as nothing more can be produced. The excess demand will cause the general price level to rise with no increase in output.



This is particularly true in the context of Singapore, where it is likely that we are operating at the intermediate range of the AS curve, given our tight labour market and limited resources available.

Therefore, the availability of spare capacity determines the effectiveness of fiscal policy in achieving economic growth in Singapore.

Finally, consumer and investor confidence also affects the effectiveness of fiscal policy in achieving economic growth in Singapore.

This is because if expansionary fiscal policy is conducted through the lowering of income and corporate taxes, this may not necessarily lead to an increase in consumption and investment levels since these are tempered by consumers' and investors' expectations. If consumers and investors are less confident as they have a poorer future economic outlook, they may choose to reduce consumption and investment even if income and corporate tax rates were lowered. This will lead to a fall in

	For example, as a result of the 2008 sub-prime crisis that originated in the United States and ultimately caused a recession in Singapore in 2009, it could be said that consumers and investors may be more wary and uncertain about Singapore's economic future. Therefore, consumer and investor confidence determine the effectiveness of fiscal policy in achieving economic growth in Singapore.
Conclusion	In summary, there are in total three factors that have been explained to show how they determine the effectiveness of fiscal policy in achieving economic growth in Singapore. These factors may influence the Singapore government's decision about whether to use fiscal policy. In part (b), we will explore how other factors may also determine policy decisions in Singapore. *NB: Any other relevant factors that may affect the effectiveness of FP in increasing NY are also acceptable.*

LORMS

L3	Candidate is able to identify three factors (including size of multiplier) that will affect the effectiveness of fiscal policy in achieving economic growth in Singapore. The explanations of these three factors in affecting effectiveness of FP are detailed and supported with relevant and well-referenced diagrams. Examples are used in support of factors highlighted, and these examples tend to be current, relevant, and useful.	7 - 10
L2	Candidate is able to identify two factors (including size of multiplier) that will affect the effectiveness of fiscal policy in achieving economic growth in Singapore. However, the explanation of these factors in affecting effectiveness of FP may be brief, undeveloped and/or inaccurate. There is some use of diagrams, although they may not be well-referenced. Examples tend to be stated and not used well. If size of multiplier is not stated as one of the factors (max 5 – L2)	5 - 6
L1	Candidate may have only identified one factor that will affect the effectiveness of fiscal policy in achieving economic growth in Singapore. There may be gross errors and/or omissions made in the explanation of how this factor affected the effectiveness of FP. OR Candidate may have merely listed factors affecting effectiveness of FP. These factors may or may not be relevant in answering the question.	1 - 4

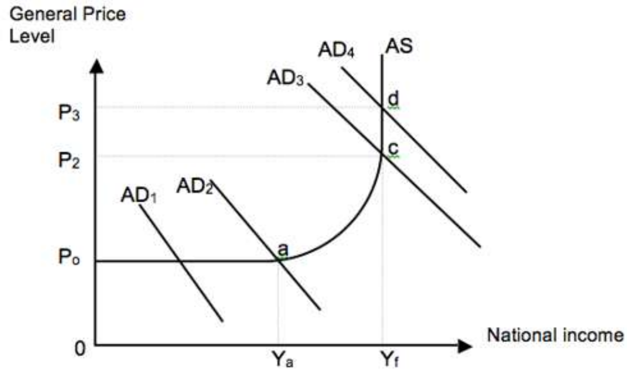
(b) Discuss whether conflict in macroeconomic objectives is the most important factor in determining policy decisions in Singapore. [15]

Question Analysis

Command Word	Discuss whether – candidates will need to explain multiple perspectives
Content	Conflicts in macroeconomic objectives, other factors that affect policy decision making in Singapore
Context	Singapore
Approach	• Thesis: Conflict in macroeconomic objectives is a factor in determining policy decisions in Singapore. • Anti-thesis: Other factors also affect policy decisions in Singapore. • Synthesis: Justify which is the most important factor in determining policy decisions in Singapore, using an explicit criteria.

Full answer

Introduction	Governments have to make decisions about which economic policy to use, such as fiscal, monetary, or supply-side policies, in order to achieve the four macroeconomic objectives of high and sustained economic growth, low inflation, low unemployment, and a favorable balance of payments. However, while all governments have these four aims, it is unlikely that these aims can **<u>all</u>** be achieved by any one policy at the same time, as the use of one policy may result in trade-offs between macroeconomic objectives. Therefore, in policy decision-making, governments may have to consider the trade-offs involved before deciding whether they should or should not go ahead with that policy. This makes conflicts in objectives one important factor in determining policy decisions in Singapore. However, there may also other factors that determine policy decisions in Singapore, and these include: current economic conditions, as well as the nature of the economy. In my essay, I will show how all of these factors may determine policy decisions in Singapore, before ranking them to explain which factor is likely to be the most important in the Singapore context, using a criteria.
Thesis	Conflict in macroeconomic objectives is a factor in determining policy decisions in Singapore. This is so for the case of fiscal policy. Due to conflicts in the objectives of full employment and price stability when fiscal policy is used, the use of expansionary fiscal policy tends to be avoided. This is because when there is an increase in G as governments spend on building infrastructure to boost economic activity, there is an increase in AD from AD3 to AD4 and hence an increase in real NY from Ya to Yf. As more resources are employed, the economy operates closer to full employment, Yf. However the economy will also face demand pull inflation from P2 to P3 as demand rises and bids up costs of factors of production, as seen in the figure below.



As mentioned earlier in part (a), since Singapore has limited spare capacity, it is likely that Singapore will face this conflict.

Therefore, if the Singapore government wants to achieve simultaneously the objectives of full employment and price stability, it is likely that they will avoid using fiscal policy. Hence, the conflict in objectives does determine policy decisions in Singapore.

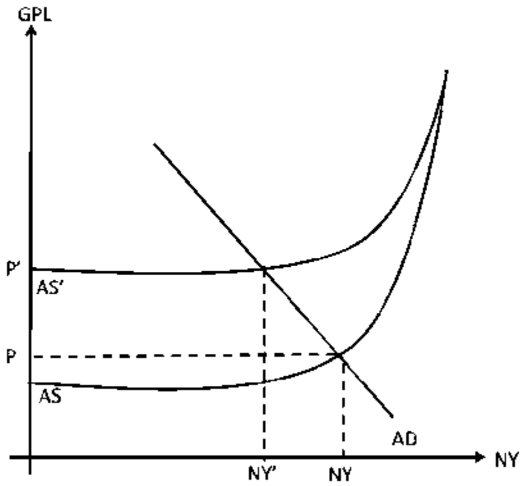
This is true also for the case of exchange rate policy. Due to conflicts in the objectives of achieving a favorable BOP and achieving price stability when the exchange rate is depreciated, depreciating the exchange rate is avoided.

In the event of an unfavourable balance of payments (BOP) due to a deficit in the current account, currency depreciation can help to resolve the situation. This is because a depreciation would help decrease the price of exports in terms of foreign currency and increase the price of imports in terms of domestic currency.

As export price competitiveness increases, the quantity demanded for exports and hence export revenue increases. At the same time as imports become more expensive, consumers switch to purchasing domestic goods instead.

Assuming that Marshall Lerner condition holds i.e. IPEDx + PEDmI >1, BOT improves since net exports increase. As BOT is part of a country's balance of payments, an improvement in BOT will lead to an improvement in BOP.

However, if the economy is import-reliant, the depreciation of the currency could lead to imported inflation as the prices of imported raw materials increase. This causes the AS to fall in the SR and the general price level to increase, as seen in the diagram below. Thus a healthy BOP is achieved at

	 An example of this would be Singapore, where imported inflation is likely to happen if the currency depreciates, since we are highly dependent on imported factor inputs, given that we have close to zero natural resources. This explains why Singapore is reluctant to depreciate its currency even when its BOT is worsening. Hence, this shows that conflict in objectives does determine policy decisions in Singapore in terms of the way a policy is carried out.
Anti-thesis	However, other factors also determine policy decisions in Singapore and are likely to be just as important as the conflict in objectives. One factor could be the current economic conditions faced by an economy. As mentioned earlier, the 2008 sub-prime crisis that originated in the United States and ultimately caused a recession in Singapore in 2009 and spurred the Singapore government into action by releasing a resilience package that increased government spending. It was determined that the unprecedented severity of the global financial and economic crisis justifies a draw from Singapore's past reserves. While the expansionary fiscal policy may result in conflicts in objectives as mentioned earlier, it is likely that in this case, the immediate economic concerns of a faltering world economy and an imminent recession overrode the concerns of conflicting aims between achieving economic growth and price stability. Another factor determining policy decisions in Singapore is also the small and open nature of our economy. This means that we heavily utilizes exchange rate policy, have given up control over interest rates (and the use of interest rate policy) and is also focused on implementing supply-side policies. Singapore's small size and lack of natural resources means that most of our basic necessities and raw materials have to be imported. Furthermore, if we produce solely for the domestic market, our relatively smaller market would limit economic growth. These result in a very open trade policy with few import restrictions. Singapore's total trade (X+M) is about three times that of GDP. Given Singapore's small size, it does not influence world prices and is a price taker. Producers and consumers in Singapore have to accept prices dictated by

	affects the prices we pay. In addition, the direct effect of exchange rate fluctuations on our inflation works through the high import content of Singapore's consumption and production of goods and services. Managing the exchange rate is thus the most effective way of maintaining price stability in a small, open economy like Singapore. It is relatively controllable by the central bank and bears a stable and predictable relationship with the objective of monetary policy, which is price stability. The importance of external demand also means that traditional monetary policy instruments such as money supply or interest rate, which largely affect domestic demand, have a smaller influence on the overall level of economic activity and, therefore, inflation in Singapore. With a small domestic market and being highly export-oriented, Singapore is more dependent on external rather than domestic demand. If the Singapore dollar were to appreciate too quickly, her exports and hence AD would plummet, hence potentially triggering a recession. Given Singapore's high dependence on both imports and exports, it makes more sense for MAS to manage Singapore's exchange rate rather than domestic interest rates as the former has a greater impact on maintain macroeconomic stability compared to the latter. Therefore, the decision ultimately to *use* exchange rate policy, and *how we use* this policy is more affected by the nature of our economy, rather than the conflicts in objectives. Maintaining a gradual and modest appreciation of the SGD may have a trade off between price stability and a favorable balance of payments, but the nature of our economy dictates that no other policy can help to maintain price stability in Singapore, and therefore this is an important factor in determining policy decision.
Synthesis	The criteria used to judge which factor is the most important in determining policy decisions would be how *relevant* the factor is to the Singapore context. In this aspect, it is likely that the conflict in macroeconomic objectives is **not** the most important factor in determining policy decisions in Singapore. The nature of the Singapore economy may be the most important factor. This is because the nature of our economy determines the *feasibility* of the use of certain policies – even if the use of these policies may result in conflict in objectives, it may be less important given that the nature of the Singapore economy has already dictated the use of exchange rate policy as the main policy instrument, and that other policies such as the interest rate policy (even if it avoids the conflicts in objectives) is not feasible in the context of Singapore.

LORMS

L3	Answer is two-sided. Candidate is able to demonstrate how conflicts in objectives **as well as** *at least two other* factors may affect policy decisions in Singapore. Candidate is able to explain in detail how conflicts in objectives may arise with the use of certain policies and therefore affect policy decisions in	9 – 11

	Singapore. These explanations are well-developed and supported with diagrams which are useful in illustrating the conflicts. Candidae is able to explain in detail at least two other factors that affect policy decisions in Singapore. These explanations are well-developed and supported with current and relevant examples set in the Singapore context which are able to illustrate how these factors affect policy decisions.	
L2	Answer is two-sided. Candidate is able to demonstrate how conflicts in objectives **as well as** *one other factor* may affect policy decisions in Singapore. Candidate is able to explain how conflicts in objectives may arise with the use of certain policies and therefore affect policy decisions in Singapore. These explanations are done with some degree of accuracy but may not have been well-developed. Diagrams are present but not used well in support of answer. Candidae is able to explain one other factor that affect policy decisions in Singapore. The explanation is similarly brief and may not have been supported with current and relevant examples set in the Singapore context.	6 – 8
L1	Answer is one-sided. Candidate may have only considered how conflicts in objectives OR other factors affect policy decisions in Singapore. The explanation of either factor is very brief and undeveloped. There are no diagrams illustrated nor examples used in support of answer. Low L1 Answer may be largely irrelevant. Any relevant points made tend to be incidental rather than purposeful.	1 – 5
E2	There is a justified stand provided and the justification is based on an identified criteria to determine the most important factor in affecting policy decisions in Singapore.	3 – 4
E1	There is a stand made but this may have been unjustified. There is a justified stand provided but the justification is mostly rehashed based on what has been presented in the answer.	1 – 2

Question 6

To what extent is there a greater need for smaller countries to be globalised? [25]

Command words:	'To what extent" – provide thesis and antithesis on the issue and making a judgement of how much it is valid.
Content:	"greater need… to be globalised" – International economics (globalisation).
Context:	"Smaller countries" – countries of varying sizes.
Approach:	1. Reasons for greater need for smaller countries to globalise. 2. Reasons that smaller countries may be harmed when globalised. 3. Reasons for greater need for larger countries to globalise. 4. Reasons for globalisation that is independent of size of county.

Outline of answer:	
Introduction	Define globalised, overview of essay
Paragraph 1	Greater need for smaller countries to globalise – Increasing export revenue
Paragraph 2	Greater need for smaller countries to globalise – Decreasing cost of production and diversity of sources of resources
Paragraph 3	Greater need for smaller countries to globalise – Higher diversity in goods and services
Paragraph 4	Smaller countries not necessarily have a greater need to globalise – Gains not necessarily associated with size of country (Principle of CA)
Paragraph 5	Smaller countries not necessarily have a greater need to globalise – Smaller countries may lose out in globalisation
Paragraph 6	Smaller countries not necessarily have a greater need to globalise – Some large countries have more to gain from globalisation
Conclusion	Stand and justification as to the extent smaller countries have greater need to globalise.

Note: For this question there is an <u>explicit need</u> to define what 'smaller countries' mean, as well as to compare smaller countries with larger countries, particularly in the thesis, to JUSTIFY why there is a greater need for smaller countries to be globalized. The highlighted portions in the answer below shows the direct comparison between smaller and larger countries.

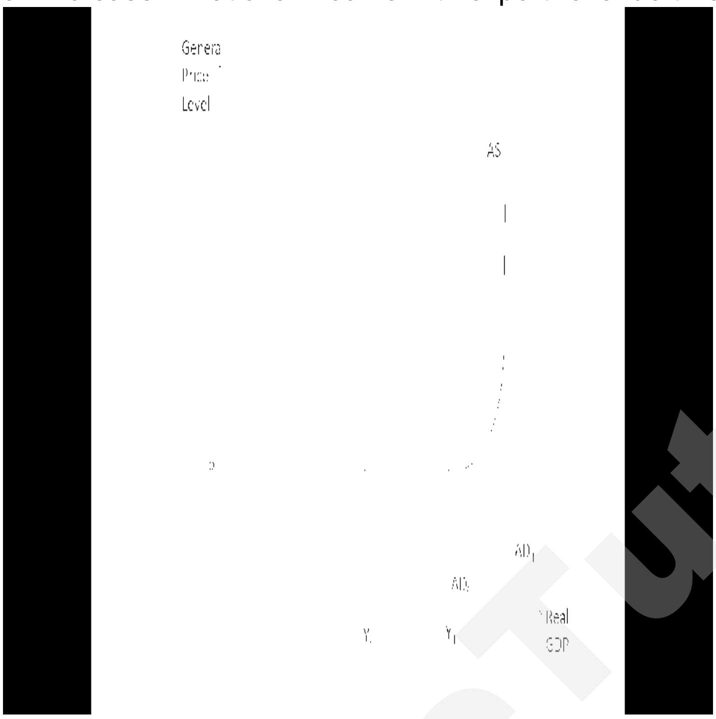
<u>Introduction</u>

Globalisation refers to the increasing integration and interdependence of the world's economies arising from increased trade and greater international mobility of factors like capital, labour and enterprise. Countries were getting more globalised but the recent trend suggested that some countries, especially the larger ones, tend to move away from globalisation. This essay will explore the extent to which smaller countries have a greater need to globalise compare to larger countries.

<u>Thesis</u>

1) Small countries have greater need for globalisation to increase export revenue

There is greater need for smaller countries to globalise to increase their national income through export revenue. Small countries have smaller domestic market/demand compared to larger countries. Globalisation allows small countries to tap into the world market for their exports. With the greater market, there will be more people buying the products of a smaller country thus higher income for small countries due to contribution from exports. E.g. Singapore, given a population size of about 5 million, can tap into markets in other countries that are many times larger than the 5 million people market. With reference to the diagram below, assuming that AD0 (AD=C+I+G) represents the AD of a small country that was not globalised, the income level will be at Y0. With globalisation and export revenue, the AD curve will be at AD1 (AD=C+I+G+X-M) which will increase the national income to Y1. Thus an increase in national income with export revenue through globalisation.



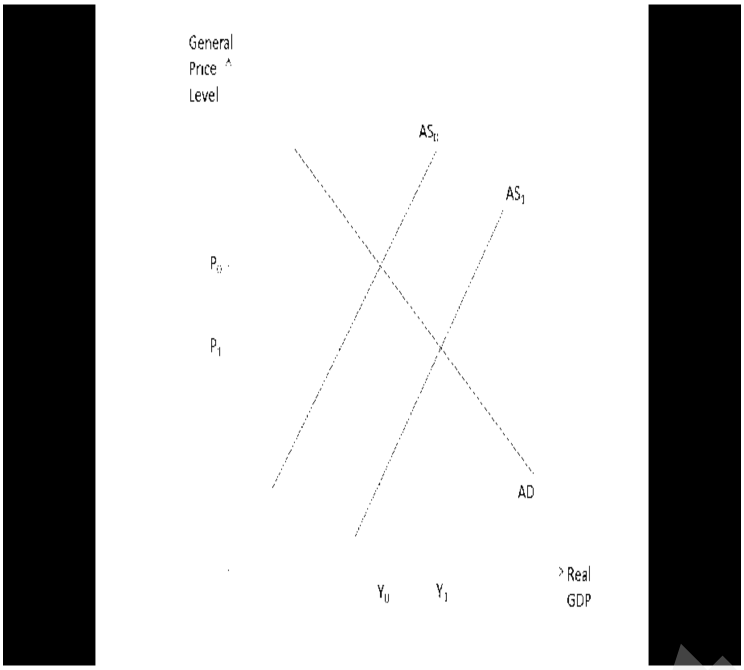
However, with globalisation there are also imports which will substitute domestically produce goods. Citizens in smaller countries may buy imported goods in place of domestically produced ones, and if the amount is large enough, it may reduce domestic C so much that the increase in X is negated.

2) Decreasing cost of production and diversity of sources of resources

Globalisation can help solve the resource constraints of smaller countries. Small countries tend to have less resource (e.g. labour and land) compared to large countries. E.g. Land and labour sizes of Singapore is very limited. With low levels of resource available, price of these resources will be higher thus cost of production will also tend to be higher. By tapping into the world for resources, can increase the supply of resources thus reducing the price. E.g. allowing inflow of labour into Singapore economy has helped to drive down the cost of labour in sectors like construction and hospitality. [May illustrate with FOP DDSS diagram]

The increased market size for firms in smaller countries also allows them to reap EOS thus reducing their COP. E.g. With larger market, firms can purchase their FOP in bulk thus enjoying bulk purchase discount (marketing EOS). By virtue of larger domestic market size, firms in large countries already have the potential to reap EOS.

The increase in FOP and reduction in COP will increase the AS thus reducing GPL and increasing NY. When AS increase, AS curve shifts to the right from AS0 to AS1, which will result in GPL falling from P0 to P1 and NY increasing from Y0 to Y1.



3) Higher diversity in goods and services

Not only there is an increase in the quantity of goods for consumption, there is also greater diversity for consumers in smaller countries when the country globalise. Given the limited resources available in small countries, there is also less ability to diversify the production of goods and services. By widening the import sources, smaller countries can import different types of goods and services to cater to different tastes and preferences. E.g. Given the land size, fishes cultivated in Singapore are only the ones that can be cultivated in captivity, but globalisation allows Singapore to import ocean caught fishes.

However, the diversity of goods may not be peculiar to smaller countries but also countries will different climate. Certain goods can only be produced in specific climate thus with globalisation, larger countries can also enjoy products that their country cannot produce because of climate. For example, tropical fruits can only be grown in the tropics and larger countries in the temperate will be able to enjoy these fruits too although they cannot produce these fruits in their countries.

<u>Antithesis</u>
1) Gains not necessarily associated with size of country (Principle of CA)

Smaller countries not necessarily will have more gain than larger country. According to the principle of CA, if countries specialise in producing what they have comparative advantage in (lower O/C), and these countries embark in mutual trade, they will all be able to produce and consume more. Countries have CA in producing certain goods for many reasons: Abundance in labour or land thus CA in producing labour or land intensive goods; abundance in capital or technology thus CA in producing capital or technological intensive goods. Abundance of labour and land is usually associated with large countries that are developing, thus there are also a lot for large countries to gain from globalisation/trade. E.g. China is a very large developing country and it has gained a lot from globalisation by specialising and exporting labour intensive goods.

2) Smaller countries may lose out in globalisation

Smaller countries may lose out in globalisation because of the TOT. The distribution of gains based on principle of CA depends largely on the TOT. If the TOT is favourable to a country, that country will have greater gains from the exchange (i.e. they will be able to exchange less for more). Small countries because of the limited volume in production will tend to have less bargaining power thus may have less favourable TOT. Leading to having to produce much more to exchange for less of other's goods. In addition, the lack of volume also makes small countries to be price taker in the world market thus subject to world price fluctuations.

3) Some large countries have more to gain from globalisation

Large countries can also gain from globalisation because of increased employment. When large developing countries have abundant labour but insufficient demand to employ all, excess labour (unemployed labour) can be employed in other countries because of globalisation. E.g. countries like Bangladesh, China, India and the Philippines have large number of citizens working abroad. This will increase their income level and improve the BOP.

Conclusion
While it is true that large countries can gain from globalisation, the gains for smaller countries are more significant because their survival depends on these gains or are imperative to them. Therefore, it is to a large extent that large countries have less need for globalisation.

Levels	Level Descriptors	Marks
Higher L3	Answer is able to address question requirements of 'to what extent' fully. Extensive use of theoretical knowledge and concepts to analyse. Good use of examples to illustrate key ideas and is consistently done. A coherent argument can be seen throughout the essay	18-21 Marks
Lower L3	Answer is able to address question requirements of 'To what extent'. Use of theoretical knowledge and concepts to analyse is evident. Good use of examples to illustrate key ideas and is consistently done. Good use of examples to illustrate key ideas. A coherent argument can be seen to some extent.	15-17 Marks
Higher L2	Answer is able to address question requirements of 'to what extent' to some extent. Use of theoretical knowledge and concepts to analyse but may not be developed well. Some use of examples to illustrate key ideas, but not all are done well. A generally coherent argument can be seen.	12-14 Marks
Lower L2	Answer is able to address question requirements of 'to what extent' to some extent. Use of theoretical knowledge and concepts to analyse but may not be pervasive or developed well. Some presence of examples to illustrate key ideas, largely stated only. An argument can be seen, but it lacks general coherence.	10-11 Marks
Higher L1	Answer is unable to address question requirements of 'to what extent'; one sided essay. Some attempts to use economic analysis, but may contain conceptual errors. Absence of examples or examples are merely stated incidentally. No argument can be seen, and points are largely in isolation of argument.	6-9 Marks
Lower L1	Answer is unable to address question requirements of 'to what extent'; one sided essay. No economic analysis is used. Conceptual errors are evident.	1-5

	Absence of examples. Incidental points on advantages and disadvantages of globalisation/protectionism.	

Evaluation		
E2	Evaluative comments are clearly stated and well justified using good economic logic.	3-4
E1	Evaluative comments are present but not well justified	1-2

Name :		Index Number:		Class :	

DUNMAN HIGH SCHOOL
Preliminary Examination
Year 6

ECONOMICS **9732/1**

(Higher 2) **21 September 2016**

Paper 1 **2 hours 15 minutes**

Additional Materials:
Writing Papers

READ THESE INSTRUCTIONS FIRST

Answer **all** questions.

Write your name and class on all pieces of work handed in.

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

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

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

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

At the end of the examination, fasten all your work securely into **two** separate bundles (one for Question 1 and one for Question 2).

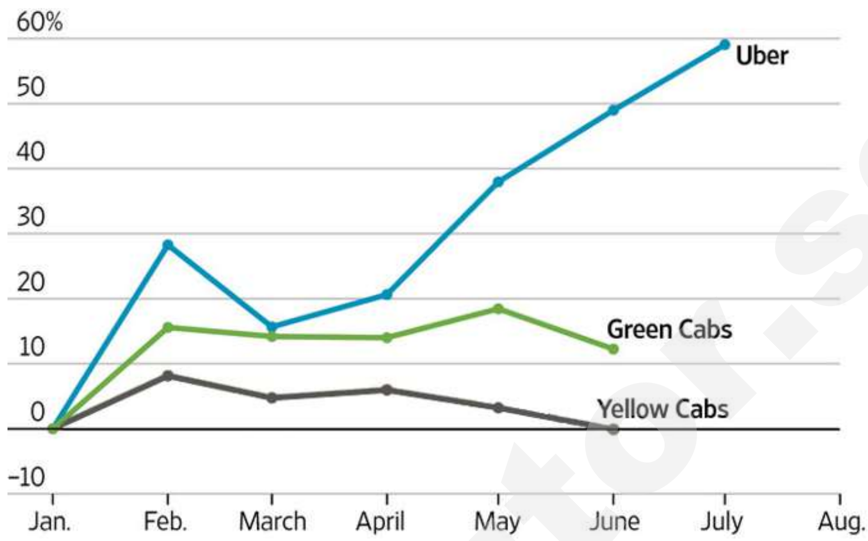
This document consists of **7** printed pages including this cover page.

[Turn over]

Answer **all** questions.

Question 1 **Uber's Astounding Rise – Overtaking Taxis**

Figure 1: Growth in Uber vs others in New York City, 2015 (Jan – Aug)



Source: www.wsj.com

Extract 1: Uber's Astounding Rise: Overtaking Taxis In Key Markets

It's fascinating to see how market disruption unfolds. Across business travel we have seen the strongest growth on UberX, Uber's lowest cost option. How big is the price differential from taxis?

From Downtown L.A. to Los Angeles International Airport, for example, the fare is about $22 via UberX versus $46.50 for taxi fare; a 20 percent tip bumps the cost of that taxi ride to about $56 (tipping is not customary using Uber).

That said, savings can evaporate at peak times if Uber goes into "surge pricing" mode and fares increase by at least 1.5 times.

Source: Forbes, 10 April 2015

Extract 2: Is Uber's surge pricing fair?

The ride-sharing service Uber has, once again, been getting some bad press coverage over its surge pricing. Uber increased its prices due to a surge in demand.

Whereas policymakers look at their choices through two lenses, one that focuses on efficiency and one that focuses on fairness, businesses tend to have one goal in mind: Will the decision maximise profits? Policymakers figure out whether there's a reason for the government to intervene. The policymaker simply wants to get rid of the market failure in the most efficient way possible.

Would surge pricing qualify as a market failure calling for government intervention?

It depends, which brings fairness into play. Fairness becomes an issue when the policy maker begins to take into consideration who will benefit and who will be hurt by the policy.

When Uber engages in surge pricing, it's simply a response to an imbalance between supply and demand. As Uber explains, when demand suddenly increases, Uber raises the prices for a ride as a way to get more drivers, i.e., supply, on the road. At some point, the invisible hand of the market gets the prices just right so that there are enough Uber drivers to take riders where they want to go.

Source: The Washington Post, 22 December 2014

Extract 3: How to Speak Uber

Back in September of last year, Uber CEO Travis Kalanick claimed that Uber was creating 50,000 new jobs for drivers around the world every month.

When Uber talks about economic impact and putting people to work, it isn't actually talking about traditional employees. Instead Uber is adding contractors, most of whom are part-time.
According to the most widely noted measure we use in the U.S., those aren't jobs. So long as Uber drivers are independent contractors, they're on the hook for costs incurred on the job (like gas, parking, and insurance), which seriously cut into the earnings they take home. Independent contractors also lack all sorts of basic protections afforded to traditional employees, such as minimum wage and health and safety standards.

While Uber claims that it's creating tens of thousands of jobs a month, it's actually signing up tens of thousands of independent contractors, roughly 80 percent of whom are working part-time.

Uber says in a statement that while independent contractors are not included in jobs reports, "this doesn't mean that the opportunity to work as an independent contractor is not a meaningful job opportunity. For the hundreds of thousands of driver partners who use the Uber platform and benefit from a flexible schedule, this is a real, tangible opportunity to earn a living."

In a way, what this comes down to is how we define a job. It used to be a job was 40 hours a week at a factory. Now a lot of standard employment is part-time and an awful lot of work is actually contingent, meaning workers don't have steady employment day to day.

Source: Slate, 14 Apr 2015

Extract 4: Strategy unhealthy and unsustainable

The price war as a business strategy is "unhealthy and unsustainable" and will hit private-hire car drivers and cabbies alike, says The National Taxi Association (NTA). It has criticised the recent price cuts by app companies Grab and Uber, saying they not only hit their drivers' earnings but, if left unchecked, could also hurt the taxi industry and, ultimately, commuters.

Taxi firms, which had fares comparable to those of UberX and GrabCar before, are now under pressure. A "price war" would mean both private-hire car drivers and cabbies having to do more trips and driving longer to earn the same amount.

In Singapore, a taxi driver has to rent a taxi from any one of the six taxi operators. The rental rates vary according to the operator and the type of taxi. Meanwhile, Uber drivers can choose to drive their own car or rent a car. To keep rental cost low, companies like Uber and GrabCar have been snapping up used vehicles to grow their rental fleet. The worry is that if private-hire car firms end up dominating the market, they can then start raising prices, and charge a premium.

Currently, cab operators must factor in "compliance costs". These include the bulk of cabbies having to meet certain standards set by the Land Transport Authority, such as covering 250km each day and being on the road during peak hours. Fleets also have to be serviced regularly.

Having said that, traditional cab operators still have a key advantage – they are the only ones allowed to get flagdowns. Still, they face a tough battle. App companies are willing to lose some money now to gain market share, but the incumbents wouldn't want to do this after being profitable for so long.

Source: The Straits Times 24 April 2016

Extract 5: Taxis and Carbon Emissions

The potential entry of electric taxis is a welcome. While taxis account for just 3 per cent of the total vehicle population, they contribute to over 15 per cent of vehicle emissions because of the higher mileage they clock. Emissions from taxis could be reduced by 27 per cent in 2050 if 85 per cent of taxis go electric.

Under the revised Carbon Emissions-Based Vehicle Scheme (CEVS), all new cars and imported used cars with low carbon emissions of less than or equal to 135g carbon emissions per kilometre will qualify for rebates of between $5,000 and $30,000, which will be offset against the vehicle's Additional Registration Fee (ARF). Cars with high carbon emissions equal to or more than 186g CO_2/km, will incur a registration surcharge of between $5,000 and $30,000. As taxis generally clock higher mileage than cars, the revised CEVS rebate and surcharge for taxis will be higher by 50% to encourage taxi companies to adopt lower carbon emission models for their fleet.

Source: The Straits Times 12 June 2016 and www.lta.gov.sg

Questions

(a) Describe what happened to the growth in Uber and traditional taxi companies in New York City. [2]

(b) Explain how Uber's surge pricing strategy is able to solve the long waiting time by the road under the business model of traditional taxi companies. [4]

(c) Explain the shutdown decision of a taxi firm following the entrance of ride-sharing service, such as Uber and Grab, in Singapore. [6]

(d) Discuss whether the data provided are sufficient to assess changes in the standard of living in these cities over the period. [8]

(e) The pollution resulting over usage of vehicles running on carbon-based fuels is an example of a market failure. Explain one policy that might be used to correct the market failure identified, and discuss its likely effect on the market share of Comfort, the largest firm in the "taxi and ride sharing service (such as Uber and Grab) industry" in Singapore. [10]

[Total: 30]

Question 2 **The Eurozone Economy**

Figure 2: Eurozone Debt and Unemployment

Source: Eurostat, accessed 1 September 2016

Extract 6: The Eurozone economy – frost in spring

The once-sickly Eurozone is undergoing recovery which, though feeble, has nonetheless been sustained. More importantly, there are signs that the pace may be accelerating this year.

A reassuring feature of the recovery is that it is spreading to the once-afflicted countries of southern Europe. Germany, which remains the main engine of growth in the Eurozone, is likely to have expanded strongly in the first quarter of 2014. But the recovery is also being boosted by a return to growth, albeit sluggish, on the part of both Italy and Spain, the third- and fourth-biggest economies in the Eurozone.

Despite these promising developments, there is still a concern that the recovery may have come too late and be too weak to avert the onset of deflation. Consumer prices are falling in several peripheral countries, notably Cyprus and Greece, but also now in Spain. The development has prompted the European Central Bank (ECB) to cut its key interest rate to 0.05%, a new record low.

Adapted from: (i) The Economist, 5 April 2014 and (ii) The Telegraph, 4 September 2014

Table 1: Annual Unit Labour Costs#, 2010 = 100

Country	2011	2012	2013	2014	2015
Germany	100.7	104.0	106.0	107.9	109.9
Greece	98.7	96.7	89.6	87.3	87.6
Eurozone (19 countries)	100.6	102.5	103.8	104.8	105.5

Unit labour costs measure the average cost of labour per unit of output and are calculated as the ratio of total labour costs to real output.

Table 2: Net trade in goods (value), US$ converted, seasonally adjusted (in billions)

Country	2010	2011	2012	2013	2014	2015
Germany	195.82	209.71	240.95	259.56	281.94	

Greece	-39.12	-33.87	-27.75	-25.70	-28.29	-19.55
Eurozone (19 countries)	-26.28	-38.21	100.43	198.56	235.99	267.52

Source: OECD.Stat, accessed 20 August 2016

Extract 7: Is Germany's big export surplus a problem?

Germany's trade surplus – the excess in the value of its exports over its imports – hit another record in 2014. At 217 billion euros ($236 billion), it was Germany's biggest ever. Expressed as a percentage of GDP, Germany's 2014 trade surplus was 7.5 percent.

Why is Germany's trade surplus so large? Undoubtedly, Germany makes good products that foreigners want to buy. For that reason, many point to the trade surplus as a sign of economic success. But other countries make good products without running such large surpluses. There are two more important reasons for Germany's trade surplus.

Some economists point to the euro currency as a key reason for Germany's perennial export surpluses. By sharing the euro with a larger population of mostly less competitive economies, German exporters have a built-in benefit: a currency that's permanently weaker than it should be, though it may be still too strong for less competitive economies. That provides an artificial advantage to German exporters.

Second, the German trade surplus is further increased by policies (tight fiscal policies, for example) that suppress the country's domestic spending, including spending on imports.

In a slow-growing world that is short on aggregate demand, Germany's trade surplus is a problem. Several other members of the Eurozone are in deep recession, with high unemployment and with no "fiscal space" (meaning that their fiscal situations don't allow them to raise spending or cut taxes as a way of stimulating domestic demand). The fact that Germany is selling so much more than it is buying redirects demand from its neighbours (as well as from other countries around the world), reducing output and employment outside Germany at a time at which monetary policy in many countries is reaching its limits.

Sources: (i) Ben Bernanke, Germany's trade surplus is a problem, Brookings Institute, April 3, 2015 and
(ii) Nils Zimmermann, Is Germany's big export surplus a problem?, DW, April 7, 2015

Extract 8: Reconciling fiscal consolidation with growth and equity

Fiscal consolidation is a policy aimed at reducing government deficits and debt accumulation. Fiscal consolidation complicates the task of achieving other policy goals as it weighs on demand in the short term. A number of fiscal consolidation instruments can enhance the long-term level of output by improving efficiency in the economy.

Table 3: Instruments of Consolidation

Expenditure Cuts	Revenue Increases
Public consumption: education	Personal income taxes
Public consumption: health	Corporate income taxes
Cash transfers: unemployment benefits	Environmental taxes
Subsidies	Consumption taxes (non-environmental)
Public investment	Sales of goods and services

Some revenue measures can also contribute positively to long-term output when they promote more efficient use or allocation of services or resources that were previously inadequately priced. To the extent that their current levels correspond to under-pricing, higher user charges reduce the waste of economic resources, thereby boosting productivity and output. Better pricing the use of environmental services through taxation can lead to welfare gains through improved environmental amenities that are not measured in GDP.

If no action is taken, climate change can involve large losses of physical and human capital as well as reduced productivity through more frequent and intense storms, rising sea levels, additional deaths from specific diseases (e.g. malaria) and deteriorating air quality.

Spending reductions can bring about potentially large long-term losses in output when they cut into areas such as public goods or growth-enhancing services that are insufficiently produced by market forces. These include cuts in public investment or government spending on education. Cuts in health care can also reduce output per capita by reducing productivity. Through its contribution to well-being, health spending is most likely to have additional positive welfare effects that are not measured in GDP.

Most fiscal consolidation instruments are harmful for growth in the short run and aggravate income inequality. In fiscal-crisis countries, the absence of consolidation could translate into a massive loss of confidence triggering economic collapse. If it helps to avoid such extreme scenarios, consolidation may be highly expansionary.

Adapted from: OECD Economic Studies, 05 Feb 2014

Questions

(a) **(i)** Identify the relationship between unemployment rate and general government debt. [1]

(ii) How does the above relationship explain the workings of the automatic fiscal stabiliser? [3]

(b) **(i)** Using the AE-Income approach, explain the effect of the monetary policy adjustment of the European Central Bank (ECB) on the equilibrium national income of the countries in the Eurozone. [5]

(ii) Explain why the above policy could be ineffective in averting the onset of deflation in the Eurozone. [2]

(c) **(i)** Compare the trends in the annual unit labour costs in Germany and Greece. [1]

(ii) Discuss the significance of the trends in **(c)(i)** in accounting for the observed changes in these countries' trade balances. [8]

(d) In the light of the various challenges that countries in the Eurozone face, assess whether fiscal consolidation should be implemented. [10]

[Total: 30]

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End of Paper

DUNMAN HIGH SCHOOL
Prelim Examination 2016

Year 6 H2 Economics 9732 Paper 1
Case Study Questions

Answer and Mark Schemes

DUNMAN HIGH SCHOOL
Preliminary Examination
9732 / H2 Economics Paper 1 CSQ
Suggested Answer and Mark Scheme

Case Study Q1: Uber's Astounding Rise – Overtaking Taxis

(a) Describe what happened to the growth in Uber and traditional taxi companies in New York City. [2]

Uber => increasing growth rate
Traditional taxi => decreasing rate / yellow cabs => zero growth

(b) Explain how Uber's surge pricing strategy is able to solve the long waiting time by the road under the business model of traditional taxi companies. [4]

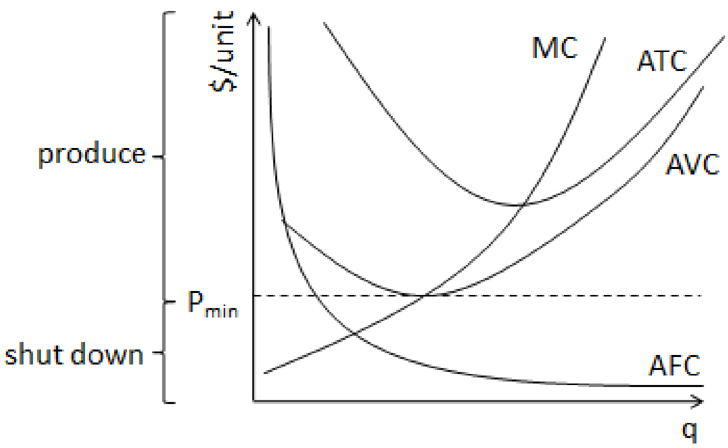
Either demand / supply analysis OR firm analysis
DD/SS: During peak hour => normal price is 'under-priced' => with surge pricing strategy, it moves towards new equilibrium, solve the long waiting time.
Firm: AR, MR increase during peak hour, P & Q increase => able to reduce the long waiting time
Correct diagram (1m)
Explanation (3m)

(c) Explain the shutdown decision of a taxi firm to following the entrance of ride-sharing service, such as Uber and Grab, in Singapore. [6]

Before the entrance of ride-sharing service => taxi companies are earning supernormal profit
With the entrance of ride-sharing service => AR falls and more price elastic
(might bring in increasing AC => not a requirement but marks will be awarded)

Shut down condition => minimise lose, in the short (4m) and long run (2m)

If a taxi firm decides to produce output, it will select the quantity of output that maximizes its profit (or, if positive profit is not possible, minimises its loss). Its subnormal profit will then be equal to its total revenue minus total cost.



Economists distinguish the short run from the long run among other things, noting that in the short run taxi companies that have decided to enter an industry have already paid their fixed costs and can't fully exit an industry. For example, over short time horizons, taxi companies are committed to paying a lease on office or buying taxi and must do so regardless of whether or not they rent out the taxi. If the taxi firm decides to shut down and not produce any output, its revenue by definition is zero. Its variable cost (e.g. wages, utilities) of production is also zero by definition, so the firm's total cost of production is equal to its fixed cost. The firm's profit, therefore, is equal to zero minus total fixed cost.

The taxi firm will want to produce if the price it receives for its output is at least as large as its average variable cost of production at the profit-maximising quantity of output, as shown above. This is simply the result of the fact that marginal cost intersects average variable cost at average variable cost's minimum.

The observation that a firm will produce in the short run if it receives a price for its output that is at least a large as the minimum average variable cost it can achieve is known as the *shut-down condition*.

Long run => TR must cover TC. In the long run, all factors of production are variable, it is better to earn nothing than to incur losses, which is in line with producers' profit maximising rationale.
Diagram is not required for this question

(d) Discuss whether the data provided are sufficient to assess changes in the standard of living in these cities over the period. [8]

Define SOL => both material and non-material aspects
Assess changes => likely to be an increase in SOL in New York, LA and Singapore due to the entrance of the new ride-sharing service, assuming ceteris paribus in other economic indicators

Thesis: data provided are sufficient:
- Fig 1 & Extract 1: Increase demand for taxi & ride-sharing service => imply an increase in income level => improvement material SOL
- Extract 3 & 4: New form of employment opportunities in US and Singapore; "tangible opportunity to earn a living" => link to material and non-SOL (such as lower stress level)
- From consumers' view point => cheaper and easier to travel around compare to the past

Anti-thesis: data provided are not sufficient
- No data on the change in the income level, income distribution etc
- With more cars on the road, will negative externality might increase

Conclusion & evaluation

Marks Scheme:

L3 (6 – 7)	– Sufficient depth/ scope – Apt reference to case evidence
L2 (4 – 5)	– Balanced answer – Insufficient depth/scope, only refer to one city – Some application to context/case
L1 (1 – 3)	– One-sided answer – No application to context/case
EV (1m)	

(e) The pollution resulting over usage of vehicles running on carbon-based fuels is an example of a market failure. Explain one policy that might be used to correct the market failure identified, and discuss its likely effect on the market share of Comfort, the largest firm in the "taxi and ride sharing service (such as Uber and Grab) industry" in Singapore. [10]

1st part: Over-usage of vehicles running on carbon-based fuels – negative externalities => explain with a diagram why this will result in a deadweight loss to the society

Government Intervention:
From extract 5**:** Carbon Emissions-Based Vehicle Scheme (CEVS), all new cars and imported used cars with low carbon emissions of less than or equal to 135g carbon emissions per kilometre will qualify for rebates of between $5,000 and $30,000, which will be offset against the vehicle's Additional Registration Fee (ARF). As taxis generally clock higher mileage than cars, the revised CEVS rebate and surcharge for taxis will be higher by 50% to encourage taxi companies **to adopt lower carbon emission models** for their fleet.

How will this reduce the MEC=> how to reach the optimal output, so as to eliminate DWL

2nd part: Economic Framework: imperfect market structure
Thesis: Increase the market share of Comfort
- Other smaller firms, without the financial resources, might not able to compete => need to purchase new cars that meet the new requirement.
- AR increases, and less price elastic, AC & MC increase => show output increase

Anti-thesis: Market share of Comfort might not increase
- The ride sharing service => need not purchase new cars. Extract 4: Uber and Grab drivers can choose to drive their own car or rent a car. Thus to meet the new requirement, these ride sharing companies need not spend such a large amount as compared to Comfort.
- Due to the increase competition, Comfort's AR might fall => especially with fierce price competition => output falls

Evaluation & Conclusion
Will government intervene? What are the other new policies?

L3 (6 – 8)	– Clear use of economics framework – Sufficient depth/ scope o Clear explanation of the type of market failure o Clear explanation of the policy o Balanced discussion on Comfort's market share due to the new policy implemented – Apt reference to case evidence
L2 (4 – 5)	– Clear explanation of how the policy works and its effectiveness – Insufficient depth/scope – Some application to context/case – Max 4m without a balanced answer on the changes in Comfort's market share.
L1 (1 – 3)	– Lack economics framework in analysis especially in explanation of the type of market failure and the working of the policy – Conceptual error in the explanation for changes in Comfort market share in 'this' industry – No application to context/case
EV (1m)	– Unexplained assessment made, merely stating synthesis
EV	– Evaluative assessment supported by economic analysis, i.e. suggestion of alternative

(2m)	policies and the need for them.

Case Study Q2: The Eurozone Economy

(a) **(i)** Identify the relationship between unemployment rate and general government debt. [1]

– Direct or positive relationship [1]
– As unemployment rose, general govt debt rose as well [1] or [0]?
– No marks given for directly proportionate or linear relationship

(ii) How does the above relationship explain the workings of the automatic fiscal stabiliser? [3]

– Automatic fiscal stabilisers are inherent features of the fiscal policy built into an economic system that automatically work to dampen fluctuations brought about by the business cycle. No direct government intervention nor explicit policy action is needed on the part of the government, via the progressive personal income tax structure and transfer payments.
– As the unemployment level in Eurozone ↑ (2008 – 2014), more workers faced ↓ factor incomes. More households' incomes end up falling below a minimum level, which qualifies them to receive unemployment benefits and/or some form of transfer payments from the govt → ↑ in govt spending.
– Simultaneously, due to progressive income tax ⇒ households' nominal incomes fall to a low income tax bracket, thus they pay a lower % of income tax now → ↓ govt tax revenue.
– More govt transfer payments and lower income tax paid due to ↑ UN → ↑ in govt debt → exhibits direct relationship. Also, this leads to a smaller ↓ in disposable income, and hence income-induced consumption ↓ by a smaller extent → moderates the contraction in AD and actual EG, thereby stabilising the economy.
– The converse holds true when the economy faced ↓ unemployment rate (2005 – 2008) and ↓ govt debt (exhibits direct relationship), where the automatic fiscal stabiliser works to dampen AD to prevent overheating of the economy.

(b) **(i)** Using the AE-Income approach, explain the effect of the monetary policy adjustment of the European Central Bank (ECB) on the equilibrium national income of the countries in the Eurozone. [5]

From Ext 6, ECB cut its interest rate to 0.05%. As i/r falls, this reduces:
– cost of borrowing relative to expected ROR on I → incentivises firms to ↑ I level
– cost of borrowing for big-ticket items → ↑ C of domestically produced g&s
– opportunity cost of using savings for consumption → ↑ C of domestically produced g&s
– ↑ C and ↑ I → ↑ autonomous AE

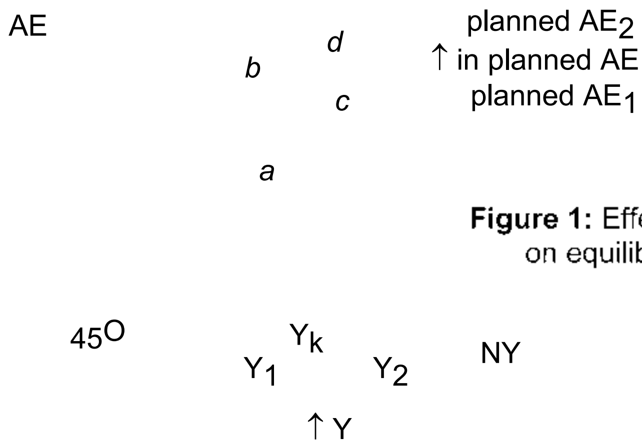


Figure 1: Effect of ↑ in AE on equilibrium NY

– Referring to Figure 1, as autonomous AE ↑, at the initial level of NY Y_1, AE > Y_1 creating a shortage 'ab', causing firms to deplete inventories (unplanned disinvestment). This induces firms to step up production in the next production cycle, leading to ↑ employment of workers, who receive factor incomes. As NY ↑ to Y_k, more domestically produced goods & services will be consumed (↑ income-induced C), causing planned AE to ↑.
– Since households will not spend all of their ↑ in income, choosing to save some of it, having to pay taxes and spend some on imports (collectively known as withdrawals), the ↑ in planned AE (due to ↑ income-induced C) is less than the ↑ in NY. At Y_k, planned AE is dY_k while NY is cY_k, a shortage of *cd* continues to exist.
– Thus, firms continue to expand production → ↑ NY further. This is the multiplier effect and the cycle repeats itself until initial ↑ in AE = total ↑ in withdrawals OR until Y_2 is reached where NY = planned AE, i.e. firms' output exactly matches the planned AE leaving neither shortages nor surpluses and hence no further adjustment pressure.
– In total, the ↑ in equilibrium level of NY to Y_2 will be > initial ↑ AE (AE_1 to AE_2).

(ii) Explain why the above policy could be ineffective in averting the onset of deflation in the Eurozone. [2]

From Ext 6, the recovery may have come too late and be too weak. In addition, there is high and rising general govt gross debt as % of GDP over the years (Fig 2). [1] Thus, there is still weak economic sentiments / poor consumer and investor confidence in the Eurozone. Hence, the cut in i/r may still bring about an insignificant ↑ in C and I → ineffective in raising AD to avert the onset of deflation (i.e. AD still falls, causing deflation to occur). [1]

(c) **(i)** Compare the trends in the annual unit labour costs in Germany and Greece. [1]

In general, from Table 1, annual unit labour costs rose in Germany but fell in Greece.

(ii) Discuss the significance of the trends in **(c)(i)** in accounting for the observed changes in these countries' trade balances. [8]

Thesis: changes in annual unit labour costs of Germany and Greece are significant in affecting trade balances of Germany and Greece

By economic theory, there should be an inverse relationship between changes in annual unit labour costs and the corresponding effect on trade balance.
– ↑ (↓) in unit labour costs → ↓ (↑) profit margins of firms in Germany (Greece) → partially pass on the ↑ unit COP / cost savings as ↑ (↓) prices to consumers respectively. Assuming

trading partners' unit labour costs remain unchanged, ↑ (↓) price of Germany's (Greece's) exports relative to trading partners

- Price of domestically produced goods in Germany (Greece) also ↑ (↓) relative to imports
- Assume demand for exports is price elastic and demand between domestic goods and imports is cross-price elastic → more than proportionate ↓ (↑) in quantity demanded for Germany's (Greece's) exports and more than proportionate ↑ (↓) in demand for imports into Germany (Greece) → ↓ (↑) in export revenue and ↑ (↓) in import expenditure in Germany (Greece) → trade balance worsens (improves) for Germany (Greece)
- Table 2 generally supports this economic theory for the case of Greece, where its annual unit labour costs fell and trade balance improved over the years, except 2014 and 2015.

However, from Table 2, trade balance has also improved in Germany, despite a rise in annual unit labour costs → could be due to reasons as follows:

AT: changes in annual unit labour costs of Germany and Greece are insignificant in affecting trade balance of Germany and Greece

AT1: there are **other factors that affect firms' unit COP** apart from labour costs
- Annual unit labour costs only accounts for part of firms' unit COP → rental costs could have ↓ by a greater extent than ↑ in annual unit labour costs → ↓ in firms' unit COP to cause an improvement in trade balance in Germany
- If firms in Germany engage in process innovation that bring about ↑ productivity by a large extent such that firms' unit COP ↓ despite annual unit labour costs ↑ → improvement in trade balance in Germany
- Above analyses could also apply to the case of Greece

AT2: annual unit labour costs only affect price competitiveness of goods, but fail to consider **non-price competitiveness** of goods that also affects trade balance
- If firms in Germany engage in product innovation, as seen from 'Germany makes good products that foreigners want to buy' in Ext 7 → **new products** created and/or **quality improvements** of products via such R&D → caters to consumers' tastes and preferences → ↑ DD for Germany's exports by foreigners and ↓ DD for imports by Germans as consumers switch towards Germany's goods → Germany's trade balance improves

AT3: apart from annual labour costs, there are **other factors that affect trade balance**
- From Ext 7, a **shared euro currency** that is permanently weaker than it should be provides an artificial advantage to German exporters → Germany's perennial X surpluses
- From Ext 7, implementation of '**tight fiscal policies**' → ↓ AD → fall in NY → ↓ purchasing power → 'suppress the country's domestic spending, including spending on imports' → Germany's trade balance improves, ceteris paribus.
- Insufficient data – only reflects annual unit labour costs of Germany and Greece, but they have trading partners beyond what is shown in Table 2 → annual unit labour costs could have risen by a greater extent in **other countries** → trade balance of Germany and Greece improve as well

Evaluation: whether changes in annual unit labour costs are significant in affecting trade balance depends on:
(a) how labour intensive the production process of the goods is → in turn affects how much labour costs take up as a proportion of firms' unit COP
(b) how far other factors change at the same time, which if significant, can outweigh changes in annual unit labour costs, in turn affecting trade balance

L3 (6 – 7)	– Balanced approach, with sufficient breadth and depth → must cover the two o Countries → Germany and Greece o Components of trade balance → export revenue and import expenditure – Good reference to case evidence.
L2 (4 – 5)	– Balanced answer. – Insufficient depth or scope → only covers 1 country and/or 1 aspect of BOT – Some reference to case evidence.
L1 (1 – 3)	– One-sided answer that is largely descriptive and/or contains substantial conceptual flaws – No reference to case evidence at all → theoretical arguments only
EV (1m)	– Reasoned judgement as to whether changes in annual unit labour costs are

(d) In the light of the various challenges that countries in the Eurozone face, assess whether fiscal consolidation should be implemented. [10]

From Ext 8, fiscal consolidation is a policy aimed at reducing government deficits and debt accumulation → likely to be austerity → contractionary fiscal policy (F/P) of govt expenditure cuts and tax increases as seen from Table 3

Challenges that countries in the Eurozone face:
– Fig 2: generally moderately high and rising unemployment rate (although it fell slightly after 2013) as well as high and rising general govt gross debt as a % of GDP
– Ext 6: consumer prices are falling in several peripheral countries → onset of deflation as recovery came too late and too weak
– Ext 7: several other Eurozone members are in deep recession, with high unemployment and with no "fiscal space"

<u>Thesis: fiscal consolidation should be implemented as it can help to address the various challenges that countries in the Eurozone face</u>

T1: fiscal consolidation helps to restore confidence, thus stimulating EG, reducing UN and govt debt + prevent onset of deflation → addresses various challenges in the **medium term**
– From Ext 8, fiscal consolidation is necessary in fiscal-crisis countries (which is the case for many countries in Eurozone), as it can help to avoid a massive loss of confidence triggering economic collapse, which may thus be highly expansionary on the economy in the medium-term.
– Such contractionary F/P → ↓ govt deficit and debt to more sustainable levels → in the medium term, restores investors' and consumers' confidence as govt is able to control its debt level. In contrast, high unsustainable govt debt level → firms and HHs may expect austerity measures in future to repay debt → withhold current investment and spending.
– Thus, in the medium term, fiscal consolidation helps ↑ AD → ↑ actual EG and ↓ demand-deficient UN via k effect. With ↓ UN → ↓ govt debt as explained in (a)(ii).
– Also, ↑ AD → ↑ competition for FOPs as derived DD for FOPs ↑ → pass on ↑ unit COP as ↑ prices → demand pull inflation.
– <Explain the above arguments with the use of AD/AS graph>

T2: fiscal consolidation helps to address challenges in the **longer term**
– Furthermore, in the longer term, as I ↑ → AS ↑ due to greater capital accumulation due to ↑ quantity and quality of resources → potential EG
– From Ext 8, fiscal consolidation can enhance the long-term level of output by ↓ wastage of economic resources via environmental taxes and/or cut subsidies → firms' COP ↑ → firms' profits ↓ → existing firms have to ↓ X-inefficiency and boost productivity levels to maintain profit margins → ↑ productive capacity when these firms engage in R&D and/or training of workers → potential EG
– Also, inefficient firms that continue to earn subnormal profit due to environmental taxes and/or lack of subsidies exit the industry → frees up resources that can be utilised for more productive uses, e.g. R&D, training → boosts productivity and output → potential EG
– Cuts in UN benefits and transfer payments to households → ↑ incentive to work harder and → ↑ productivity → ↑ competitiveness and thus stimulate EG into the long term
– As the countries in Eurozone attain potential EG → sustained economic recovery and can further ↓ govt debt → address various challenges into the longer term

EV: difficult to find any strong evidence of the direct correlation between investors' + consumers' confidence levels and govt debt levels. Their confidence levels may be based on more immediate factors, like short-term EG rates, real wages etc. than govt debt levels.

AT: fiscal consolidation should not be implemented due to the detrimental impact on the various challenges that countries in the Eurozone face

AT1: fiscal consolidation worsens EG, ↑ UN and exacerbates govt debt as % of GDP + hastens the problem of deflation in the **short term**

– From Ext 8, 'most fiscal consolidation instruments are harmful for growth in the short run as it weighs on demand in the short term' → contractionary effects on the economy
  - <Explain how fiscal consolidation brings about contractionary effects> ↓ G expenditure on infrastructure e.g. schools and hospitals and ↓ public investment → ↓ AD
  - ↓ govt spending on UN benefits → ↓ disposable income → ↓ consumption → ↓ AD
  - ↑ personal income taxes → ↓ disposable income → ↓ consumption → ↓ AD
  - ↑ corporate income taxes → ↓ post-tax profits → disincentive to invest → ↓ I → ↓ AD
  - ↑ environmental taxes → ↑ firms' COP → ↓ firms' profits → ↓ I → ↓ AD
  - With the ↓ AD → ↓ actual EG and ↑ demand-deficient UN via k effect. With ↑ UN → ↑ govt debt as explained in (a)(ii). Also, ↓ AD → ↓ competition for FOPs → ↓ prices → speeds up pace of deflation that has already occurred in Cyprus, Greece and Spain

AT2: fiscal consolidation may aggravate challenges into the **longer term**

– If the govt cuts spending and/or raises taxes in the wrong areas such as 'public goods or growth-enhancing services that are insufficiently produced by market forces' → can undermine long-term growth
  - Cuts in essential health care services e.g. ↓ vaccination services → ↓ productivity as workforce fall sick more easily → ↓ output per capita and slowdown in growth of productive capacity as quality of resources ↓ → undermine potential EG
  - ↓ G expenditure on education → ↓ workforce productivity → undermine potential EG
  - ↑ personal income tax → disincentive to work harder especially for higher income workers → ↓ workforce productivity → undermine potential EG
  - ↑ corporate income taxes → ↓ I → hinders potential EG due to ↓ capital accumulation

– As the countries in Eurozone experience slower potential EG → 'potentially large long-term losses in output' → aggravate challenges into the longer term

Evaluation: whether fiscal consolidation should be implemented depends on:

(a) how fiscal consolidation is being carried out, i.e. the specific areas / aspects that the govt cuts spending and raises taxes on → e.g. cuts in UN benefits, transfer payments to households and cuts in firms' subsidies → stimulate EG into the long term → address challenges. However, cuts in healthcare, education → undermine potential EG → worsen challenges.

(b) timing of the fiscal consolidation plans, which in turn depends on prevailing economic conditions of the economy → fiscal consolidation implemented on countries that are performing relatively worse than counterparts, i.e. with more economic challenges of deeper severity may end up being detrimental and self-defeating, since the austerity measures are likely to further worsen the gloomy economic outlook / impede the feeble recovery of Eurozone (Ext 6) → ↓ govt tax revenue and ↑ govt spending on UN benefits and transfer payments → fail to achieve aim of fiscal consolidation and worsen economic challenges that Eurozone are currently facing. The best way is to aim for actual EG in the short term, but in the long-term review govt spending commitments and ↓ govt debt as % of GDP to sustainable levels.

(c) magnitude of govt debt as % of GDP → for countries with debt of unsustainable levels, it is much more difficult to ↓ govt debt and likely takes a much longer time as well as a combination of policies / multi-pronged approach to contain govt debt to sustainable level, so as to restore investors' and consumers' confidence → address challenges.

L3 (7 – 8)	– Balanced approach, with sufficient breadth and depth o Clear identification of the various challenges that countries in the Eurozone face o Clear discussion of how fiscal consolidation helps to address and worsen challenges → covered all 3 challenges (moderately high and ↑ UN, ↑ general govt gross debt as a % of GDP and deflation) – Rigorous economic analysis with the use of economics framework. – Good reference to case evidence.
L2 (4 – 6)	– Balanced answer. – Insufficient breadth or depth → covers only 2 challenges or uses economic framework but lacks rigour in explanation – Some reference to case evidence.
L1 (1 – 3)	– One-sided answer that is largely descriptive and/or contains substantial conceptual flaws. – Insufficient breadth and depth. – Lacks economics framework in analysis. – No reference to case evidence at all → theoretical arguments only
EV (1m)	– Unexplained judgement as to whether fiscal consolidation should be implemented.
EV (2m)	– Reasoned judgement as to whether fiscal consolidation should be implemented,

Name :		Index Number:		Class :	

DUNMAN HIGH SCHOOL
Preliminary Examination
Year 6

Economics **9732/2**

Paper 2 Essay Questions

13 September 2016

2 hours 15 minutes

Additional Materials:
Writing Papers

READ THESE INSTRUCTIONS FIRST

Write your name and civics class in the spaces provided on the answer paper.

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

Write your answers on the separate writing paper provided.

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

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

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

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

At the end of the examination, fasten all your work securely into three separate bundles, one for each question.

Please indicate all questions attempted in the boxes below.

Section A			Section B		
Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**

This document consists of **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 In 2014, global GDP growth was 2.6%. Productivity in the Singapore hotel industry grew at a compound annual rate of 5.8% from 2010 to 2014.

(a) Explain how elasticities of demand can assist in understanding the effect of each of these changes on the hotel occupancy of luxury and budget hotels in Singapore. [12]

(b) In addition to the above events, Chinese tourists cancelled trips to Singapore following a serious air traffic accident in 2014.

Discuss how the above developments would affect the revenue of luxury and budget hotels in Singapore. [13]

2 **(a)** In what circumstances may price discrimination be beneficial to consumers? [10]

(b) Assess the extent to which price discrimination is the main profit generator for firms in different market structures. [15]

3 Explain the reasons for government intervention in the provision of key facilities such as defence and medical services and discuss the extent to which such intervention meets the microeconomic objectives. [25]

Section B

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

4 **(a)** Explain the economic indicators that can be used to measure the performance of an economy. [10]

(b) Discuss whether market-oriented supply-side policies is the best way to spur economic growth in view of a gloomy outlook. [15]

5 **(a)** Explain the economic factors that affect domestic and foreign investments into a country. [8]

(b) Assess the view that governments should prioritise low unemployment over the achievement of other macroeconomic goals. [17]

6 Globalisation brings about trade-offs between governments' economic objectives. In view of these trade-offs, discuss whether economies should continue to embrace globalisation. [25]

DUNMAN HIGH SCHOOL
Prelim Examination 2016

Year 6 H2 Economics 9732 Paper 2
Essay Questions

Answer and Mark Schemes

1 In 2014, global GDP growth was 2.6%. Productivity in the Singapore hotel industry grew at a compound annual rate of 5.8% from 2010 to 2014.

(a) Explain how elasticities of demand can assist in understanding the effect of each of these changes on the hotel occupancy of luxury and budget hotels in Singapore. [12]

(b) In addition to the above events, Chinese tourists cancelled trips to Singapore following a serious air traffic accident in 2014.

Discuss how the above developments would affect the revenue of luxury and budget hotels in Singapore. [13]

Price elasticity of demand (PED) is a measure of the degree of responsiveness of the quantity demanded for a good to a change in the price of the good itself, ceteris paribus.

Budget hotels
1. Demand is said to be price elastic when a given change in price of a good results in a more than proportionate change in quantity demanded in the opposite direction, ceteris paribus.
2. Substitutes are easily available: Airbnb or hostels. Consumers of budget hotels are not particular of access to amenities services provided.

Luxury hotels
1. Demand is said to be price inelastic when a given change in price of a good results in a more than proportionate change in quantity demanded in the opposite direction, ceteris paribus.
2. Fewer substitutes available as consumers of luxury hotel are concerned of the access to amenities provided within the hotel compound and personalised butler services. This is a part of the production process of luxury hotel which Airbnb cannot replicate easily and compete with.

Productivity growth of the hotel industry will see a lowering of marginal COP. Supply will increase because firms are more willing and able to increase Qss at each and every price level. At the current price level of P0, there exist a surplus, Qss is greater than Qdd. Firms will reduce prices to remove the surplus. Quantity demanded rises as utility-maximising consumers, constrained by their budget, are now willing and able to buy larger quantities, but the units of output that are produced at higher marginal cost become unprofitable at lower prices. Profit-maximising firms cut back output to avoid the marginal losses, reducing quantity supplied. This process will continue until the surplus is eliminated at the new equilibrium point. However, the extent of increase in Qdd is dependent on the PED for luxury hotel and PED of budget hotel.

Budget hotel: PED>1 and so the fall in price will lead to a more than proportionate increase in Qdd from Q0 to Q2
Luxury hotel: PED<1: and so the fall in price will lead to a more than proportionate increase in Qdd from Q0 to Q1

Pr
P
P
Q D D Q
Figure
S1
S2
E0
E1
P1
E2

The income elasticity of demand (YED) is a measure of the responsiveness of demand to changes in income, ceteris paribus.

Budget hotel
An inferior good is one whose demand changes <u>in the opposite direction</u> as the change in income, ceteris paribus. While rising incomes give them greater purchasing power, consumers' willingness to purchase inferior goods fall as they are now able to switch to goods that are able to give them higher levels of utility. Demand for inferior goods will, as a consequence, fall and YED of inferior goods negative (YED < 0). A surplus exists at current price level and the new equilibrium point is established at E2, whereby both equilibrium price and quantity is lower than before.

Price
S
P1
E1
E2
P2
D1
D2
Quantity
Q2 Q1

Fig 2: Demand curve shifts in response to increase in income for inferior goods

Luxury hotel
A normal good is one whose demand changes <u>in the same direction</u> as the change in income, ceteris paribus. Consumers, seeking to maximise their utility, will increase their demand for normal goods when their higher incomes give them greater purchasing power. Therefore, the YED of normal goods is positive (YED > 0). Luxury goods such as luxury hotels tend to have high YED. These goods are consumed only after the expenditure on necessities has been accounted for. When income rises during economic growth for instance, it is the demand for luxuries that is often the first to be rise. Ceteris paribus, when the rise in quantity demanded is more than proportionate to the rise in income, YED value is not just high but greater 1, i.e. demand is income elastic. Thus, the increase in demand is also higher from D1 to D3 instead of D1 to D2. A shortage exists at current price level and the new equilibrium point is established at E3, whereby both equilibrium price and quantity is higher than before.

Price

S

P_3

P_2

P_1

D_1 D_2 D_3

Q_1 Q_2 Q_3 Quantity

Fig 8b: Demand curve shifts in response to increase in income for normal goods

Marks Scheme

Level	Descriptors
L3 10-12	• Good exemplifications • Uses a good economics framework with well explained diagrams • Points raised are well-elaborated & based on the different relevant elasticities concepts
L2 7-9	• Points raised lack elaboration/ exemplification • Explain the different elasticities concepts but did not link to how the different elasticities concepts will affect the equilibrium quantity of hotel
L1 1-6	• Attempted analysis is limited • Conceptual misunderstandings of the different elasticities concepts tested are evident

Suggested Answers

Part (b)

		Upscale hotel market: MBS, W Hotel, RWS	Budget hotel market: Fragrance Hotel, Hotel 81
Impact on demand	Changes on demand	1. Increasing income: higher purchasing power for normal good • Upscale hotel market will see a more than proportionate increase in demand (YED>1) • However, the extent of increase in demand for luxury market is dependent on the income level of consumers. The higher the income level, the more luxury hotels are perceived to be a necessity. • The growing middle class in Asia and Southeast Asia countries will still view luxury hotel as a luxury good. The increase in income growth is a recent phenomenon, thus the consumption of luxury goods is not part of their daily lifestyle. 2. Falling taste and preference for tourists to travel to Singapore • MH370 ➔ consumers derive lower utility from air travel, thus they also consume less hotel services Overall: SR ➔ demand might fall as the fear of air travel outweighs the rising income effect. LR ➔ with time, consumers might slowly forget about the tragic accident and regain confidence in air travelling again, thus increase their consumption of hotel rooms.	1. Increasing income: higher purchasing power for normal good • Budget hotel market might see a fall in demand as it is considered an inferior good (YED<0) • However, this might not be true. As income in developing countries in Southeast Asia grow (e.g Myanmar), they will consume more travel packages, including budget hotels in Singapore. Budget hotels in the POV of tourists from developing Southeast Asian countries are viewed as normal goods. 2. Falling taste and preference for tourists to travel to Singapore • MH370 lowers consumers utility from air travel, as such they also consume less hotel services Overall: demand for budget hotel will fall significantly The increase in income growth of Southeast Asian tourists might not be sufficiently large to overcome the falling demand from China.
Impact on supply	Changes on supply	1. Increasing supply (overall): rising productivity will lead to lowering of marginal COP • Affects the total revenue to fall, PED<1: substitutes available for hotels like Airbnb, mid-tier hotels • However, PED for upscale hotel are more inelastic: alternatives like Airbnb and mid-tier hotels isn't a strong substitute for upscale hotel, whose consumers prefer the amenities (gym and pool) and personalised service (butler) available. • Total revenue will fall as the increase in Qdd is less than proportionate given a fall in price: PED<1	1. Increasing supply (overall): rising productivity will lead to lowering of marginal COP • Affects the total revenue (TR will increase), PED>1: substitutes available for hotels like hostels • Budget hotels are more easily substitutable away with hostels. Demand is more price elastic due to consumers are more willing to pay a lower price to stay in a hostel and does not mind using a common bathroom and entertainment room.

Suggested Answers

Net impact on equilibrium price, qty and total revenue	***SR:*** demand has decreased but supply has increased • Equilibrium price will decrease, however, impact on equilibrium qty depends on the relative magnitude of decrease in demand and increase in supply • The fall in demand is likely to outweigh the increase in supply ➔ consumers with rising income and the fear for flying are more incentivised to cancel their trips ➔ total revenue will fall ***LR:*** demand and supply have increased • Equilibrium qty will increase, however, impact on equilibrium price depends on the relative magnitude of increase in demand and supply • The increase in demand is likely to outweigh the increase in supply ➔ total revenue will increase	Demand has decreased but supply has increased • Equilibrium price will decrease, however, impact on equilibrium qty depends on the relative magnitude of decrease in demand and increase in supply • The increase in income growth among consumers from developing countries is significant, they do not see budget hotel in Singapore as inferior good but normal good, able to cushion the overall fall in demand➔ total revenue will increase

Marks Scheme

Level	Descriptors
L3 7-9	• Good discussion of how the above developments affect the luxury and budget hotels market and its total revenue differently • Points raised are well-elaborated & based on economics concepts. • Good exemplifications
L2 4-6	• Attempted at discussing how the above developments affect the luxury and budget hotels market and its total revenue differently • Points raised were insufficiently elaborated or lack economic analysis • There were attempts to exemplify
L1 1-3	• Attempted analysis is limited, conceptual misunderstandings are evident and there is lack of understanding of the question requirements.
E1 1-2	For well-supported judgment
E2 3-4	

Suggested Answers

2 (a) In what circumstances may price discrimination be beneficial to consumers? [10]

(b) Assess the extent to which price discrimination is the main profit generator for firms in different market structures. [15]

2a)

Introduction
- Define price discrimination
  - o Price discrimination is defined as the selling of the same good at different prices for reasons not associated with differences in cost of production.

- Beneficial to consumers => increase satisfaction level =>(i) price and non-price: (ii) quality, (iii) variety aspects

Body
- Explain any 2 circumstances => with economic framework and diagram/s

- Case 1 => continue production even if the company is having subnormal profit:
  - o Perfect PD – continue to production under perfect PD

  Price discrimination can be an advantage to the community in those situations where an essential good like medical services is not commercially viable if a single price were to be charged.

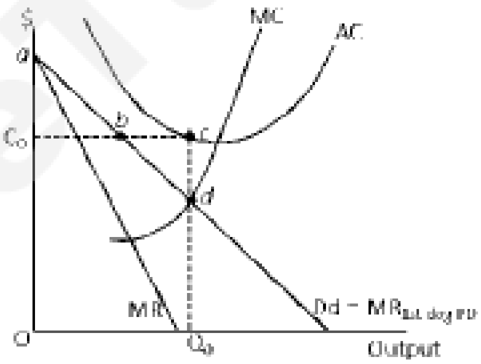


Figure 1: First Degree Price Discrimination

Referring to Figure 1, a doctor may not be able to supply his medical services to a rural town if he were to charge a single price because the demand curve lies entirely below his average cost curve. However, if the doctor were to engage in 1st degree price discrimination and charge each patient according his maximum ability to pay.

- Profit-maximising output = Q_0 where MC = $MR_{1st\ degree\ PD}$
- TR with 1st degree price discrimination = area under dd curve = $OadQ_0$
- TC = AC × Q = OQ_0cC_0
- As long as area aC_0b ≥ area bcd, the firm is able to at least break even. The market is able to supply the good even in the absence of government intervention.

- Case 2 => produce more output in the market, and consumers with price elastic demand can purchase the good or service at a lower price level.
- 3rd degree => higher consumer surpluses for consumers with price elastic demand

Suggested Answers

An example of third degree price discrimination by Universal Studios Singapore

	Adult (Age 13-59)	**Child (Age 4-12)**	**Senior (Age 60 and above)**
1-Day Pass	$74	$54	$36
RWS Invites Attractions Season Pass	$98	$88	$88

$ $ $ MC

P

P

DD_B

MR_{A+B}

DD_A

MR_A

MR_B

Q Q Q Q Q_{A+B} Q

a) Market A with relatively

b) Market B with relatively

c) Combined market

Figure 2: Charging different prices in different markets

In Figure 2c, the market marginal revenue curve here is the summation of the marginal revenue curves in Figure 2a and Figure 2b horizontally at each and every price level.

To determine the total output, the monopolist will produce that level of output where the MC equals the combined MR (MR_{A+B}) in Figure 2c. Having decided on the total output, the firm will now have to consider how to divide the output between the 2 markets. The monopolist maximises profits by equating the firm's MC with individual MR curves in the 2 markets, i.e. $MC = MR_A = MR_B$. If the MR in the 2 markets are not the same, the monopolist could increase profits by transferring output from the market where MR is lower to the market where MR is higher. 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.

The impact of 3rd degree price discrimination varies across the different groups of consumers. Those consumers with a more price inelastic demand are charged a higher price than those with a more price elastic demand. Those paying a higher price might feel this system of pricing is unfair. However, those charged a lower price may thereby be able to obtain a good or service they previously could not if a single price was charged by the monopolist. 3rd degree price discrimination is likely to increase output and make the good or service available to more consumers.

Note: candidates may explain using 2nd degree PD

Conclusion

Suggested Answers

The extent to which price discrimination 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
L3 7-10	Consumers benefits – cover both price and non-price Uses a good economics framework with well explained diagrams Points raised are well-elaborated & based on economics concepts.
L2 5-6	Points raised lack elaboration/ exemplification. Explain the different types of PD but did not link to how these benefited the consumers
L1 1-4	Attempted analysis is limited, conceptual misunderstandings are evident and there is lack of understanding of the question requirements.

(b) Assess the extent to which price discrimination is the main profit generator for firms in different market structures. [15]

Introduction
- Profit maximisation condition
- Different Market structures
- Why PD can only be practiced in imperfect competition

Body
Thesis
PD is the main profit generator for firms
Diagram is not required, candidates can refer to figure 1 to 3 in part a.
Explain why profit is higher than a firm charging a single price
Exemplification => from any imperfect market structure

Antithesis
PD may not be the main profit generator for firms in different market structures.
Explain any 2 cases:
- Firms in oligopoly => **collusion**. Need not charged lower prices for markets with PED>1
- Explain either explicit collusion – cartels or tacit collusion - price leadership

- MPC => product differentiation => niche market to earn higher profit level
  Product differentiation can increase a firm's profits in three ways:
  - increase the demand for it its goods directly
  - demand relatively more price inelastic. Differentiating its product from its competitors' gives the firm more pricing options (i.e. greater market power). For example, successful product differentiation allows firms to charge higher prices and earn higher profit. Recall that when demand is price inelastic, an increase in price brings about a smaller than proportionate reduction in quantity demanded which then contributes to higher total revenue. This in turn helps the firms to avoid cut-throat price competition which is crucial during times of rising cost of production.
  - reduce the degree of substitutability between its goods and its competitors' goods (cross elasticity of demand for the good is reduced). This in turn reduces its susceptibility to competitors' price cuts.

- Candidates may explain any other strategies, such as advertising, predatory pricing, limit pricing that lead to higher profit levels

Conclusion & evaluation
- Well-explained judgement
- Considered the conditions and characteristics of the market structures/ industries

- Any form of government intervention in a particular economy

Level	Descriptors
L3 7-9	Good discussion on the strategies to increase profit levels Good discussion on PD and any 2 other strategies Points raised are well-elaborated & based on economics concepts.
L2 4-6	Good discussion on how to increase the profit levels – is PD the best strategy? Points raised were insufficiently elaborated or lack economic analysis.
L1 1-3	Attempted analysis is limited, conceptual misunderstandings are evident and there is lack of understanding of the question requirements.
E1 1-2	For well-supported judgment
E2 3-4	

3 Explain the reasons for government intervention in the provision of key facilities such as defence and medical services and discuss the extent to which such intervention meets the microeconomic objectives. [25]

Question can be sub-divided into 2 questions:
Explain the reasons for government intervention in the provision of key facilities such as defence and medical services
And
Discuss the extent to which such intervention meets the microeconomic objectives.
Note: candidates can approach the questions in either ways
a) explain in why government intervene in provision of public and merit goods +
how this intervention may/may not lead to achieving efficiency and equity
OR
b) Why the government provide public goods, can this meet the microeconomic objectives +
Why government provide merit goods can this meet the microeconomic objectives

Reasons for government intervention in provision of key facilities:
i) Defence serices: A private good and public good are distinguished by the features of excludability and rivalry.

Excludability:
<Definition> 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.
<Exemplification> 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.

<Elaboration> 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.

Rivalry:
<Definition> A public good also has to be non-rival in consumption. This means that the consumption of a good by additional individuals will not reduce the utility (quantity and quality) derived from consuming the good.
<Exemplification> 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 rivalrous in consumption. When an individual consumes a hamburger, that unit of hamburger is gone and not available for consumption by the next individual.

<Elaboration> As a result of non-rivalry, no additional unit of a public good needs to be produced for additional consumption. 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.

- Why the provision of this service meets government microeconomic objectives
  - Important service to the society
  - Non-provision in free market
  - Equity issue – only the very rich can afford
  - Antithesis => can provision of this services worsen the efficiency and the equity of the society?
  - Other key facilities may not be under public goods
    - Key facilities are private good that are rivalrous and excludable eg. Airports and seaports
    - <u>Excludability</u>: 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.
    - <u>Rivalry:</u> 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 operated. The profit is provided by charging the users of facilities.
    - Government need not intervene, to meet the microeconomic objectives.

ii) Medical Services: A positive externality is also known as an external benefit, whereas social benefits include both external benefits and private benefits. Presence of imperfect information and equity issues

<Elaboration with exemplification> 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 medical services, a healthy labour force can increase efficiency for the employer. It may also produce other important external benefits, such as lower medical cost and improve international competitiveness for the country.

Draw the <u>graph</u> to illustrate the potential deadweight loss due to positive benefit and imperfect information

Explain why merit good deemed by the government to be under consumed, thus resulting in DWL

Why government intervene => how to eliminate the DWL

How to meet the 2 objectives => efficiency in resource allocation and equity

E.g. to develop medical services, such as hospital, requires high capital outlay that may be a barrier to entry to a private firm. Hence government would be the natural choice to cough up the initial investment.
Equity: to ensure the lower income group get access to medical facilities and care

Antithesis
- Why DWL might even increase with government intervention?

- Can the free market be better in achieving the microeconomic objectives?
  - 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 as productive efficient compared to the running of the facilities by the private sector, who are profit-driven.

- How about PPP, a better way in meeting the microeconomic objectives?
  - 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 projects that are aimed at creating infrastructure such as hospitals and public transport infrastructure (in Singapore, 2016), 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 and Evaluation
- Well explain judgement
- Considered the conditions and characteristics of the economy, governments' budget

Level	Descriptors
	L1 Knowledge/ Recognise (Description)
L1 (1-9)	• Answers are descriptive and largely irrelevant • Concepts are descriptive or explained with many errors • Poor use of examples • Weak or inappropriate applications of the concepts.
	L2 Consolidate (Add some detail – application)
L2 (10-16)	• At least 2 concepts, public and merit goods were explained adequately • Balance approached – why government intervention may or may not meet the government microeconomic objectives; with some lapse in explanation • Adequate attempt at exemplification • Some attempt at providing other reasons or other forms of intervention
	L3 Elaborate (Extend to include analysis)
L3 (17-21)	• Clear economic explanation of 2 concepts, public and merit goods • Good use of examples to explain the free-rider problem, missing market problem (MC=0) and how social benefits = private + external benefits, imperfect information = difference between perceived and actual demand • 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 & imperfect information. • Good discussion how government intervention achieve/ may not achieve microeconomic objectives, efficiency and equity.
Evaluation	
E1 (1-2)	• Able to make some evaluation or limitations of the use of the market failure

E2 (3-4)	• 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

4 (a) Explain the economic indicators that can be used to measure the performance of an economy. [10]

(b) Discuss whether market-oriented supply-side policies is the best way to spur economic growth in view of a gloomy outlook. [15]

(a) In order to access the full 10 marks, candidates should mention at least three indicators with economic growth rate as a compulsory indicator. What students should focus is not just on the explanation of the economic indicators but to explain how they help to measure economic performance. Candidates also need to show awareness that any individual indicator alone is insufficient to measure economic performance; overall economic performance requires all indicators to provide a more complete / holistic picture.

To measure economic performance → measure the extent to which the 4 macroeconomic goals have been achieved: (1) high and sustainable economic growth, (2) low inflation, (3) low unemployment as well as (4) healthy BOP

Explanation of economic indicator	Analysis of how each economic indicator measure economic performance
Economic growth rate → use % ρ in GDP – Define GDP. – Alternative indicator: GNP – Further breakdown of GDP figure e.g. proportion of each component that makes up GDP (C vs. I as % of GDP)	Explain how the value of GDP / GNP growth rate indicate the economic performance of an economy. – A positive (negative) value means ↑ (↓) in a country's national output → ↑ (↓) in economic activities in the country → economic performance improves (worsens) – While the GDP growth rate figure on its own may not shed much light on future growth, more detailed analysis of the GDP figure can help to measure economic performance, e.g. a ratio weighted towards investment suggests that the economy is competitive in attracting I → indicates potential EG of a country * Recognise that EG rate is usually the most important indicator to measure economic performance.
Inflation rate (%) → use % ρ in CPI – Inflation rate measures the general price level of g&s within a country – 2 types of inflation → demand pull or cost push	Explain how the value of inflation rate indicate the economic performance of an economy. – ↑ positive inflation rate means small ↑ in GPL, which likely indicates ↑ in economic activities → competition for FOPs → ↑ unit COP → firms pass on as ↑ prices to consumers ⇨ The above assumes demand-pull inflation and coupled with strong GDP growth figure → overheated economy + indicates demand-pull inflation → improvement in performance – If country is able to maintain low and stable positive inflation (coupled with positive EG) over time → able to attract investments → achieves potential EG and generates more employment opportunities
To measure the actual EG of an economy → better to use **% change in real GDP** over time to measure ρ in the **volume** of economic activity, while maintaining relative prices constant, i.e. removes the effect of price changes. In this way, it reflects the economic performance more accurately than using % ρ in nominal GDP.	
Unemployment rate (%) – Define UN rate.	Explain how the value of unemployment rate can be used to measure economic performance.

– Briefly explain that demand-deficient and structural unemployment are the more important sources of unemployment	require FOPs including labour being hired → ↓ DD-deficient UN – A low UN rate also represents a productive and efficient economy which makes fuller and more efficient utilisation of its current resources → achieves productive efficiency and economy is able to maximise its output → strong economic performance – A low UN rate helps ensure the internal stability of an economy due to less social issues in terms of crimes like robbery, thefts → improvement in economic performance ⇨ Coupled with a high GDP growth figure → suggests that economy is operating at or close to full employment → ↓ demand-deficient UN → improvement in performance – If country is able to maintain low and stable UN (coupled with positive EG) over time → able to attract I → achieves potential EG and creates more jobs → improvement in economic performance
BOP status → surplus or deficit – BOP measures a country's external performance → very important for small and open economies like Singapore and Hong Kong, which are highly X-oriented and M-dependent. – Briefly explain the 2 components of BOP. – Explain what it means when a country has a BOP surplus or a deficit.	Explain how the BOP statistics can be used to measure economic performance. – If constant BOT surplus over the years → suggests high export competitiveness → implies injection into the local economy that can boost its EG → improves economic performance – If constant capital and financial account surplus over the years → suggests economy is attractive to foreign investors → may imply a boost in potential EG if the surplus is a result of foreign MNCs investing in the country + creates more job opportunities that ↓ demand-deficient UN → improves economic performance – For SG → consistent current account surplus adds to foreign reserves → maintains exchange rate stability → helps to: • prevent speculative attack on S\$ • curb imported inflation via a relatively strong S\$, which is particularly important for SG given its lack of natural resources • provide a conducive environment for I and trade → ↑ EG, ↓ UN • improves economic performance – However, countries running current account deficits may have strong economic performance / GDP growth → ↑ import expenditure. Thus a current account deficit could possibly reflect high incomes → strong economic performance – Also, a country may run a temporary current account deficit due to importing of capital goods → contributes to future growth

L3 7 – 10	– Well-developed explanation of at least 3 economic indicators (BOTH internal and external) and how they measure economic performance. – Max 8m – if only two indicators are explained (with EG rate as an indicator) – Max 9m – if candidate did not explain both internal and external – Analysis is supported with the use and explanation of economic framework – Use of relevant real world examples such as countries in euro area and emerging economies as poor and strong economic performance respectively
L2 5 – 6	– Addresses only 1 aspect of the question: • explanation of economic indicators OR • analysis of how the economic indicators measure economic performance – Max 5m – if answer is purely on the meaning of economic performance with some incidental mentioning of economic indicators. – Max 6m – if two or more indicators are explained, but without EG rate
L1 1 – 4	– Mere listing of the indicators or largely irrelevant answer such as how economic performance affects SOL or largely descriptive answer. – Max 4m – if answer is on economic goals only OR describes economic

	indicators without any link to how they measure economic performance.

Discuss whether market-oriented supply-side policies is the best way to spur economic growth in view of a gloomy outlook.
[15]

Candidates should recognise that there are different types of policies that can be used to spur EG. These policies include market oriented supply-side policies (as stated in the question), interventionist supply-side policies and demand management policies. Then, candidates are to assess these policies using the FRESH criteria, before coming to a reasoned judgement on which is the best way to spur EG in the context of a gloomy outlook.

Explain how market oriented SS-side policies work → free up the markets by ↓ distortions of current policies on prices and incentives, encourage private enterprise and improve market efficiency → ↑ AS <explain with AD/AS diagram>

(i) To ↑ productive capacity → ↑ AS (shifts downwards and rightwards) → encourage potential growth / non-inflationary growth
- Fiscal reforms: ↓ red tape, ↓ corporate income taxes e.g. Singapore ↓ CIT from 20% (2005 to 2007) to 18% (2008 to 2009) and to 17% (from 2010 onwards) as well as removal of other impediments to investment and risk taking e.g. establish intellectual property rights (IPRs) → ↑ firms' incentive to undertake investment projects and engage in process innovation → capital accumulation and ↑ productivity → ↑ AS
- Fiscal reforms: ↓ personal income taxes → ↑ incentive to work harder → ↑ work effort → ↑ productivity → ↑ AS
- Cutting back govt spending e.g. firms' subsidies that distort markets → free up resources for the private sector which, subjected to the discipline of market competition, tend to be more efficient than the public sector → ↑ AS

(ii) To ↑ AS (shifts downwards) → ↑ actual EG
- Flexible labour policies → ↑ SS of labour → ↑ competition in the labour market → downward pressure on wages → ↓ firms' unit COP → pass on as ↓ prices → ↑ AS
- Trade liberalisation exposes domestic producers to competition from imports → check complacency → ↓ X-inefficiency → keep unit cost down to remain competitive → ↑ AS.
- Privatisation → transfer of a state owned (natural) monopoly run by the govt to the private sector or introduce private services into the public sector → introduction of competition and removes non-profit motive → ↓ X-inefficiency → ↑ AS. Examples include privatisation of:
  - Royal Mail (2014) and British Telecom (1984) in the UK
  - SMRT, Singapore Airlines, Sembcorp Industries in Singapore
- Deregulation → govts remove, reduce, or simplify restrictions on firms → fewer and simpler regulations → ↑ level of competitiveness by encouraging the efficient operation of markets → spurs innovation → productivity gains → ↑ AS

- As domestic firms face ↑ competition → encourage adoption of better technology and spur greater innovation as domestic firms need to improve productivity → ↑ AS

Possible strengths of market oriented SS-side policies in spurring EG

- For PIT cuts: effectiveness in stimulating greater work effort depends on the relative magnitude of the substitution and income effects of the ↑ in disposable wages. During

gloomy outlook → job insecurity → employed workers are likely to work harder so that they do not lose their current jobs → ↓ PIT could be effective in ↑ productivity → ↑ EG

- For privatisation: nationalised industries can be inefficient → high cost to the govt → selling off such loss-making industries can ↓ govt's budget deficit. In view of **gloomy outlook**, which is especially crucial for the govt to prioritise EG above the other goals and spend its funds wisely, privatisation:
  - helps the govt to avoid larger budget deficits since during poor economic times, govt budget is tighter due to ↑ govt spending on UN benefits, transfer payments and ↓ tax revenue due to ↑ UN.
  - allows the govt to use the 'extra' revenue gained from selling off the industries and the originally intended funds 'saved' (if the industries were still nationalised) to stimulate EG via demand-management policies
- The cutting back on govt spending e.g. subsidies to firms → govt can reallocate such funding to stimulate EG via demand-management policies, which is especially pertinent during **gloomy outlook** as explained above
- As domestic firms face ↑ competition due to above policies → engage in product innovation → ↑ variety and quality of products → ↑ non-price competitiveness of goods that cater to consumers' tastes and preferences → ↑ demand for g&s → ↑ AD → ↑ EG

Limitations of market oriented SS-side policies in spurring EG

- For fiscal reforms (↓ red tape, ↓ corporate income taxes etc). to attract I: still depends on investors' confidence in the economy, which could be affected by external economic conditions, i.e. with **gloomy economic outlook** → expected ROR on I is still low → ineffective in ↑ I → ineffective in spurring EG
- For privatisation: privatised firms often retrench workers to cut waste → in view of **gloomy outlook**, likely to meet with strong resistance from the population, especially the retrenched workers. In countries with strong labour unions, this policy may backfire as riots and protests may ensue → further deters I and worsens EG
- For privatisation, deregulation and trade liberalisation: long gestation period before full benefits can be realised → ineffective in stimulating EG in the short run → inappropriate for govts to implement such policies alone, because in view of **gloomy outlook**, the recession may deepen into a depression

Explain how interventionist SS-side policies work → to counteract deficiencies of markets to provide the necessary conditions for EG <explain with AD/AS diagram>

(i) Infrastructure development → govt spending on:
  - Transport and communication – e.g. extension of MRT network to cover Bukit Timah Line, North-South Expressway in Singapore → ↑ accessibility and speed of getting to workplace → ↑ productivity, high-speed Next Generation Nationwide Broadband Network → ↑ connectivity and workers' productivity
  - Business parks for various industry clusters e.g. Biopolis, Jurong Island, Data Centre Park, Seletar Aerospace Park

- ↑ quantity and quality of resources (via ↑ productivity) → ↑ productive capacity → ↑ AS (shifts downwards and rightwards) → encourage non-inflationary growth

(ii) Human capital development → govt spending on education, training, retraining: e.g.
  - Singapore govt ↑ spending to expand the capacity of the Continuous Training and Education (CET) training infrastructure in the key growth areas identified by the govt such as aerospace, precision engineering and process manufacturing. There is also enhanced funding support for adult learners enrolled in the CET courses.

– SkillsFuture Credit → all Singaporeans aged 25 and above received an opening credit of S$500 from January 2016 that can be used for programmes to upgrade their skills.

- These initiatives aim to ↑ productivity → non-inflationary growth

(iii) Enhance productivity and innovation → govt spending to ↑ productivity and R&D
 – In Singapore, the Agency for Science and Technology (A*STAR) was set up in 2000 to build up Singapore's capabilities in science, engineering and technology; topping up the National Research Fund (NRF) by $1 billion in 2015

- These initiatives aim to ↓ cost of innovation / R&D → ↑ firms' incentive to engage in R&D → ↑ process and product innovation → ↑ AD & ↑ AS → ↑ EG

Limitations of interventionist SS-side policies in spurring EG

(i) For human capital development:
 – In times of **gloomy outlook** that is primarily caused by demand shocks, it is not about structural rigidities / bottlenecks that prevent EG from being sustained, but rather the lack of jobs in the labour market. Even if workers are imbued with the right attitude and aptitude / receptive towards training and are indeed successfully trained, if gloomy outlook still persists, EG will still not ↑.

(ii) For productivity and innovation: apart from the uncertainty in achieving breakthrough in research (hence ineffective in ↑ EG), in view of **gloomy outlook** → ↓ incomes → consumers still lack the ability to purchase the g&s despite being relatively cheaper (process innovation) and better (product innovation) → ineffective in ↑ EG

(iii) For all the 3 aspects:
 – Involve large amounts of govt expenditure → in view of gloomy outlook where govts' budget become tighter, countries may be less able to implement such interventionist SS-side policies as they lack the financial means to do so → may inject lesser funding → less effective in ↑ EG. This is especially so for countries with high govt debt e.g. PIIGS in the euro area → unable to ↑ EG via this policy.
 – In view of current **gloomy outlook**, since interventionist SS-side policies involve long time lags to generate the expected productivity growth → ineffective in ↑ EG in the short run, it may not be apt for govts to implement such policies alone, because the recession may deepen into a depression.

Explain how demand management policies ↑ EG <explain with AD/AS diagram>

(i) Expansionary F/P → e.g. US, Japan govt spend on welfare pay-outs and UN benefits → ↑ households' disposable income → ↑ in C → ↑ AD → ↑ actual EG

(ii) Expansionary M/P → e.g. ↑ money supply to ↓ i/r → explain how ↓ i/r leads to ↑ C and ↑ I → ↑ AD → ↑ actual EG

(iii) Expansionary M/P (SG context) → depreciate S$ via the sale of S$ by MAS → ↑ price competitiveness of SG exports relative to other foreign goods. As S$ depreciates against foreign $, prices of SG's X ↓ in foreign $ terms, while prices of M ↑ in S$. Marshall-Lerner condition (sum of price elasticities of demand for X and M exceed one) will hold true, since the demand for SG's X are price elastic due to the many available substitutes in the global market → S$ depreciation induces sufficiently large changes of X and M in the opposite direction such that X revenue ↑ relative to M expenditure → BOT improves. Also, ↑ import prices induce local consumers to switch to domestic g&s and assuming close substitutability between imports and domestically produced g&s → large ↑ in C_D. Coupled with BOT improvement → ↑ in AD → ↑ actual EG

Limitations of demand management policies in spurring EG

In general, the effectiveness of all demand management policies depends on the:

(i) prevailing economic conditions / outlook → in times of **gloomy outlook**, welfare pay-outs or transfer payments (for exp. F/P) is less effective in stimulating spending by lower income households. Similarly, ↓ i/r is also less effective in stimulating consumers' spending and investments. Correspondingly, despite ER depreciation causing X to be relatively cheaper, foreigners still lack the purchasing power due to ↓ incomes → ineffective in stimulating EG, because of limited ↑ X. Faced with an impending recession, there is a loss of consumer and investor confidence. Households are less willing to spend their additional disposable income, preferring to ↑ precautionary savings. Likewise, the expected rate of return on investment remains depressed and a cut in i/r rate might not be sufficient to incentivise local firms to ↑ I. As such, demand-management policies are likely to be ineffective in stimulating EG.

(ii) relative share of the different AD components, which in turn could also be influenced by the characteristics of the economy. For small and open economies (large and less open economies), expansionary M/P centred on ER (i/r) could be more effective than expansionary F/P in stimulating actual EG, since the respective policies target largest components that contribute to AD for the respective types of economies → overall ↑ in AD is larger. G is often one of the smaller, if not the smallest component of AD.
- In SG's case, G is about 5% the size of X. A small ↓ in X e.g. by 10% will require a doubling of the govt's spending to counter the effects, but ↑ in govt spending of such magnitude is unfeasible → expansionary F/P is likely to be ineffective in ↑ EG. However, in times of **gloomy outlook**, some cushioning is better than no cushioning at all to mitigate ↓ in EG.

Candidates can also explain on the specific limitations of individual demand management policy, for instance,
- For expansionary F/P: crowding out effect (but may be less applicable in times of **gloomy outlook** where the govt is spending on behalf of consumers and investors)
- For expansionary M/P centred on i/r: interest inelasticity of C and I
- For ER depreciation and protectionism: in view of **gloomy outlook** → similar retaliatory measures of currency depreciation or tariffs undertaken by other govts → worsen EG. E.g. currency war during the Global Financial Crisis when competitive devaluations occurred

Evaluation → which is the 'best' policy to spur EG?

Consider prevailing economic conditions → in times of **gloomy outlook**,
- Many policies are likely to be ineffective, it is better for the govt to use a combination of policies to complement each other so as to ↑ overall effectiveness in ↑ EG → no 1 single best policy
- Some policies are likely to be faced with backlash and thus backfire → e.g. market-oriented SS-side policies such as flexible labour policies, privatisation etc. may result in huge resistance from the population (labour union members receive lesser incomes and some workers may be structurally unemployed because of restructuring due to privatisation) → strikes and riots may ensue which could further worsen the poor economic outlook situation
- Better to adopt policies with a shorter time lag so as to avert a deep recession that may end up being a depression. Some policies have a longer gestation period than others e.g.

interventionist SS-side policies usually have a much longer gestation period than market-oriented SS-side policies and demand management policies → to ↑ EG in the SR, the govt should consider adopting the latter policies instead

- Choose the right type of policy that addresses the root cause: if the economy is facing stagflation (a situation with inflation and UN). If the AS curve shifts upwards (↓) due to ↑ in unit COP (e.g. food price inflation in the early part of 2008) → ↑ in GPL and ↓ EG. Stagflation cannot be solved via demand-management policies as policymakers will be caught in a conundrum: ↑ AD to ↑ EG but worsen inflation, or combat inflation by ↓ AD but worsen EG? → SS-side policies are preferred as it could be one of the few tools left.

Consider country's context in terms of the following:

- budget / fiscal position → does the country have sufficient funds to implement the policy, especially since during times of gloomy outlook, govts have a tighter budget? For e.g. interventionist SS-side policies and expansionary F/P requires govt expenditure, unlike market-oriented SS-side policies and expansionary M/P
- monetary policy trilemma / impossible trinity: economies in monetary union do not have an independent M/P → each country is unable to alter i/r or ER on its own to ↑ EG

  <Exemplification> Portugal, Italy, Ireland Greece and Spain (PIIGS) are members of the Eurozone. Without their own currency, these countries cannot rely on monetary policy. Similarly, policies such as exchange-rate depreciation which may induce an increase in AD are out of the question in view of the common currency in the EU. Fiscal policy is also severely limited by high levels of sovereign debt in addition to the fact that the IMF has forced these countries to undertake contractionary fiscal policy. Since demand-management policies have lost their effectiveness, supply-side policies are preferred as it is among the last available tools.
- characteristics of the economy in terms of its size and openness → influence size of k. SG or Hong Kong (HK) has a small k size due to its openness to import flows and lack of natural resources → high MPM. In contrast, large and less open economy like US, UK and Japan have comparatively larger k size. The smaller the k size, the more ineffective demand management policies are in stimulating EG, since the overall ↑ in AD is smaller. As such, small and open economies may have to adopt more of SS-side policies that do not work through the k process or adopt expansionary F/P but with a SS-side bias → overcome the limitation of small k → ↑ effectiveness in ↑ EG

Consider SR vs LR → in the long run, SS-side policies are preferred as it is compatible with the government's macro objectives

L3 9 – 11	– Well-developed discussion of all 3 types of policies to spur EG – Analysis is supported with the use and explanation of economic framework – Use of relevant real world examples – Application to the context of gloomy outlook
L2 6 – 8	– Balanced approach → thesis and anti-thesis – Lacks breadth (addresses only 2 types of policies) or lacks depth (undeveloped explanation / lacks rigour in analysis despite some use of economic framework) – Max 8m – if answer discusses only 2 types of policies → 1 must be market-oriented SS-side policies – Some use of relevant examples – Limitations of policies may go off-track e.g. side effects / trade-offs in other goals instead of focussing on EG – Limited application to the context of gloomy outlook
L1 1 – 5	– Mere descriptive knowledge of market-oriented SS-side policies or largely irrelevant answer that focuses on other macroeconomic goals instead of EG – Does not consider other types of policies – Limited use of relevant examples
E2 3 – 4	– Reasoned judgement on the best policy to spur EG in view of a gloomy outlook, supported with economic analysis → e.g. shows some comparison of the different types of policies or any other relevant evaluative argument
E1 1 – 2	– Unsubstantiated stand on the best policy to spur EG in view of a gloomy

5 (a) Explain the economic factors that affect domestic and foreign investments into a country. [8]

(b) Assess the view that governments should prioritise low unemployment over the achievement of other macroeconomic goals. [17]

Domestic and foreign investments are incentivised by profit motive, i.e. influenced by factors affecting revenue and costs. Factors that affect both domestic and foreign investments are:

(i) Government policies that **influence revenue or cost**, e.g.
- microeconomic policies such as indirect taxes (subsidies) → ↑ (↓) firms' **marginal cost of production** respectively → ↓ (↑) firms' profits respectively → ↓ (↑) investment
- macroeconomic policies such as expansionary demand management policies that aim to ↑ EG → ↑ firms' revenue due to ↑ demand for g&s → ↑ **expected ROR on I** <explain with MEI graph – see below>
- macroeconomic policies such as ↓ corporate income taxes (CIT) e.g. Singapore ↓ CIT from 20% (2005 to 2007) to 18% (2008 to 2009) then to 17% (from 2010 onwards) → ↑ firms' **post-tax profits**

(ii) Prevailing economic conditions that **influence firms' expected ROR on I**

MEI, r (%) b ME ME a c r I I Level of

E.g. strong Vietnam's relatively EG between 1991 and 2010 averaged 7.5% each year and, despite the many difficulties the country faced between 2011 and 2013, GDP growth still rose by 5.6% → ↑ foreign I inflows due to ↑ MEI from MEI_1 to MEI_2. At investment of I_1, the last dollar invested now yields a higher rate of return bI_1. Holding interest rate unchanged at r_1, for each additional unit of investment between I_1 and I_2, the returns from investment exceed the interest rate r_1, and the area abc shows the expected net return for investment between I_1 and I_2. By the marginalist principle, firms will ↑ investment up till I_2, whereby the rate of return (cI_2) = interest rate r_1.

(iii) External economic environment / conditions → such as:
- ↓ **MEI** in the event of global recessions → footloose MNCs pull out and ↓ domestic I
- other countries offer better investment conditions e.g. relatively lower **labour costs** in developing countries than developed countries → offshoring to developing countries

Factors that affect domestic investments include monetary policy that affects interest rate → e.g. US central bank, FED tightens monetary policy → ↑ i/r → ↑ **cost of borrowing** relative to expected ROR on I <can explain with MEI graph> ↓ incentive to take up loans to undertake investment projects as it is costlier to finance the loan → ↓ domestic investments.

* Accept any plausible answer as long as candidate addresses question

L3 6 – 8	– Well-developed analysis of at least 2 economic factors that covers both breadth (domestic AND foreign investments OR revenue AND costs) and depth – Analysis is supported with the use and explanation of economic framework – Use of relevant real world examples in analysis
L2 4 – 5	– Lacks breadth (addresses only 1 aspect → domestic or foreign investments OR revenue or costs) or lacks depth (undeveloped explanation / lacks rigour in analysis despite some use of economic framework) – Uses economic framework in answer but lacks rigour in explanation – Limited use of real world examples
L1 1 – 3	– Mere listing of the factors or largely irrelevant answer e.g. non-economic factors – Lacks economic framework in answer – Lacks real world examples in analysis

Assess the view that governments should prioritise low unemployment over the achievement of other macroeconomic goals.
[17]

The 4 macroeconomic goals are: low unemployment, sustained economic growth and healthy balance of payments. Low unemployment is often considered to be achieved when unemployment rate is at 2 – 3%.

Thesis: it is important for govts to achieve low unemployment due to the benefits of low UN / costs of high UN and the pursuit of low UN helps to attain other macroeconomic goals at the same time

(i) Pursuing low unemployment helps to prevent / avoid the issue of:
- ↓ **material SOL**: low UN → workers receive factor incomes → able to buy g&s to satisfy their needs and wants → derive utility
- ↓ **material SOL** and **loss of potential national output** that could have been gained: when an economy experiences UN, it is producing within the boundary of PPF → economy's actual output < potential output → under-utilisation of resources / idle resources → loss of potential output and productive inefficiency. High UN → economy loses a large amount of output → opportunity cost to society (loss of economic welfare) since smaller output means fewer needs and wants can be satisfied → ↓ SOL
- ↓ **non-material SOL**:
  - low UN → able to pay for better quality education, healthcare → improves wellbeing
  - high UN → the longer each individual is out of work, the greater the loss in self-esteem → depression → worsens health → worsens wellbeing
  - high UN → ↑ social costs in the form of crimes
- **hysteresis**: prolonged recession → longer-term UN discourages workers from job search (lose motivation), accelerates skills loss → some may end up leaving the labour market prematurely → erosion of work skills and other important attributes → in the long run, productivity ↓ and the PPF shift inwards → ↓ **potential EG**
- **worsening fiscal / budget position**: with greater UN → govt loses tax revenue and ↑ govt spending in terms of administrative costs of running welfare programmes esp. in countries which give out UN benefits

(ii) Pursuing low unemployment **enables other macroeconomic goals to be achieved**.

Low demand-deficient UN → achieves the other macroeconomic goals

– ↓ demand-deficient UN → workers receive factor incomes → ↑ purchasing power → ↑ demand for g&s → ↑ C → ↑ AD from AD_1 to AD_2 → firms deplete inventories (unplanned disinvestments) and then step up production in the next production cycle → ↑ real national output from Y_1 to Y_2 → ↑ **actual EG**

EV: depends on whether the economy is operating with or without existence of spare capacity, i.e. as the economy reaches full employment, real output can ↑ only by a smaller extent (Y_2 to Y_3) → smaller ↑ in **actual EG**

– From above, keeping demand-deficient UN low → maintain consumers' confidence and the ↑ actual EG helps to ↑ investors' confidence → acquisition of capital goods → ↑ capital accumulation and productivity gains → ↑AS → allows economy to continue to achieve sustained / **non-inflationary EG** <explain with AD/AS graph>; ↑ foreign I inflows → improves financial account → **improves BOP**

Low structural UN → achieves the other macroeconomic goals

– Structural UN occurs when economy faces structural change and workers laid off due to redundancy are unable to gain employment in other industries due to geographical or occupational immobility.

– The pursuit of low structural UN via govt expenditure (G) on education, training and retraining → ↑ employability and labour productivity → ↓ unit cost of production → ↑ AS + ↑ AD due to ↑ G → improves **actual EG**. Also, improvement in quality of workers → **non-inflationary EG** (contributing to **sustained economic growth** and **low inflation**). In addition, it allows economy to gain greater export competitiveness in new industries → **improves BOP**.

Anti-Thesis: governments should not prioritise low unemployment over the achievement of other macroeconomic goals due to its trade-off with other macroeconomic goals and the importance of achieving other macroeconomic goals

(i) Conflict / trade-off with other macroeconomic goals

– Prioritise low demand-deficient UN regardless of existence of spare capacity → ↑ **demand-pull inflation** if economy is operating near full employment, due to acute shortage of FOPs → intense competition for FOPs bids up factor prices → ↑ unit COP → firms pass on as ↑ prices to consumers → sharp ↑ GPL from P_2 to P_3 (instead of P_1 to P_2 when more idle resources are available, despite the same magnitude of ↑ in AD)
<Example: China's overheated economy stoked fear of inflation in 2011>

– Prioritise low demand-deficient UN → **worsens BOP**: ↓ UN → ↑ income → ↑ demand for imports → ↑ import expenditure → worsens BOT
– From above → inflation erodes export competitiveness → ↓ X revenue assuming price elastic demand for X. Also, demand for M ↑ as they are relatively cheaper than domestic goods, assuming M and domestic goods are close substitutes. As such, BOT worsens. Also inflation → investors find it difficult to predict future streams of revenue and costs with certainty → ↑ risks of investments → deters foreign I → worsens financial account → **worsens BOP**

(ii) Importance of achieving other macroeconomic goals, due to their benefits
- Low inflation may help to achieve EG, low UN and healthy BOP <explain>
- Non-inflationary EG → achieves low UN and healthy BOP <explain>
- Healthy BOP → accumulates foreign reserves → maintains ER stability → curbs imported inflation while preventing loss of X competitiveness to achieve EG and low UN (e.g. SG modest and gradual appreciation over the years) <explain>

Point Evaluation: achieving EG may not necessarily lead to lower UN →
- Despite ↑ in job vacancies due to ↑ EG, the unemployed workers may lack the skills needed for the jobs (occupational immobility). There is thus a mismatch of skills and opportunities due to the structure of the economy changing → structural UN
- Productivity-driven growth achieved via automation / mechanisation (for mass production manufacturing) → jobless growth since less labour as a derived demand will be employed → ↑ UN

Evaluation → whether govts should prioritise low UN over the achievement of other macroeconomic goals depends on:

- Prevailing economic conditions → to consider the duration and severity
  - E.g. for the case of European economies that are facing recession, with some facing deeper and more prolonged recession than others → govts ought to tackle the problem of ↑ UN first to restore consumer and investor confidence.
  - If country is facing hyperinflation (e.g. Zimbabwe) → govt should prioritise the problem of inflation over the other goals first

- Characteristics of economy → to consider size and openness
  - Small, open and resource-scarce economies rely on export-driven growth and foreign I. Thus it is relatively more important for such economies (compared to those which are bigger, relatively less open and have more resources to rely on) to ensure domestic price levels are stable to prevent loss of X competitiveness and foreign I inflows.
  - For small, open and resource-scarce economies, domestic price stability is likely to be the pre-requisite before other macro aims can be achieved → failure to keep domestic price levels stable or being constantly subjected to erratic fluctuations in price will prevent the other macro aims from being achieved.

In general, if the economy is doing well with no major crisis, sustainable EG should be the macroeconomic priority of the govt because achieving sustainable EG is complementary with other macroeconomic goals.

L3 10 – 13	– Balanced approach, with thesis and anti-thesis + both breadth and depth – Well-developed discussion of why govts should and should not achieve low unemployment, covering both demand-deficient (cyclical) and structural UN + at least 2 other macroeconomic goals (1 of which must include healthy BOP) – Analysis is supported with the use and explanation of economic framework – Use of relevant real world examples – Max 11m – if answer fails to analyse the external goal of healthy BOP
L2 6 – 9	– Balanced approach → thesis and anti-thesis – Lacks breadth (addresses only 1 type of UN or 1 other macroeconomic goal or fails to analyse healthy BOP) or lacks depth (undeveloped explanation / lacks rigour in analysis despite some use of economic framework) – Max 9m – if answer discusses only 2 macroeconomic goals → 1 must be low UN – Some use of relevant examples
L1 1 – 5	– Mere descriptive knowledge why govts should achieve low unemployment OR why govts should achieve other goals – Lacks the use of economic framework in analysis – Limited use of relevant examples
E2 3 – 4	– Reasoned judgement on whether govts should prioritise low unemployment over the achievement of other macroeconomic goals, supported with economic analysis based on well-explained criteria
E1 1 – 2	– Unsubstantiated stand on whether govts should prioritise low unemployment

6 Globalisation brings about trade-offs between governments' economic objectives. In view of these trade-offs, discuss whether economies should continue to embrace globalisation. [25]

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. Globalisation brings about many challenges and opportunities for all economies.

What comes with globalisation?
– ↑ in international trade at a much faster rate
– ↑ in international flow of capital
– ↑ in movement of labour across boundaries
– ↑ in international outsourcing and offshoring by multinational corporations (MNCs)

Trade-offs between govts' economic objectives as a result of globalisation

(1) Globalisation allows small and open economies to achieve greater EG, lower UN and improvement in BOP, but could lead to greater demand-pull inflation

<u>TRADE FLOWS</u>
– Globalisation → ↓ trade barriers → ↑ access to foreign markets for X → ↑ DD for X → ↑ AD → via the multiplier effect → further ↑ income-induced consumption → AD and NY ↑ even more → ↑ actual EG and ↓ UN <explain with use of AD/AS>
– ↑ DD for X → ↑ export revenue → improves BOT (assume ↑ import expenditure is smaller) → improves BOP
– Especially pertinent for small and open economies like Singapore and Hong Kong which are limited by their small domestic market sizes, without globalisation, their economies are less able to achieve high EG, low UN and healthy BOP.

However, the above analysis assumes that the economy operates with existence of spare capacity / idle resources available. As AD ↑ → more resources are being utilised and economy operates closer to full employment level → ↑ shortage of FOPs → intense competition for FOPs → bids up factor prices → ↑ firms' unit COP → firms pass on as ↑ prices to consumers → sharp ↑ GPL from P_2 to P_3 (instead of P_1 to P_2 when more idle resources are available, despite the same magnitude of ↑ in AD)

(2) Globalisation allows developed countries (DCs) to achieve lower UN in industries that it has CA in but could lead to structural unemployment in industries that it has lost its CA & widening income gap

TRADE FLOWS

- Globalisation → specialisation based on comparative advantage (CA), DCs e.g. US produce goods that they incur lower opportunity costs than trading partners and export them in exchange for goods that they incur relatively higher opportunity costs than trading partners, i.e. import goods that they lack CA in from trading partners e.g. Vietnam

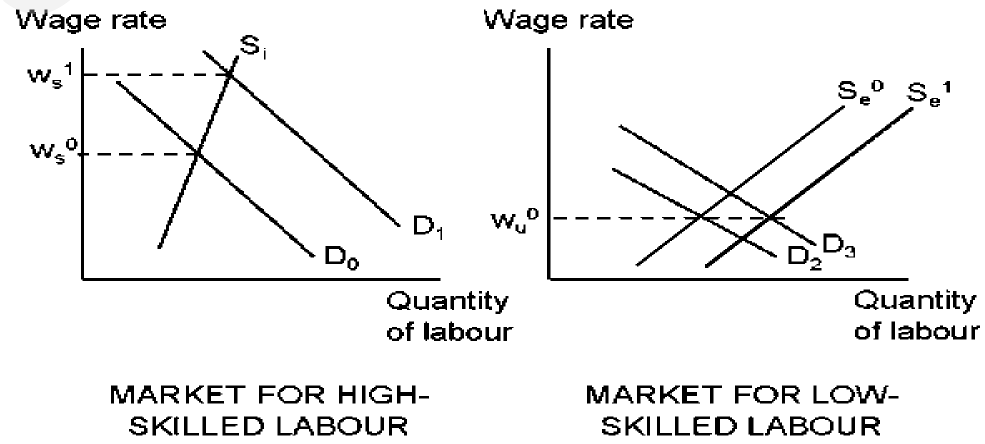
<Exemplification>

- US incurs lower opportunity costs in the production of higher-end value-added knowledge-intensive and capital-intensive g&s such as aircraft, integrated circuits, non-electrical machinery (compared to Vietnam).
- Vietnam incurs lower opportunity costs in the production of lower-end land- and labour-intensive g&s such as rice compared to US.
- This is due to US' factor endowment in high-skilled labour and technology (that Vietnam lacks in) as well as Vietnam's abundance in low cost low-skilled labour and land, in which US lacks such factor endowment respectively.
- Via specialisation and trade in the respective goods in the different countries → stimulate X → ↓ UN in the exporting industries of the 2 countries (aircraft industry in US and rice industry in Vietnam)

As a result of globalisation that may lead to rapid economic changes → DCs e.g. US are likely to face UN in the sunset industries that have lost CA in the production of labour-intensive goods like rice to low cost competitor, Vietnam. This is because low-skilled workers in the US textiles industry are unable to move into growing / sunrise industries (e.g. aircraft) due to a mismatch of skills between the 2 different industries → occupational immobility as farmers are not equipped with the relevant skills to make an aircraft → ↑ structural UN in US

LABOUR FLOWS

- Globalisation → ↑ labour mobility due to ↓ foreign labour restrictions → ↑ SS of low-skilled workers in DCs (US) due to influx of low-skilled workers from the developing countries
- From the above aboe, in the US, high-skilled workers e.g. aircraft technicians → ↑ derived demand for their services, but low-skilled workers e.g. farmers → slower ↑ derived demand for their services → sharp ↑ wages for aircraft technicians as SS is inelastic in the short run, as they need undergo many years of education and training before being certified as a qualified technician, while wages for farmers stagnate.



Market for high-skilled labour | Market for low-skilled labour in the US labour market in the US labour market

- DD for high-skilled labour ↑ from D_0 to D_1. However, the long period of training involved in acquiring the specialised skills means that SS of high-skilled workers tends to be inelastic in the short run. With an inelastic supply S_i, the shortage created by the ↑ in demand requires a sharper ↑ in wage (W_s0 to W_s1) for quantity supplied to ↑ sufficiently for the labour market to clear.
- In contrast to high-skilled labour, the SS of low-skilled labour is more elastic – without any special training required, quantity supplied of such workers can be ↑ readily in response to wage ↑. Demand for low-skilled labour experiences a smaller ↑ (from D_2 to D_3). Coupled with ↑ in supply (from S_e0 to S_e1) following the influx of migrant workers from developing countries, wages of low-skilled workers stagnate at W_u0.

  The sharply ↑ wages of the high-skilled workers contrasts with the stagnating wages of the low-skilled workers leads to a widening of income gap in many developed countries.

(3) Globalisation achieves greater efficiency but could lead to worsening structural UN and BOP and widening income gap in DCs

<u>TRADE FLOWS AND CAPITAL FLOWS</u>

- Globalisation → ↓ trade barriers → influx of cheap imports of manufactured goods into DCs e.g. clothing, shoes and bags → such industries in DCs are unable to compete with these developing countries → inefficient industries shut down → frees up resources that can be better allocated to other productive uses → improves allocative efficiency
- Furthermore, with ↑ competition from imports (and foreign firms due to ↓ investment barriers) → ↑ market contestability → firms are likely to ↓ X-inefficiency thus ↑ productive efficiency, as well as engage in process and product innovation that ↑ dynamic efficiency

However, as a result of ↑ competition → shut down of inefficient firms → ↑ structural UN, since displaced workers do not possess the relevant skills to move into the sunrise industries which are likely to be knowledge and capital intensive, for e.g. finance and biotechnology → ↑ income inequality

<u>CAPITAL FLOWS</u>

- Globalisation → ↓ investment barriers → offshoring and outsourcing → more operations hollowing out of DCs into developing countries (for e.g. call centres in India and iPhone manufacturing in China) → shut down of these low-end industries in DCs → frees up resources from these low-end industries that DCs lose CA in to be reallocated towards high-end industries that DCs possess CA in → improves allocative efficiency
- However, workers in the low-end industries end up being structurally in DCs.
- Also, with foreign investment outflows → worsens financial account → worsens BOP

(4) Globalisation achieves greater EG, lower UN and improves BOP but could lead to increase in allocative inefficiency in developing countries

<u>TRADE FLOWS AND CAPITAL FLOWS</u>

- Globalisation → ↓ trade and investment barriers → ↑ X and offshoring to developing countries e.g. China → ↑ AD in the SR and ↑ AS in the LR → ↑ actual EG and ↓ demand-deficient UN via the multiplier effect in the SR as well as non-inflationary EG in LR <explain with use of AD/AS diagram>.
- Also ↑ X revenue and ↑ foreign investment inflows improve current and financial account respectively → improves BOP

However, ↑ X and offshoring → production way beyond socially optimal output levels → ↑ negative externalities, especially since they usually lack strict environmental regulations → worsens allocative inefficiency → especially true for the case of China <explain with use of market failure diagram>

Despite trade-offs, economies should still continue to embrace globalisation as govts can implement policies to mitigate the trade-offs → benefits of globalisation outweigh costs (choose 1 or 2 policies)

Policies	Comments
<u>Contractionary demand-management policies to mitigate demand-pull inflation</u> Govts can implement contractionary demand-management policies <explain how policies work> to dampen the ↑ in AD due to globalisation. As AD ↑ by smaller extent → less intense competition for FOPs → smaller ↑ GPL <explain with use of AD/AS diagram>	<u>Contractionary demand-management policies → ineffective in ↓ demand-pull inflation</u> – Strong EG → strong consumers' and investors' confidence. Thus, despite ↑ i/r or ↑ taxes → small ↓ C and ↓ I → small ↓ in AD → small ↓ in demand-pull inflation <u>Contractionary demand-management policies → more adverse unintended consequences</u> – Time lags that may further destabilise the economy when economy slips into recession because of vulnerability to external shocks due to globalisation
<u>Protectionism and interventionist SS-side policies to mitigate structural UN</u> – In the SR, govts in DCs may need to protect their sunset industries via use of tariffs <explain with tariff diagram> and concurrently retrain these workers to equip them with the relevant skills to work in sunrise industries that the DC has CA in. – The protectionism policy 'buys time' for the workers to trained, as training takes time. – Via the use of interventionist SS-side policies (retraining of workers) → better match of skills and jobs available, while speeding up restructuring of the economy. – Ensures that structural unemployment is ↓ when the DC undergoes restructuring process.	<u>Protectionism → more adverse unintended consequences</u> – Protectionism → beggar-thy-neighbour policy → tit-for-tat retaliation which may bring about even more adverse consequences via reverse multiplier effect → all-round economic stagnation <u>Training → ineffective in ↓ structural UN and ↓ income inequality</u> – Uncertainty in the effectiveness of training programmes as they depend largely on the attitude and aptitude / receptiveness of the workers. Training could still be ineffective if workers are slow in learning or are still unable to apply the skills after they have undergone the training programme – Also depends on the literacy rate of the low-skilled workers – 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. – Esp. since training takes time to be completed → ↑ reluctance of the unemployed to go for training. – Long gestation → policy will likely be ineffective in the SR
<u>Training of low-skilled workers to mitigate widening income inequality</u> – To solve the root cause of the problem due to lack of relevant skills in the growing industries, preventing them from moving into these industries to earn higher incomes → govts should raise public awareness of the benefits of upgrading their skills to encourage workers to	

<u>Progressive income taxes and transfer payments to low income workers to mitigate widening income inequality</u> – E.g. US's PIT is progressive, i.e. higher income earners pay a proportionately higher tax, while the lowest income workers do not pay any income tax → ↓ disposable income (Y_d) of high-income earners by a greater extent. The highest income earner pays PIT of 39.6%. – Transfer payments to low-income workers → helps to ↑ Y_d of low-income earners – Together → ↓ (↑) Y_d of high-income (low-income) earners → ↓ income gap	<u>Redistributive policies → more adverse unintended consequences</u> – Such redistributive policies → disincentive to work and save → discourages work effort and may cause high-skilled workers to move to other DCs with much lower PIT that leads to brain drain → ↓ productivity → hinders potential EG – In order to minimise the moral hazard associated with unconditional transfers to the poor, Singapore has adopted a *Workfare* model that *ties govt transfers to work* instead of a *Welfare* model. Working as a negative income tax, *Workfare* benefits are targeted at low-wage workers.
<u>Pigouvian taxes to ↓ allocative inefficiency</u> – Govts in developing countries can impose pigouvian taxes to force firms to internalise the MEC of over-production by ↑ MPC → ↓ production to socially optimal output level → ↓ allocative inefficiency <explain with graph>	<u>Pigouvian taxes → ineffective in ↓ allocative inefficiency</u> – Imperfect information about the monetary value of the MEC → underestimation by the govt does not fully correct the problem <u>Pigouvian taxes → more adverse unintended consequences</u> – Imperfect information about the monetary value of the MEC → overestimation by the govt may even cause govt failure – Pigouvian taxes → ↓ firms' profits → potentially deter foreign I → hinder potential EG

Despite trade-offs, economies should still continue to embrace globalisation as the globalisation is also part of the solution to the problems it creates

- With inward investment + exposure of domestic firms to competition → increase factor quantity and quality → increase AS in the LR → relieve globalisation-related inflation
- Globalisation → countries gain access to green technology → reduce the negative externalities of globalisation-led growth

Despite trade-offs, economies should still continue to embrace globalisation, just that they should do so selectively

Examples? Justification?

Evaluation → whether economies should continue to embrace globalisation depends on:

– Characteristics of economy → to consider size and openness

- Small, open and resource-scarce economies are export-oriented and import-dependent. They rely a lot on X and foreign I to propel EG. Also, since they lack resources, they depend on imported raw materials and basic necessities to minimise inflation. Thus it is relatively more important for such economies (compared to those which are bigger, relatively less open and have more resources to rely on) to **embrace globalisation** due to the benefits of globalisation that are likely to outweigh the costs of globalisation, which could be mitigated with the use of policies.

– Ability of the govt to implement effective policies to mitigate the trade-offs in economic objectives due to globalisation, which could in turn be influenced by:
- budget / fiscal position → does the country have sufficient funds to implement the policy e.g. retraining programmes to ↓ structural UN?
- monetary policy trilemma / impossible trinity: economies in monetary union do not have an independent M/P → each country is unable to alter i/r or ER on its own → less able to ↓ DD-pull inflation

L3 15 – 21	– Balanced approach, with thesis and anti-thesis + both breadth and depth – Well-developed analysis how globalisation brings about trade-offs between govts' economic objectives AND discussion of why economies should or should not continue to embrace globalisation in view of trade-offs – Addresses all 3 aspects of globalisation and trade-offs in BOTH micro- and macro-economic objectives due to globalisation – Analysis is supported with the use and explanation of economic framework – Use of relevant real world examples – Max 19m – if answer fails to incorporate both micro- and macro-economic objectives OR if answer only incorporates the 2 aspects of globalisation – trade and capital flows
L2 10 – 14	– Balanced approach → thesis and anti-thesis – Lacks breadth (addresses only 2 aspects of globalisation OR trade-offs in macro-economic objectives only) or lacks depth (undeveloped explanation / lacks rigour in analysis despite use of economic framework) – Max 12m – if answer only addresses how globalisation brings about trade-offs between govts' economic objectives – Max 14m – if answer makes some incidental link to how globalisation brings about trade-offs between govts' economic objectives and then analyses why economies should or should not continue to embrace globalisation in view of trade-offs – Some use of relevant examples
L1 1 – 9	– Mere descriptive knowledge of how globalisation brings about trade-offs between governments' economic objectives OR largely irrelevant answer e.g. benefits and costs of globalisation but does not address how globalisation brings about trade-offs in govt economic objectives – 1-sided answer – Limited use of economic framework in analysis – Limited use of relevant examples
E2 3 – 4	– Reasoned judgement on whether govts should continue to embrace globalisation in view of the trade-offs in economic objectives due to globalisation, supported with economic analysis based on well-explained criteria
E1 1 – 2	– Unsubstantiated stand on whether govts should continue to embrace

HWA CHONG INSTITUTION
C2 Preliminary Examinations
Higher 2

CANDIDATE NAME		**CT GROUP**	15
CENTRE NUMBER		**INDEX NUMBER**	

ECONOMICS **9732/01**
Paper 1 Case Study Questions
29 August 2016
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 Question 2 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 and 2 cover pages.

Answer **all** questions

Question 1

The Coal Industry and Housing Market in the United Kingdom (UK)

Extract 1: Decline of the UK coal industry

In 1970, 292 UK mines employed 287,000 miners and produced 145 million tonnes of coal a year. Today, the UK has just 4,000 miners and 13 million tonnes of annual output. Domestic production accounts for less than 25% of the 60 million tonnes used in the UK, with the rest mostly imported from the United States (US), Russia, Australia and Columbia. Yet soon, there will be only one deep mine and fewer than 20 surface mines left in the UK after the UK's largest coal producer, UK Coal, announced plans to close two of the three remaining deep pits because they are no longer financially viable. The closures will affect a total of 1300 workers.

The UK coal industry didn't just collapse overnight. The decline started since the First World War. The UK mines came under increasing competition from alternative power sources and cheap coal produced elsewhere in the world. Coal-fuelled power stations provided 80 per cent of UK's energy in 1961. Things changed during the 1990s. Government invested in nuclear energy and by the middle of the decade, gas had overtaken coal. In 1990, gas powered less than 1 per cent of UK's electricity. By 2011, it powered 40 per cent, with coal down to 32 per cent.

If 21st Century market forces are less favourable to the UK coal industry, so too is the green agenda. Coal produces electricity more cheaply than gas, but it is the dirtiest fossil fuel and emits more carbon emissions. In 2013, the government introduced a carbon price support tax. The European Union (EU) directives require coal-fired power stations to reduce their carbon emissions by 2023 or face closures.

Concern has mounted that the UK efforts to promote low-carbon energy are hampering competitiveness and leading to higher energy bills.

“Getting coal off the grid as soon as possible makes energy more expensive, and you lose the diversity of the generation mix … Security of supply and affordability have been placed behind carbon emissions targets,” says Phil Garner, director-general of The Confederation of UK Coal Producer (Coalpro).

Sources: Energy & Technology Magazine, 14 April 2014 and The Financial Times, 12 March 2014

Extract 2: UK's Battered Coal Industry Sees Glimmer of Hope in Carbon Capture

The UK sits atop significant coal resources. In September 2013, the British Geological Survey estimated that over 17 billion tonnes of coal remain in the UK's coalfields, enough to provide power for 300 years. This could potentially create thousands of jobs and reduce the UK's balance of trade deficit.

Supporters of the coal industry are counting on the UK government's drive to support a new and untested Carbon Capture and Storage (CCS) technology, which could enable coal-fired power stations to trap and pipe harmful emissions underground out to under the seabed during the production of electricity.

"That means there is a future for the UK coal industry; it won't be particularly massive but it will be the retention of perhaps 10 million tonnes a year of output," said Tony Lodge, research fellow at the London-based Centre for Policy Studies.

If CCS does take off, UK's deep mines will need to find a way to cut production costs. They are in fierce competition with cheaper suppliers from Colombia, Russia, China, and the US.

The coal industry is urging the government to require domestically-produced coal to be used in future CCS plants.

Source: Reuters, 17 October 2014

Extract 3: UK House Building Soars Amid Housing Market Revival

House building in the UK is rapidly on the rise amid the economic recovery. But the pace of house building continues to fall well short of what is needed to keep up with demand.

Construction firms are now chasing profits from higher house prices. But building in the short term is held up by a lack of materials and labour. The surge in demand in late 2013 and early 2014 led to materials such as bricks running out. Construction workers left the industry during the financial crisis and the industry has struggled to recruit enough skilled labour to catch up with increasing demand.

In November 2014, the government set out a range of steps to try to recruit new construction workers. One of the proposals suggested bringing former military personnel on to building sites. The House Builders Federation also pointed out that suppliers have responded to short term pressures through increased training schemes and gave examples of brick makers reopening plants.

The housing crisis in the UK is not just one of a shortage of houses. The housing stock is among the oldest and coldest in Europe due to poor insulation and the cost of heating leaking properties is leading to a rise in fuel consumption.

Sources: International Business Times, 15 May 2014 and BBC News Magazine, 13 January 2015

Table 1: The UK: selected data, 2013

Region in the UK	Average house price[1]	Average annual income of borrowers[1]	Population (in millions)	Area km^2	Electricity Tariff[2]	
					Day (pence per kWh)	Night (pence per kWh)
North West	186,000	50,000	7.1	14,165	16.91	8.46
Yorkshire	181,000	49,000	5.4	15,420	16.28	8.36
East	277,000	63,000	6.0	19,120	15.83	8.59
London (Capital)	362,000	79,000	8.5	1,572	16.19	8.64
South East	318,000	69,000	8.8	19,095	16.63	8.43

[1] figures rounded to the nearest £1,000s;
[2] electricity charges by the electricity company, Good Energy

Source: various

Extract 4: The UK's Climate Change Act

The Climate Change Act contained the world's first legally binding national commitment to cut greenhouse gas emissions. The headline target is to cut emissions by at least 80% from 1990 levels by the year 2050.

Power and Industry
The power sector comprises the large-scale production of electricity while industry activity includes manufacturing, construction, and extraction of fossil fuels (e.g. coals, oil, etc) and refining. Emissions from power and industry accounted for 26% and 23% respectively of total UK greenhouse gas emissions in 2013.

The UK applies carbon pricing under both EU and national schemes. The EU Emissions Trading Scheme (EU ETS) forces all big factories and power plants to buy a permit for each tonne of CO_2 emissions. Recently, these permits have traded at £5-6 per tonne of CO_2. The overall cap on emissions is lowered progressively. UK has topped up that very low carbon price with its own Carbon Price Floor scheme, designed to provide long term certainty for low carbon investment. Government support has also been provided to transit to a low-carbon power sector, which uses renewables (such as wind and solar), nuclear and carbon capture and storage (CCS).

Buildings
Emissions from buildings accounted for 17% of total UK greenhouse gas emissions in 2013. Direct emissions, resulting from use of fossil fuels (primarily gas) for heating, make up almost half of buildings emissions. The other half is electricity-related, resulting from lighting and the use of appliances.

The Green Deal and Energy Company Obligation (ECO) target retrofit improvement in the energy efficiency of homes (e.g. loft and cavity walls insulation and replacement of old inefficient boilers) at no upfront cost for consumers. The costs of the measures is paid back over time through electricity bills and payments are supposed to be less than savings through reduced energy bills (the 'Golden Rule').

Source: Committee on Climate Change, July 2014

Questions

(a)	With reference to Extract 3, explain why the value of the price elasticity of supply of new housing in UK might change over time.	[3]
(b)	With reference to Table 1, explain whether the pricing policy by the electricity company could be considered an example of price discrimination.	[4]
(c)	Using the information in Table 1, account for the difference in average house prices in London and Yorkshire.	[3]
(d)	Explain the type of unemployment that might arise due to the closure of the two coal pits.	[2]
(e)	Discuss the factors that the UK government should consider in deciding to redevelop the coal industry.	[8]
(f)	Discuss whether the UK government currently adopts the most appropriate economic policies in reducing greenhouse gas emissions to achieve economic efficiency in resource allocation.	[10]

[Total: 30]

Question 2

The Pains and Gains of Economic Restructuring

Extract 5: China – The need to restructure

The National Bureau of Statistics (NBS) announced that the world's second largest economy, China, grew 7.4 percent in 2014. Although the pace was the slowest in 24 years, it was in line with mainstream market expectations against the general backdrop of China's painstaking efforts in economic restructuring, which was prompted by both external and internal vulnerabilities.

Externally, the prolonged weakness and instability of the United States (US) and Eurozone economies have exposed China's vulnerability to external shocks. China had to resort to a 4 trillion yuan (US$586 billion) stimulus package in 2008 to fend off the contagion effect of the global financial crisis.

Internally, the Chinese are concerned over the formation of real estate bubbles that are fuelled by excessive borrowing. The fear is that if the real estate bubbles were to burst, housing prices will come tumbling down. This would cause some households to cut down on expenditure of other goods and services in an attempt to pay their debts, sending internal shocks reverberating throughout the economy.

A source close to the central government said, "There are downward risks, but China has enough policy room and there is no need to be pessimistic."

Source: Xinhua, 20 Jan 2015

Extract 6: China – Restructuring to boost consumption

China's level of consumption, at 36 percent of GDP, is much lower than the world average, which measures at 60 percent of GDP. This is partly because Chinese consumers hold larger precautionary savings to guard against illness and loss of income during old age. High savings may be changeable over time; improvements in health and pension coverage are expected to continue to lower the necessary savings ratio and boost consumption. Planned expansion of urbanization should also improve consumption as China's cities expand and its middle class grows.

Consumption, however, is dependent not only on the presence of health care and urban residence, but on jobs, and this is where the anxiety prevails. Households earning US$16,000 to US$24,000 per annum accounted for only 15 percent of urban households in 2012. GDP per capita averages at only US$6,807 per annum, and the population is aging. China's challenge now lies in creating the types of jobs that will cater to a growing mass of educated workers and provide higher incomes. As local officials have learned, simply building up urban areas does not draw in high value businesses, nor does it create middle class residents in the absence of jobs.

Moves were announced by the State Council to encourage the hiring of the longer-term unemployed and new graduates to stave off an unemployment crisis. Preference in bids for large-scale projects is to be given to firms that commit to hiring more people. This is on the right track, but while these policies may improve the employment outlook, they could still go further in ensuring that most firms have better access to finance, lower taxes, and strong supporting institutions. In addition, it is the restructuring toward a service-based, skills-intensive economy that is essential.

Source: The Diplomat, 3 May 2015

Extract 7: Singapore – Restructuring into a "manpower lean" and creative economy

Singapore has embarked on a restructuring process towards being a "manpower lean" economy by cutting growth rates of foreign labour. This is done by imposing more stringent stipulations and also increasing the levy fees imposed for hiring foreign staff manpower. Small-Medium enterprises (SMEs) have been hit especially hard by the new rules. There are ample subsidies to push SMEs towards being manpower lean through using more productive capital goods but there is uncertainty about the return on investment. Addressing these concerns, Acting Minister for Manpower Mr Tan Chuan Jin said in parliament, "Given Singapore's small physical size, we will need to grow within the constraints that we have. Restructuring for higher productivity will be a risky and painful process for companies but we cannot proceed with business as usual".

At the same time, Singapore is also trying to restructure into a creative economy and reduce the nation's dependency on manufactured goods. An emphasis on design has been key to this planned shift into a creative economy. The Singapore government recognizes that, with growing access to better technology, industries are increasingly competing via price and functionality. The new competitive advantage thus lies in the ability to carve out new markets and create new markets through the fusion of business, technology and arts. Design, which serves to bring about such a fusion has emerged as the key differentiation strategy for businesses.

Singapore-based firms seem to be adapting well and are increasingly engaged in the design phase of manufacturing rather than the physical production of goods. The phenomenon is known as the "servicization" of manufacturing. Monetary Authority of Singapore (MAS) managing director Ravi Menon has also referred to this trend, saying that in some cases production of goods is being shifted offshore but control centres remain in Singapore, such as in the semiconductor industry. Singaporean companies are increasingly turning to southern Malaysia for production, where wages are cheaper and government incentives provide tax breaks for new industry.

Source: various

Extract 8: Youth unemployment in the Eurozone

While the Eurozone (a bloc of 28 countries, including Germany and Greece) seems to have stabilized from the debt crisis, the risk that Europe may stagger back into the economic abyss is far from over. In many countries of the Eurozone, serious reforms to improve regional competitiveness had not been undertaken. This has sparked fears of a possible renewed recession in the Eurozone.

Unemployment in the Eurozone is already endemic and a renewed recession would worsen matters. Youth unemployment in particular is a worry because jobless youth often feel rejected by society, and react either by withdrawing or by lashing out violently, as we have already seen in some southern Eurozone nations. The impact on future productivity is also a significant worry. A growing academic literature on the 'scarring' effects of launching a career without a full-time stable job suggests that young people who endure early spells of unemployment are likely to have lower wages and greater odds of future unemployment than those who don't. These scarring effects last throughout the remainder of their 20-30 years of working life.

Currently, Greek's youth unemployment (for labour force aged under 25) is at 51.5%, second to Spain, which comes in at 53.7%. But the bloc is hugely divided. Germany and Austria have youth unemployment rates of just 7.6% and 8.2%, respectively.

Source: Duestche Welle, 17 Oct 2014

Table 2: China: selected economic indicators, 2011 – 2014

	2011	2012	2013	2014
GDP growth rate (at 2010 prices)	9.5	7.8	7.7	7.4
Exports (% of GDP)	26.8	25.7	24.8	23.9
Gross fixed capital formation (% of GDP)	44.6	45.3	45.8	44.3
Consumption (% of GDP)	37.4	36.6	36.2	37.4
Unemployment rate (%)	4.3	2.5	4.6	4.7

Table 3: Singapore: selected economic indicators, 2011 – 2014

	2011	2012	2013	2014
GDP growth rate (at 2010 prices)	6.2	3.7	4.7	3.3
Exports (% of GDP)	200.9	195.4	192.4	176.5
Gross fixed capital formation (% of GDP)	25.6	26.8	27.9	26.5
Consumption (% of GDP)	38.9	37.5	36.6	36.8
Unemployment rate (%)	2.9	2.8	2.8	3.0

Table 4: Eurozone: selected economic indicators, 2011 – 2014

	2011	2012	2013	2014
GDP growth rate (at 2010 prices)	1.6	-0.9	-0.3	0.9
Unemployment rate (%)	10.2	11.4	12.0	11.5
Youth unemployment rate (%)	21.3	23.6	24.4	23.7

Table 5: China's and Singapore's Top Export Partners in 2014

Rank (% Share)	China	Singapore
1	United States (18%)	China (12.4%)
2	Eurozone (15.6%)	Malaysia (11.3%)
3	ASEAN (12.2%)	Eurozone (9.8%)
4	Japan (5.96%)	USA (7.8%)
5	South Korea (4.5%)	Indonesia (7.4%)

Sources of Tables 2 to 5: various

Questions

(a)	Explain why the Chinese are 'concerned over the formation of real estate bubbles'.	[2]
(b)	From Extract 6, comment on the likely change in China's multiplier value after restructuring.	[4]
(c)	'Restructuring for higher productivity will be a risky and painful process for companies' (Extract 7). Explain the above statement.	[4]
(d)	Compare the trend of unemployment rate and youth unemployment rate in Eurozone from 2011 to 2014.	[2]
(e)	To what extent would youth unemployment in the Eurozone adversely affect its current and future economic growth?	[8]
(f)	A Eurozone recession would have a significant contagion impact on other economies. Assess the effectiveness of China's and Singapore's restructuring efforts in mitigating this.	[10]

	impact on their economies.	

[Total: 30]

[END OF PAPER]

Copyright Acknowledgements:

Question 1 Extract 1:	@ *The miner's strike of 1984 and the British Coal Industry*; Engineering and Technology Magazine, Vol 9, issue 4; 14 April 2014; http://eandt.theiet.org/magazine/2014/04/the-strike.cfm @*National miners' strike defines demise of UK coal industry*; The Financial Times; 12 March 2014; https://next.ft.com/content/d10f9f98-a90d-11e3-bf0c-00144feab7de
Question 1 Extract 2:	@ *Britain's battered coal industry sees glimmer of hope in carbon capture*; Reuters; 17 October 2014; http://uk.reuters.com/article/uk-britain-coal-closure-idUKKCN0I618B20141017
Question 1 Extract 3:	@ *UK House Building Soars Amid Housing Market Revival*; International Business Times; 15 May 2014; http://www.ibtimes.co.uk/uk-house-building-soars-amid-housing-market-revival-1448732 @ *Why can't the UK build 240,000 houses a year?*; BBC News Magazine; 13 January 2015; http://www.bbc.com/news/magazine-30776306
Question 1 Table 1:	@ House Price Index (HPI); Office for National Statistics; 17 February2015; https://www.ons.gov.uk/ @ Population of England in 1014, by region; http://www.statista.com/statistics/294681/population-england-united-kingdom-uk-regional/ @ Domestic Energy Tariffs; https://www.goodenergy.co.uk/media/W1siZiIsIjUzZWEyYzcxZjY0MGJhMDAwMjAwNThhOSJdXQ/Domestic%20Tariff%20Sheet.pdf
Question 1 Extract 4:	@ Meeting Carbon Budgets – 2014 Progress Report to Parliament; Committee on Climate Change; July 2014; https://www.theccc.org.uk/publication/meeting-carbon-budgets-2014-progress-report-to-parliament/
Question 2 Extract 5:	© China 2014 growth at 24-year low; Xinhua, 20 Jan 2015; http://news.xinhuanet.com/english/china/2015-01/20/c_133932040.htm
Question 2 Extract 6:	© China's Efforts to boost consumption, Are they Enough?; The Diplomat, 3 May 2015; http://thediplomat.com/2015/05/chinas-efforts-to-boost-consumption-are-they-enough/
Question 2 Extract 7:	© Restructuring is painful but must be beneficial; Channelnews Asia, 8 March 2014; http://www.channelnewsasia.com/news/specialreports/budget2014/news/restructuring-is-painful/1024186.html @ More Evidence Restructuring Taking Hold; The Wall Street Journal, 12 August 2014; http://blogs.wsj.com/economics/2014/08/12/more-evidence-singapore-restructuring-taking-hold/
Question 2 Extract 8:	© Eurozone Crisis Returns with a Vengence, Duestche Welle; 17 October 2014; http://www.dw.com/en/eurozone-crisis-returns-with-a-vengeance/a-18000470
Question 2 Tables 2 to 5:	© http://www.singstat.gov.sg/, http://www.statista.com/, and http://www.worldbank.org/; accessed 2 Aug 2016

HWA CHONG INSTITUTION
JC2 Preliminary Examinations
Higher 2

CANDIDATE NAME		**CT GROUP**	15
CENTRE NUMBER		**INDEX NUMBER**	

ECONOMICS **9732/02**
Paper 2 ESSAY
15 September 2016
2 hours 15 minutes

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your **name, CT group, Centre and Index numbers** clearly in the spaces at the top of this page and on every page you hand in.

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

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

Begin each question on a fresh sheet of writing paper.

At the end of the examination, fasten the answer sheets to each essay question separately together with the 3 cover pages provided.

If you only attempt 2 essays, please submit a nil return with the 3rd cover page, indicating the possible essay question you would have attempted. If you only attempt 1 essay, please submit 2 nil returns with the other 2 cover pages, indicating the possible essay questions you would have attempted.

The number of marks is given in brackets [ ] at the end of each question or part question.
You are advised to spend several minutes reading through the questions before you begin writing your answers.
You are reminded of the need for good English and clear presentation in your answers.

This document consists of **2** printed pages.

[Turn over

Answer **three** questions in total.

Section A

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

1 (a) Explain how free trade helps to alleviate the problem of scarcity. [10]

(b) In the recent decades, technological advancement has helped to promote the spread of information and economic integration has facilitated labour migration.

Discuss the extent to which the above events could help to reduce resource misallocation arising from imperfect information and immobility of factors of production. [15]

2 In recent years, the price of natural fertilisers for organic brown rice production has risen and healthy living campaigns are seeing more consumers switching from non-organic white rice to organic brown rice.

Assess the relevance of elasticities of demand and supply in understanding the impact on the expenditure by consumers on non-organic white rice and organic brown rice. [25]

3 There are five movie theatre operators in Singapore and they are making efforts to protect their profits in view of rising competition from online movie streaming services.

(a) Compare the barriers to entry of movie theatre industry and online movie streaming industry. [10]

(b) Discuss the likely impact on profit of a movie theatre operator when faced with competition from online movie streaming services. [15]

Section B

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

4 (a) Explain how the relative importance of the components of the circular flow of income for a small and open economy might be different from a large and less open economy. [10]

(b) Assess the usefulness of the components of the circular flow of income to compare different countries' standard of living. [15]

5 Discuss whether the use of various policies by governments will inevitably lead to conflicts in macroeconomic objectives. [25]

6 Some countries like China use interest rates while others like Singapore choose exchange rates as their instrument for monetary policy.

(a) Explain how consumers, producers and government of a country could be affected by the appreciation of its own currency. [10]

(b) Discuss why governments use different instruments of monetary policy to control the rate of inflation. [15]

HWA CHONG INSTITUTION

C2 Preliminary Examination 2016

Higher 2 Economics

Case Study Question 1: The Coal Industry and Housing Market in the United Kingdom (UK)

Suggested Answers

(a)	**With reference to Extract 3, explain why the value of the price elasticity of supply of new housing in UK might change over time.**	[3]
	Define PES [1m] If there is no definition given, the idea of how responsive quantity supplied will be to a change in price must be captured in the student's explanation to get 1m. State + Explain that in SR: PES<1 [1m] Need time to build houses and in the short term, there is a "lack of materials and labour… bricks running out… construction workers left the industry" → lack of spare capacity State + Explain that in LR: PES likely >1 [1m] Availability of materials and spare capacity as "brick makers reopen plants" and skilled workers as former military personnel join the construction industry and training schemes help to train them to become skilled workers.	
(b)	**With reference to Table 1, explain whether the pricing policy by the electricity company could be considered an example of price discrimination.**	[4]
	Explain that the different prices charged for the usage of electricity could be due to 3rd degree price discrimination: [2m] – Define PD → charging different prices (day vs night) to different groups of consumers (day vs night) for the same product (electricity) due to reasons not associated with cost differences. – The different prices charged could be due to differences in price elasticity of demand. Day prices are higher as demand for electricity is more price inelastic due to higher degree of necessities in the day time where electricity is required for the functioning of the economy when most people are awake, e.g. business and production activities, school, households etc. Night prices are lower as demand is more price elastic due to lower degree of necessities. Most activities are not essential to be conducted in the night when most people will be resting. Explain that the different prices charged could be due to differences in costs: [2m] – During the day (peak), demand for electricity is higher, leading to higher marginal cost incurred and hence higher prices are charged. – During the night (off-peak period), nuclear and coal-fired stations, with lower operating costs, will be used. However, during peak period, power stations with higher operating costs (e.g. oil-fired stations) will have to be activated.	
(c)	**Using the information in Table 1, account for the difference in average house prices in London and Yorkshire.**	[3]
	Price difference likely due to differences in demand and supply: London has a higher average house price because: Higher demand due to higher annual income earned (£79,000) leading to higher purchasing power and higher population (8.5m) + Lower supply due to lack of land in the capital (1,572km^2) available for building new houses. Yorkshire has a lower average house price because: Lower demand due to lower annual income earned (£49,000) leading to lower purchasing power and lower population (5.4m) + Higher supply due to land available outside of the capital (15,420km^2) for building new houses. Demand factor [1m] Supply factor [1m]	

Account for difference [1m]

(d) Explain the type of unemployment that might arise due to the closure of the two coal pits. **[2]**

Structural unemployment [1m] as the mining industry is in a decline and the miners might not have the skills to work in expanding industries that require higher skills (since mining involves more manual labour). [1m]

Note: Cyclical unemployment not accepted as the impact on the whole economy will be too small given that only 1300 workers will be affected.

(e) Discuss the factors that the UK government should consider in deciding to redevelop the coal industry. **[8]**

Possible factors:

<u>Comparative Advantage + Impact on Macro Goals</u>
If the government decides to redevelop the coal industry, it would have to consider whether the industry would be able to gain comparative advantage in mining coals.

According to Extract 2, the UK "sits atop significant coal resources… enough to provide power for 300 years" and used to produce lots of coal in the past. Hence the UK has the factor endowment in coal and the expertise and she might be able to produce coal at a lower opportunity cost than other countries. If successful, X increases and M falls significantly (since UK imports more than 75% of its coal requirements – Extract 1) → BOT improves, BOP improves, ceteris paribus. AD increases leading to multiple increase in national income. Employment increases too. (Evidence: Extract 2 "potentially thousands of jobs could be created and … source of export revenue")

<u>However</u>, the UK might not gain comparative advantage in coal production as the competition will be fierce with cheap suppliers from Colombia, Russia, India, China, South Africa, and the US (Extract 2).

<u>Environmental Concern + Resource Allocation:</u>
If the government decides to redevelop the coal industry, it would also have to consider environmental issues.

Coal is "the dirtiest fossil fuel and emits more carbon emissions" (Extract 1). Should the UK redevelop the coal industry and use it as the main source for electricity generation, it will increase the carbon emissions in UK (negative externalities). Explain how negative externalities result in allocative inefficiency.

<u>However</u>, with the new CCS technology, which could enable the coal-fired power station to trap and pipe harmful emissions underground out to under the seabed during the production of electricity (Extract 2), the problem of negative externalities/ pollution might no longer be an issue.

<u>Evaluation:</u> Even though the CCS technology can reduce the problem of pollution during the production of electricity, it does not help to cut down the carbon emissions during the extraction of coal.

<u>Strategic Reason:</u>
"Getting coal off the grid… makes energy more expensive… lose the diversity of the generation mix… security of supply and affordability have been placed behind carbon emissions target" (Extract 1) → If the UK no longer produces coal, it will need to depend on other countries for the resource, making it more vulnerable to external changes (possible imported inflation, supply shocks). And if it no longer uses coal to generate electricity, it is more vulnerable should there be any supply shocks to the other energy sources.

<u>However</u>, given that many countries produce coal (Extract 2: Colombia, Russia, China, and the US), the UK could always turn to other countries should the countries it imports from suffer high inflation or have supply shocks.

<u>Conclusion</u>
The UK government is unlikely to redevelop the coal industry as the coal industry is unlikely to gain comparative advantage even though it has significant coal resources. Extract 2 implied that even with the CSC technology, the "future for the British industry… won't be massive… 10 million tonnes a year", which is lower than the current output. Moreover, the coal industry "is urging the government to require domestically-produced coal to be used in future CCS plants". This implies that the coal industry will require protectionism in future, which means the domestic product is unlikely to be produced at a lower opportunity cost than other countries.

Or any well-justified conclusion

Mark Scheme

L3 (6-8)	Balanced and well developed economic analysis, based on the case material with evident evaluation and judgment. 2 factors are enough. However, to earn top L3 marks, must have considered both macroeconomic aims and environmental concern.
L2 (4-5)	Answers tend to be lopsided (i.e. did not consider the drawbacks) or there is insufficient use of economics analysis. Little or no evaluation/judgment.
L1 (1-3)	Weak attempt in answering the question requirement. Major conceptual errors were evident.

(f) Discuss whether the UK government currently adopts the most appropriate economic policies in reducing greenhouse gas emissions to achieve economic efficiency in resource allocation. **[10]**

Introduction: The presence of greenhouse gas emissions (negative externalities) suggests that the free market has failed in the allocation of resources. Hence, the UK government targets to cut emissions by at least 80% from 1990 to 2050 to achieve greater economic efficiency in resource allocation. Whether the target is achievable or not would depend on the economic policies currently adopted.

Body: Explain how each policy works and assess its effectiveness and limitations

Power and Industry

Explain how **Carbon Trading with Carbon Price Floor** scheme works.

- *Extract 4: The EU Emissions Trading Scheme (EU ETS) requires all big factories and power plants to buy a permit for each tonne of CO2 emissions.*
- The EU estimated the socially efficient level of emissions and decided on the number of permits to be issued to the big factories and power plants, and they are allowed to pollute up to the permitted level only. If any of the big factories or power plants wants to pollute beyond the permitted level, it can purchase extra permits from others who might not need them. That is, the big factories and power plants can trade these permits among themselves, where the price of the permits is determined by the forces of demand and supply. The total level of emissions produced by all the big factories and power plants will not exceed the level set by the UK government.

Assess its **effectiveness and limitations.**

- The EU government lowers the overall cap on the emissions progressively to give firms time to react (e.g. to cut emission by adopting green technology) but with the intention for the level of emissions to reach the socially efficient level eventually.
- However, as the overall cap is lowered progressively, the current limit was set too high, causing these permits to trade at a "very low carbon price" of "£5-6 per tonne of CO_2", which will not truly reflect the external costs to third parties. The UK government has rectified this with the Carbon Price Floor scheme to ensure that there is a minimum price for the permits. By setting the carbon price above the market equilibrium price, the UK government aims to better reflect the external costs to third parties to ensure more efficient allocation of resources and to "provide long term certainty for low carbon investment" so that when more firms switch to more environmentally friendly methods of production to avoid buying the more expensive permits, the amount of EMC will fall.

Explain how **Transition to a Low-carbon Power Sector** works.

- By transiting to a low-carbon power sector, which uses renewables (such as wind, solar, and biomass), nuclear and carbon capture and storage (CCS), the UK government aims to reduce the amount of emission and hence EMC, so that the new market output will be closer to the socially efficient level.

Assess its **effectiveness and limitations.**

- The transition will require massive capital outlays, which will put a strain on the government's budget.

- Moreover, CCS is a new and untested technology that might not produce results. Hence, the opportunity cost is high.

<u>Buildings</u>

Explain how **retrofit improvement in the energy efficiency of homes works**.

- By insulating loft and cavity walls and replacing old inefficient boilers, the demand for gas for heating will fall. This policy aims to <u>reduce PMB/ demand</u> to coincide with the PMC at the socially efficient level.

Assess its **effectiveness and limitations**.

- The level of effectiveness depends on the take-up rate. Given that there is no upfront cost for consumers, as "the costs of the measures is paid back over time through electricity bills and payments are supposed to be less than savings through reduced energy bills (the 'Golden Rule')", this creates more incentive for households to take up retrofit improvement.
- However, as the loft and cavity walls insulation is a major renovation of homes, households might not take it up. It is also not compulsory for household to take up the retrofit improvement

Conclusion/Evaluation: Provide an overall stand on whether the UK government currently adopts the most appropriate economic policies.

- The UK government currently adopts a good mix of short-term and long-term policies in the power and industry and buildings sectors to reduce carbon emissions to achieve <u>economic efficiency in resource allocation</u>. The EU ETS and carbon price floor scheme force firms to internalise the external costs in the short-term and in the long-term, encourage the switch to low-carbon production to reduce emissions. The transition to a low-carbon power sector will reduce emissions in the long-term. The retrofit improvement will also help to reduce emissions in buildings in the short-term. Given that both sectors accounted for around two-thirds of total UK greenhouse gas emissions in 2013, the current policies will help UK to reduce carbon emissions significantly.
- However, the UK's "housing stock is among the oldest and coldest in Europe due to poor insulation and the cost of heating leaking properties is leading to a rise in fuel consumption", the UK government might want to regulate and enforce the retrofitting improvement instead of leaving it to the households to take it up voluntarily.
- Or any well-justified conclusion.

Mark Scheme

L3 (7-8)	A well-developed analysis on economic policies to achieve economic efficiency in BOTH Power and Industry and Buildings. There is good reference to the case material. Effectiveness and limitations of policies are well considered.
L2 (4-6)	An analysis on economic policies to achieve economic efficiency in either Power and Industry OR Buildings. There is analysis provided on economic policies to achieve economic efficiency in BOTH Power and Industry and Buildings BUT this analysis is under-developed with a lack of reference to the case material. Effectiveness and limitations of policies might not have been considered or considered superficially.
L1 (1-3)	Descriptive answer with minimum link to question.
E2	Provide good synthesis and a reasoned conclusion.
E1	Attempts to synthesize

HWA CHONG INSTITUTION

C2 Preliminary Examination 2016

Higher 2 Economics

Case Study Question 2: The Pains and Gains of Economic Restructuring

Suggested Answers

(a)	**Explain why the Chinese are 'concerned over the formation of real estate bubbles'.**	**[2]**
	1. If the real estate bubbles were to burst, prices of housing would fall. (1m) 2. Consumers would feel less wealthy OR consumers would have to cut down on expenditure to pay their debts, thus cutting consumption and reducing AD, adversely affecting actual growth/national income. (1m) - OR **well elaborated point (2),** explaining why C decreases and its impact on national income (standard of living is also be accepted) can be given 2m Note: Explanation on macro impact is non-negotiable	
(b)	**From Extract 6, comment on the likely change in China's multiplier value after restructuring.**	**[4]**
	The k value can be calculated by 1/(1-MPC) or 1/MPW. Original APC is 0.36. Using this as a proxy (1m), it is likely that the k value is below 2 initially. (k = 1/(1-0.36) = 1/0.64 = 1.56.) OR MPS is likely to be high due to high precautionary savings and thus the k value is likely to be low. Explain that MPS is likely to decrease because "improvements in health and pension coverage" will reduce the need for high precautionary savings and hence reduce the necessary savings ratio (APS). Reduction of APS can be used to predict reduction of MPS. This will possibly increase the MPC (MPC = 1 – MPS or students can explain the urbanisation may result in growth of middle class → tends to increase MPC as Y increases from low to middle income level) and thus increase the k value. (3m – ability to explain the change in the value of k) Note: No proxy – max of 3m. Comment – the usage of proxy to comment on the likely value Credit for relevant evaluative comment (but it is not a requirement)	
(c)	**'Restructuring for higher productivity will be a risky and painful process for companies'. (Extract 7) Explain the above statement.**	**[4]**
	Students need to show understanding that "risky" and "painful" to companies will be in the form of impact on firms' profits. Cutting foreign manpower growth and imposing higher levies may increase wages and lead to increase in variable cost of production Investment for productivity e.g. using productive capital goods – increased fixed cost. Overall increase in MC/AC → reduce profitability Show understanding that it may not lead to lower marginal costs in future and hence may not increase profits/ uncertainty on the returns on capital equipments (idea of risk) Note: revenue reasons can also be accepted. **2m – for well-developed explanation for change in COP** **1m – for profitability** **1m – idea of risk** **Note: Very well developed explanation, provided explanation on change in fixed and variable cost (3m) + impact on profits (1m)→ up to 4marks**	

(d)	**Compare the trend of unemployment rate and youth unemployment rate in Eurozone from 2011 to 2014.**	**[2]**
	Similarity – Both unemployment rate and youth unemployment rate generally increase from 2011 to 2014. Or Both unemployment rate and youth unemployment rate rose from 2011 to 2013 and fell in 2014 (acceptable only for comparison question. For describe qn, overall trend is preferable) **Difference** – youth unemployment rate is consistently higher than that of unemployment rate over the period. OR Increase in youth unemployment rate is higher than that of unemployment rate. [Note: there is difference in % points]	
(e)	**To what extent would youth unemployment in the Eurozone adversely affect its current and future economic growth?**	**[8]**
	1. Explain how youth unemployment in Eurozone may affect its actual economic growth Table 4 shows that Eurozone's unemployment has been high in 2011 to 2014, ranging between 10% to 12% and youth unemployment rate to be around 23% Loss in production and Income: Loss of jobs brings about reduction in production and income. Scarring effect (where young people may not have a full time stable job and earn lower wages and at greater possibility of unemployment)→ reduces purchasing power → low consumer confidence among the youths (expectations) → fall in (autonomous) consumption → fall in AD Excess labour means the economy is not producing on the boundary of PPC and thus actual growth is affected. The longer youths remain unemployed, the more it will hamper the Eurozone's recovery. Note: If students write 'fall in purchasing power' → reduce INDUCED consumption Evidence: launching a career without a job suggests that young people who endure early spells of unemployment are likely to have lower wages and greater odds of future unemployment than those who don't. These scarring effects last throughout the remainder of their 20-30 years of working life. Loss in tax revenue which may affect future govt spending: Lack of income of greater proportion of labour force who are unemployed leads to less tax revenue, compounded over a longer period of working life. Leading to less resources for the government to allocate to expenditure. If the government, especially in Eurozone is already running a budget deficit, the loss in tax revenue could possibly lead to a cut in budget spending which in turn exert a further contractionary effect on the economy's actual growth Loss of social stability Unemployment appears to be linked to greater incidence of crime and violence as seen in some Southern Eurozone nations where jobless youth 'lash out violently'. This in turn lowers investors' confidence in the economy and may reduce FDI in eurozone. Furthermore, the high youth unemployment is also an indication that these youths may be structurally unemployment (mismatch of skills and jobs available), firms may be wary of investing in Eurozone. Evidence: jobless youth… lashing out violently 2. Explain how youth unemployment in Eurozone may affect its Potential Economic Growth Loss in human capital With a long productive worklife ahead of youths, the lack of opportunities when young will hamper future work life and lead to loss of skills and even dropping out of the labour force – quality and quantity of labour will be adversely affected thus - lower potential growth Lack of tax revenues can also affect the ability of governments to invest in infrastructure etc	

Since FDI and domestic investment may decline→ lower potential growth

3. Evaluate the extent of adverse effects of youth unemployment on Eurozone

In general, the fact that youth has longer productive lives ahead of them **amplifies the consequences of unemployment,** with the impact on potential growth particularly pronounced.

The **impact on economic growth is also not evenly spread out** as it seems that Germany and Austria's youth unemployment rate is significantly lower compared to eurozone's youth unemployment.

Evidence: Germany and Austria have youth unemployment rates of just 7.6% and 8.2%, respectively.

Mark Scheme

L3 (6-8)	Balanced and well developed economic analysis based on the case material and evident evaluation and judgment. Students are expected to include the idea of PPC and/or AD/AS in their analysis.
L2 (4-5)	Answers tend to be lope-sided or insufficient use of economics analysis. Little or no evaluation/judgment. Should students only explain effects of unemployment in general on economic growth or did not consider actual vs potential growth, consider max of 4m.
L1 (1-3)	Weak attempt in answering the question requirement i.e. did not address youth unemployment and its effects on economic growth of Eurozone. Major conceptual errors were evident.

(f) **A Eurozone recession would have a significant contagion impact on other economies. Assess the effectiveness of China's and Singapore's restructuring efforts in mitigating this impact on their economies.** **[10]**

1. Explain contagion impact

Can impact Sg and China directly through direct trade relationships (Slow growth in Eurozone (see Table 3)) → poor consumer confidence → possible fall in dd for goods and services → fall in DDx from other countries including China and Sg). The extent of the contagion impact depends on the trade relationship between which can be seen in Table 5. It states that the Eurozone is the 2nd most important trading partner of China and the 3rd most important trading partner of Singapore. Ceteris paribus, this implies that China will be more adversely affected.

There is also indirect impact on DDx from China and Sg by other countries as the contagion spreads to other parts of the world.

2. Identify and explain how Singapore and China restructure their economy

Singapore – **Increase Productivity** and to move towards **Creative economy**, from high skilled to even higher skilled industries. Manpower lean – leveraging capital goods for higher productivity and reducing reliance on foreign manpower.
+ The **new competitive advantage** thus lies in the ability to carve out **new markets** and create new markets through the fusion of business, technology and arts. Design, which serves to bring about such a fusion has emerged as the key differentiation strategy for businesses.

China – structuring to boost growth driven by consumption instead of trade → less affected by contagion effects of Eurozone recession

Evidence:
Current data of China shows C only takes up about 36% of GDP while (X + I) as % GDP is close to 70%.

Improvements in health and pension coverage are expected to continue to lower the precautionary savings ratio and boost consumption. Planned expansion of urbanization should also improve consumption as China's cities expand and its middle class grows.

3. Discussion on the effectiveness of China's and Singapore's restructuring efforts in mitigating contagion effect on their economies

China:
Restructuring efforts are incomplete and still on-going. Despite the measures to improve health and pension coverage, and urbanisation, there are still significant obstacles e.g. finding its graduates suitable jobs. Exports (as % of GDP) has declined only gradually as seen in Table 2 and consumption (as % of GDP) only increased marginally from 2011 to 2014. However, C as %GDP in China is back to 36%. Since GDP per capita is still rather low at US$6807, and it takes time for measures to encourage longer term unemployed and new graduates takes time, successfulness in reducing dependence on trade and hence mitigate contagion is yet to be seen.

Singapore:
Still very reliant on exports (176.5% of GDP in 2014). Eurozone recession can have global impact and impact Singapore directly and indirectly. Increased productivity from restructuring efforts can mitigate some of the impact. Movement into the creative economy – e.g. "servicization" of manufacturing, can also help mitigate as the manufacturing is done in low cost countries rather than Singapore. The ability to design, and thus carve out or create new markets to react to the world economic situation can also help Singapore adapt more adequately.

Synthesis (can vary based on student's analysis):
Based on the overall direction of the restructuring efforts and nature of each economy, China may be better able to weather the storm as they leverage the might of their large national market should their measures mentioned above shows success overtime.
Students can also 'rank' whether Sg or China is more effective in mitigating the contagion impact of eurozone recession

L3 (7-8)	Balanced and well-developed economic analysis on the effectiveness of China's and Singapore's restructuring efforts in mitigating contagion effect on their economies, based on the case material.
L2 (4-6)	Lopsided or under-developed analysis with insufficient application of case evidence.
L1 (1-3)	Descriptive answer with minimum link to question.
E1	Attempts to synthesize or some judgment
E2	Provide good synthesis and a reasoned conclusion.

Mark Scheme

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C2 Preliminary Examination 2016

Higher 2 Economics

Paper 2 Essays Suggested Answers

Question 1

(a) Explain how free trade helps to alleviate the problem of scarcity. [10]

(b) In the recent decades, technological advancement has helped to promote the spread of information and economic integration has facilitated labour migration.

Discuss the extent to which the above events could help to reduce resource misallocation arising from imperfect information and immobility of factors of production. [15]

Part (a)

Introduction:

Using the theory of Comparative Advantage, we will be illustrating how a country's problem of scarcity may be reduced.

Body:

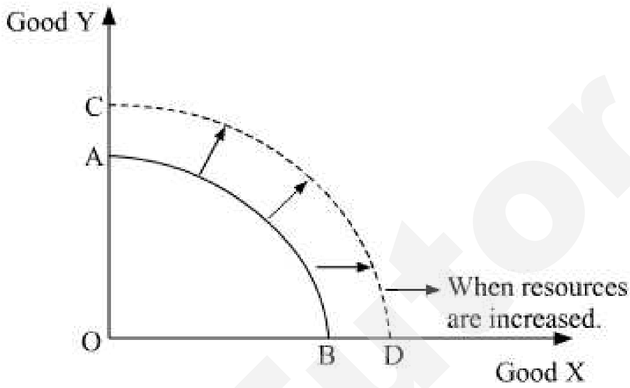
1) Theory of CA
   - The Law of Comparative Advantage states that trade can benefit all countries if they specialise in the goods in which they have a comparative advantage in the production of a good, that is, she can produce the good at a lower opportunity cost than another country.
   - The illustration of the Law of Comparative Advantage is based on the following assumptions:
     - Only 2 countries are involved in the production and exchange of 2 commodities.
     - Each country has 10 units of resources and devotes half of her resources among the production of the 2 goods.
     - There is constant opportunity costs of production of the goods.
     - There are no transport costs, which might outweigh the benefits of specialisation and trade.
     - There are no restrictions to trade (protectionism).
     - There is perfect factor mobility within each country and factor immobility between countries (otherwise no need for trade).
     - There are no emergencies or political or strategic reasons for a country to produce a good with the higher comparative cost.

	Production of textiles and cars before specialization and trade		**Opportunity Cost of producing 1 unit of**		**Production with: DC: Partial Specialise with 75% resources in cars and 25% in textile LDC: Full specialization in textile**		**Consumption after trade by exchanging 12T for 12C TOT: 1T:1C**	
Countries	**Textiles**	**Cars**	**Textiles**	**Cars**	**Textiles**	**Cars**	**Textiles**	**Cars**
Developed Country (DC)	20	30	3/2 C	2/3 T	10	45	22	33
Less Developed Country (LDC)	15	10	2/3 C	3/2 T	30	0	18	12
World	35	40			40	45	40	45

- Although DC is able to produce more of both goods than LDC.
- Both countries can still gain from trade if they specialize according to their comparative advantage which is determined by their opportunity cost in production or relative efficiency in producing the good.
- Before specialization, DC produces 20 units of textiles and 30 units of cars which means it has to give up 3/2 unit of cars for 1 unit of textile or 2/3 unit of textiles for 1 car.
- On the other hand, LDC produces 15 units of textiles and 10 units of cars which means it has to give up 2/3 unit of cars for 1 unit of textiles or 3/2 unit of textiles for 1 unit of car.
- This implies that DC and LDC have a lower opportunity cost or comparative advantage in producing cars and textiles respectively.

- Assuming DC will have partial specialization in cars using 75% of resources and 25% of resources in textiles while DC goes into full specialization in textiles.
- DC will produce 10 units of textiles and 45 units of cars and LDC will produce 30 units of textiles only.
- These countries will agree to trade if the terms of trade lie between: 2/3 cars < 1 textile < 3/2 cars or 2/3 textiles < 1 car < 3/2 textiles. Terms of trade (TOT) measures the rate of exchange of one good or service. The exact terms of trade will depend on the strength of demand and the relative bargaining powers of the countries involved.
- Assuming they agree on the terms of trade of 1 unit of textiles to 1 unit of cars and exchange 12 units of textiles for 12 units of cars.
- After specialization and trade, DC gain 2 and 3 units of textiles and cars respectively and LDC gain 3 and 2 units of textiles and cars respectively. The world output also increases by 5 units each for textiles and cars.
- It is clear that after specialization and trade, both DC and LDC gain from trade and consume beyond their PPC

2) Free trade also allowed even more movement of capital goods and even resources. As a result, the country will have increase in the quantity of resources. That will means that the PPC can actually shift outwards to encompass more points outside the original PPC.



This means that people can now access the point in ABCD and thus the problem of scarcity has been alleviated.

<u>Conclusion:</u>
-
- Consumption beyond PPC → able to alleviate the problem of scarcity
- Extent of pt beyond PPC will depend on the difference in opp cost and the type of goods that has been traded.

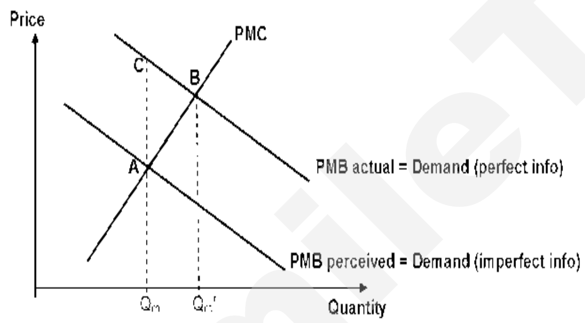
Marking Scheme

LEVELS	DESCRIPTION	MARKS
3	• Shows good explanation of the CA theory using appropriate examples. • Ability to explain how the theory allows country is able to consume beyond the PPC and thus it is a alleviation of scarcity with the a PPC diagram • Well-illustrated and explained table. Or Brief explanation of Theory of CA but shows understanding that free trade can alleviate scarcity through trade of FOPs.	7-10
2	• Ability to explain how the law of CA lead to increased world output but inadequately explained. • CA table contains minor errors and inadequately explained • Scarcity unexplained with PPC.	5-6
1	• Major conceptual errors with little coherent explanations. • Not linking theory of CA to scarcity • CA table unexplained	1-4

<u>**Part (b)**</u>

Introduction:
- Given the age of technological advancement, there has been information explosion and unseen amount of movement of labour.
- Will be examining if such an age had led to better resource allocation and thus less welfare loss for the society.

Body:

Thesis : Allocation of resources has been improved	**Anti- Thesis: Allocation of resources might not have improved**
<u>Imperfection of information</u> • Will better access to information, consumers are better informed and thus make better decision and able to attain optimal social efficient pt. • Using an example and diagram for framework Possible Context: Healthcare – Colorectal cancer screening Consumers may underestimate their true private marginal benefits from colorectal cancer screening due to imperfect information. For example, if consumers knew that colorectal cancer is now the most common cancer in Singapore affecting both males and females, they would realise that the benefit of such screenings is that it has a good chance of detecting the cancer early. Furthermore, the early stage of colorectal cancer is often localised to the bowel and hence early diagnosis can often lead to a complete cure. Figure 9: Imperfect information on actual PMB of cancer screening  • Assume that there are no positive or negative externalities. • As seen in Figure 9 above, with imperfect information, consumer demand for colorectal cancer screenings is lower at PMB perceived as they underestimate the actual benefit of such screenings. • As such, the market equilibrium quantity would be at Q_m where **PMB perceived = PMC**. • However, the true private marginal benefit should be at PMB actual. • Hence, with perfect information, the market equilibrium quantity would be higher at Q_m' where **PMB actual = PMC**. • Hence the ignorance of the full benefits of colorectal cancer screenings causes an **underconsumption** Q_m' – Q_m of such screenings. • Area Q_m'Q_mCB is the actual total private benefit foregone for the underconsumption Q_m' – Q_m. • Area Q_m'Q_mAB is the total private cost not incurred for the underconsumption Q_m' – Q_m. • Since the actual total private benefits foregone exceeds the total private costs not incurred for underconsumption Q_m' – Q_m, area ABC represents the **deadweight welfare loss** due to underconsumption of Q_m' – Q_m.	• There might over compensation and result in too much increase demand, resulting in overconsumption and DWL too. • There might be too much conflicting information, resulting in information overload. For example: MMR vaccines and its correlation with autism • Some maybe misleading or sources may not be credible.

- However with better spread of information through various media, people realized the importance of such screening and divergence between the actual and perceived would be reduced → This will improve the allocation of resources and reduce the DWL.

Immobility of Resources

- With the better transport technology and the free trade agreement which may allow resources to be move more freely.

- Not all resources are mobile. Some resource like land are just fixed.
- But a globalized world means that other countries can have access to the resources.

Types of Immobility of Factors of Production

(A) Labour Immobility
Labour as a factor of production often experiences occupational immobility and/or geographical immobility.

- **Occupational Immobility**: As an economy progresses, there tends to be a shift in the composition of the types of industries in the economy. For instance, a developed economy may create more employment opportunities in the service sector whereas the manufacturing industries are facing a decline due to a loss in the comparative advantage. However, despite greater job opportunities in the service industries, workers are not able to switch jobs immediately to work in the service sector due to occupational immobility. They lack the skills to work in this sector. Thus, even though there may be abundant supply of workers in the economy, they will not be able to fill the job vacancies that are created in the service sector. Thus these workers become structurally unemployed.

- For example, a large number of unemployed factory operators with primary school education in Singapore may not be able to work in growing industries like pharmaceutical industries. This implies that there is a mismatch of skills between the unemployed and those required in expanding sunrise industries in Singapore. Clearly, this leads to a waste of resources and represents market failure.

- However with the availability of online courses, one can be equipped for a certain job more readily. Knowledge can be learnt from these online course and they can even be from reputable universities. Now society can produce closer to PPC and have less welfare loss as it is able to be closer to the maximum potential.

- Certain job needs practical trainings too. Thus purely attaining knowledge via the online courses is insufficient. Examples are surgeons, counsellors etc.
- As such, not all occupation immobility can be mitigated by the spread of technology.

(B) Geographical Immobility: Geographical immobility exists in large countries (e.g.UK, USA, China and India) when there are barriers to people moving from one region to another in search of jobs. These barriers include social ties and costs involved in moving between regions. Thus market failure occurs because resources are not being reallocated from areas where demand for labour is low and unemployment high to other areas where demand for labour is high and there plenty of unfilled job vacancies.

- However, with advancement of technology and economic integration, travelling from one place to other has become hassle free, cheaper, more convenient and less time consuming.

- For example, for the citizens of EU, the citizens could travel from one country to another without going through any border and thus no need for passports. For Singapore, traveling to most countries do not require visa application.

- International travels are made cheaper and faster with the newer

- No Antithesis for Geographical immobility
- Not all resources are mobile even with technological advancement and economic integration. For example :

Capital Immobility

- **Functional Immobility:** Certain capital goods are difficult to transfer from one use to another. For instance, a train once built is only useful as a train. It cannot function as a car or a plane.

- **Geographical Immobility:** For other capital goods, it is difficult to transfer it from a geographical location to another. For example, a petrochemical plant built in China cannot be easily uprooted and

and faster aeroplanes. Traveling within China with its bullet and travelling within Europe using the Eurostar only take hours. Domestic flight are also readily available.	

Conclusion:

Technological advancement could have helped to promote the spread of information and economic integration has facilitated labor migration but need not necessarily have helped in all aspects of resources allocation pertaining information and all factors of productions.

Marking Scheme

LEVELS	DESCRIPTION	MARKS
3	• Discusses both market failures adequately. • Clear analytical framework used to discuss the arguments for and against . • Analysis adequately addresses the context, giving examples when possible.	**9 - 11**
2	• Lack scope in that only 1 of the 2 market failures were covered. • Lack scope in that the arguments raised were overly one-sided with scant consideration of the anti-thesis. • Analysis does not adequately address the given context. • May have some minor conceptual errors in some of the key concepts in the question or is very theoretical with minimal contextualised arguments. • An answer that digresses excessively into alternative solutions.	**6 - 8**
1	• Major conceptual errors with little coherent explanations • No examples at all or examples are irrelevant or inappropriate • Missing link to key concepts in the question	**1 - 5**
E2	• Answer has a simple stand • Answer has a well-explained evaluative comment within the body of the essay.	3-4
E1	• Answer lacks a well-justified stand • Answer lacks any evaluative comment within the body of the essay or contains generic evaluative comments.	1-2

Question 2

In recent years, the price of natural fertilisers for organic brown rice production has risen and healthy living campaigns are seeing more consumers switching from non-organic white rice to organic brown rice.

Assess the relevance of elasticities of demand and supply in understanding the impact on the expenditure by consumers on non-organic white rice and organic brown rice. [25]

Introduction

- Focus: Assess the relevance of PED, PES, YED & CED in impacting the consumer expenditure in each market given a rise in the price of natural fertilizers 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.
  - PES: Measures the degree of responsiveness of quantity supplied 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.
  - CED: 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 the impact of a rise in price of natural fertilizers in both organic brown rice market and non-organic white rice market. (rise in the price of natural fertilizers are assumed to have no impact on the supply of non-organic white rice market)

Development 1: Consider a rise in price of natural fertilizers	
Organic Brown Rice Market	**Non-organic White Rice Market**
E_0 X 0a **<u>Fig 1. Market for organic brown rice</u>**	0a **<u>Fig 2: Market for non-organic white rice</u>**
Assume that natural fertilizers are used in the production of organic brown rice(i.e. factor of production): Rise in price of natural fertilizers→ increases the unit cost of product → fall in SS of organic brown rice from So to S_1→ less units of organic brown rice is supplied at every price → [briefly explain adjustment process] → rise in eqm price from Po to P_1, fall in eqm qty from Q_0 to Q_1. The DD for organic brown rice is likely to be price elastic (PED> 1) due to availability of non-organic rice as substitutes to organic brown rice. Hence, a rise in price of organic brown rice lead to a more than proportionate fall in quantity demanded of organic brown rice. WRT Fig 1, a rise in the price of organic brown rice (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 $E_0Q_0Q_1X$) as compared to a smaller rise in CE due to the rise in P (i.e. area $E_1P_1P_0X$)→ CE on organic brown rice falls from 0PoEoQo to $0P_1E1Q_1$. **Note students can also argue that demand for brown rice to be price inelastic due to the price being of low proportion of income for most households.**	Rise in price of natural fertilizers → fall in SS of organic brown rice → fall in qty dd of organic brown rice → rise in DD for non-organic white rice since they are substitutes (CED>0) → demand curve shifts right from Do to D_1 → more units of non-organice rice is demanded at every price → rise in both eqm price & qty from Po to P_1, Qo to Q_1 → rise in CE from 0PoEoQ0 to $0P_1E1Q_1$.
Comment on Relevance of DD elasticities:	
PED is relevant in explaining the impact on CE in the market for organic brown rice as it explains how qty dd of organic brown rice changes wrt a rise in the price of organic brown rice due to a fall in its supply. CED is relevant in explaining the impact on CE in the market for non-organic white rice as it explains how DD of non-organic white rice (and therefore its P & Q) is affected due to a rise in the price of organic brown rice, when the supply falls. PES is irrelevant here as a rise or fall in demand will cause CE to rise (both P and Q increase) or fall (Both P and Q fall) respectively, regardless of the extent of change in Q when P changes.	

Development 2: Consider the impact of the healthy living campaigns in both brown rice market and white rice market.

Development 2: Consider healthy living campaigns	
<u>Fig 3. Market for organic brown rice</u>	0a **<u>Fig 4: Market for non-organic white rice</u>**
Assuming that healthy living campaigns successfully lead to consumers being more informed of the possible health benefits of consuming organic brown rice → change consumers' taste and preference towards organic brown rice → switch to consuming organic brown rice → rise in DD for organic brown rice from D_0 to D_1→ rise in eqm price and qty from P_0 to P_1, and Q_0 to Q_1 → rise in CE on organic food from $0P_0E_0Q_0$ to $0P_1E_1Q_1$.	Successful healthy living campaigns in changing taste and preferences towards organic brown rice → assume that the DD for non-organic white rice falls from D0 to D_1 as consumers switch from consuming non-organic white rice to organic brown rice → fall in eqm price and qty from P_0 to P_1, Q_0 to Q_1 → CE decreases from $0P_0E_0Q_0$ to $0P_1E_1Q_1$.
Comment on Relevance of DD elasticities:	
CED is irrelevant in explaining the impact of the rise in brown rice on the CE in the market for non-organic white rice. The rise in price of brown rise is caused by a demand change, and not a change in supply. If students argue using competitive supply, explaining that farmers start to devote more factors of production into producing brown rice due to their expectations of price increase from the healthy living campaign, thus reducing the supply of white rice. Then they can make use of PED to discuss the impact of expenditure on white rice. Otherwise PED is not relevant here. Similar to the previous discussion on the previous page, PES and YED continue to be irrelevant in explaining the impact on CE in both markets due to healthy living campaigns.	

<u>Analyse the combined net impact on the market for organic brown rice</u>:

If students argue that PED < 1, fall in supply will lead to a rise in CE. Furthermore, healthy living campaign will increase the demand for organic brown rice thus also increasing CE. Combining the 2 events, consumer expenditure will increase overall.

If students start from PED > 1, then there will be 2 offsetting changes to CE. They should have a graph showing the combined shift with the appropriate justification on which curve shifts more, with the appropriate conclusion regarding consumer expenditure.

<u>Analyse the combined net impact on the market for non-organic white rice</u>:

If students only shift the demand to the left due to the campaign, then consumer expenditure could only fall.

If students also include competitive supply justification to argue that supply would fall, together with an explanation that PED < 1, due to white rice being a necessity for most Asians, expenditure can then rise. They are then expected to take a stand on what is the overall effect regarding consumer expenditure.

Conclusion
Conclude with the relevance of the elasticities concepts (PED & CED are more relevant while PES & YED are 'less' relevant) and the likely impact on the total expenditure on the 2 markets with evaluation.

Marking Scheme

Level	Descriptor	Mark
L3 Upper	An excellent answer which analyzed well how the combination of events impact on the expenditure by consumers on non-organic white rice and organic brown rice. Both breadth and depth evident. Shows a strong ability to exemplify and able to apply them to the context of the question. Judgements on the relevance of the elasticities concepts are given (PED & XED are more relevant compared to PES & YED).	19-21
Lower	A competent answer which analyzed well how the combination of events impact on the expenditure by consumers on non-organic white rice and organic brown rice.	16-18
L2 Upper	An answer which explained well how the combination of events impact on the expenditure by consumers on non-organic white rice and organic brown rice. There is sufficient scope but lacks depth (or vice versa). Some judgements on the relevance of the elasticities concepts are given.	13-15
Lower	For an answer which explains the events on the impact on the expenditure by consumers on non-organic white rice and organic brown rice. However, theoretical analysis may not be so accurate. Diagrams to illustrate concepts are missing/incomplete.	10-12
L1 Upper	An answer which shows some understanding of the question and has limited scope and depth. The context of the question is not considered. Diagrams may not be used to illustrate theoretical concepts.	6-9
Lower	An answer which struggles to answer the question with major misconceptions or question has been misread.	1-5
Evaluation		
E2	For an evaluative assessment based on economic analysis.	3-4
E1	For unexplained assessment.	1-2

<u>**Question 3**</u>

There are five movie theatre operators in Singapore and they are making efforts to protect their profits in view of rising competition from online movie streaming services.

(a) Compare the barriers to entry of movie theatre industry and online movie streaming industry. [10]

(b) Discuss the likely impact on profit of a movie theatre operator when faced with competition from online movie streaming services. [15]

<u>**Part (a):**</u>
Approach: Define barriers to entry and mention types of barriers to entry (substantial iEOS, control of essential raw materials or wholesale/retail outlets, legal barriers, brand loyalty, other tactics to eliminate competition, etc).

Definition: Barriers to entry are a combination of obstacles that deter or prevent new firms from entering a market to compete with the existing firms.

<u>Compare</u> between the 2 industries:
Movie Theatre (high BTE): high initial capital outlay, legal barrier for the need to have the license for distributorship.
Online movie streaming (low BTE): low initial capital outlay, legal or illegal source of distributorship.

<u>Substantial Internal Economies of Scale</u>
Movie theatre: When sunk cost is large for an industry, there are substantial economies of scale to be reaped at only very high levels of output. Large movie theatre operators have the power to obtain the rights to screen first-run films and to do so at a lower average cost per screening. The more screens in the chain, the lower the unit cost of each screening. Similarly, a large chain can re-equip its cinemas with new technology (such as 3-D viewing) at a lower average cost. Other technologies may also be shared, such as online booking systems which cover all cinemas around Singapore. There are also financial and risk bearing economies of scale available to movie theatre operators, including the ability to raise finance for expansion through possible acquisitions, and to bear and manage commercial risks more effectively. These factors combine to put large movie operators at a great advantage in being able to win and maintain market share.

Online Streaming Movies: Generally, lower initial capital outlay and hence, the scope of internal economies of scale are lesser.

Control Wholesale/Retail Outlets & Legal Barriers
Movie theatre: Large movie theatre has control over the outlets through which the films must be shown, it can prevent potential rivals from gaining access to consumers. For example, exclusive rights to broadcast certain movies at its outlet or distributorship and this prevent other firms to broadcast the film due to licensing/copyrights. (A licence is the right to operate or produce certain goods and services that are granted by the government.)

Online Streaming Movies: The source of distributorship may not be that clearly defined, as online streaming movies sites may try to avoid trouble by not hosting their own content, instead acting as a search engine for links to streamed content, usually embedded from a secondary site.

Brand Loyalty
A strong brand name is a barrier as a new entrant will have difficulties breaking into the market as it is extremely hard to compete against a well-established brand in context of movie theatres as compared to online streaming movies. The brand name is often established by means of product differentiation, in terms of types of seats or services provided for the movie going consumers.

Note: Predatory pricing and supernormal profits argument are not accepted as BTE in the context of the question.

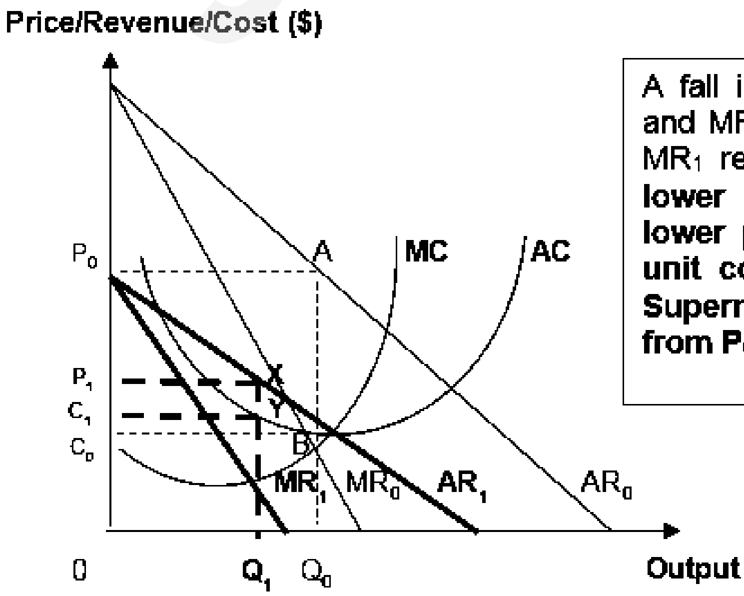
Conclusion:
In general, the barriers to entry for the movie theatres are higher than that of the online streaming movies.

Marking Scheme

LEVELS	DESCRIPTION	MARKS
3	Clear and logical **comparison** of BTE (with examples, 3 different types of BTE) with consistent use of good examples to illustrate. Low L3 (7m) – 2 well explained and exemplified BTE	7-10
2	Adequate knowledge of BTE but **comparison** is underdeveloped. Mistakes in explanation and few/no examples used.	5 – 6
1	Merely define BTE without clearly **comparing** between the two. No examples provided.	1 - 4

Part (b):

Approach: Discuss the change in profit of a movie theatre operator in context of rising competition from online movie streaming (illustrate with cost revenue diagram to show how supernormal profits may have been reduced – AR falling).



A fall in demand will cause AR_0 and MR_0 to decrease to AR_1 and MR_1 respectively. This results in **lower output from Q_0 to Q_1, lower price from P_0 to P_1 and unit cost rises from C_0 to C_1. Supernormal profit decreases from P_0C_0BA to P_1C_1YX.**

The extent of the change in profits will warrant certain responses from the movie theatre operator with strategies to protect its profits. Strategies could be either revenue (maximising revenue) or/and cost (minimising cost):

Revenue Strategies:

- Different discounts given (loyalty programme, 1-for-1 movie ticketing, etc). Bundling with other products like popcorn, movie related products etc.
- Better quality / experience → sound system, type of seats, timing, memberships, loyalty programme.
- Experience → IMAX experience (the state-of-the-art technology and architecture makes the movie so real, you'll forget you're in a theatre)
- Kinetic seats: Some amusement parks, such as the Six Flags franchise, have custom-built theaters with kinetic seats that tilt, spin, and rumble according to what's happening on the screen. Usually the film is something short, like a dinosaur chase.
- Thematic theater designs: For example, a movie theater where the "seats" were individual hot tubs. Or a movie theater that didn't have any seats at all. Instead, sand covers the ground from corner to corner and the temperature is kept comfortable ("beach theater").
- Marketing → advertisements, securing exclusive release or launch events that streaming services may not provide.

Cost Strategies:

- Minimising variable cost → reorganising movie screening time to minimise unnecessary use of electricity, especially during non-peak period.
- Introducing methods to cut back on manpower cost → enhancing ticket sales/collection (for eg, quick tix used by Golden Village where purchase/collection of tickets can be done without manpower cost).

Note: Any feasible/possible revenue and/or cost strategies can be accepted in the context of the question.

Conclusion:
In conclusion, theatre-going is a "social activity" and experience that cannot be replaced by online movie streaming services. While online streaming "may impact attendance to some extent", theatre-going can be made compelling by putting in place "infrastructural investments" that heighten the overall experience. These amenities create a unique experience for the theatre goer. Serving a meal, offering certain types of beverages and luxury seating all present a compelling reason to watch a film in a movie theatre as opposed to at home via online movie streaming services. Additionally, movie theatres can easily justify increased ticket prices in locations where full-service amenities are present.

Whether a movie theatre operator would response to protect its profit when faced with rising competition from online movie streaming services would ultimately depends on the degree of competition/impact in terms of profits for a movie theatre operator.

Marking Scheme

LEVELS	DESCRIPTION	MARKS
3	For a well-balanced answer which provides a thorough analysis of the impact on profit of movie theatre operator and its response to the impact via appropriate strategies, applying to the context of the movie theatre operator against online movie streaming services.	9 - 11
2	Able to identify and examine the impact on profit of movie theatre operator and its response to the impact via appropriate strategies, however, answers are largely theoretical and under developed.	6 - 8
1	Descriptive answer lacking in economic analysis. Mostly irrelevant answer.	1 - 5
E2	Substantiated judgement	3-4
E1	Some attempt at judgement	1-2

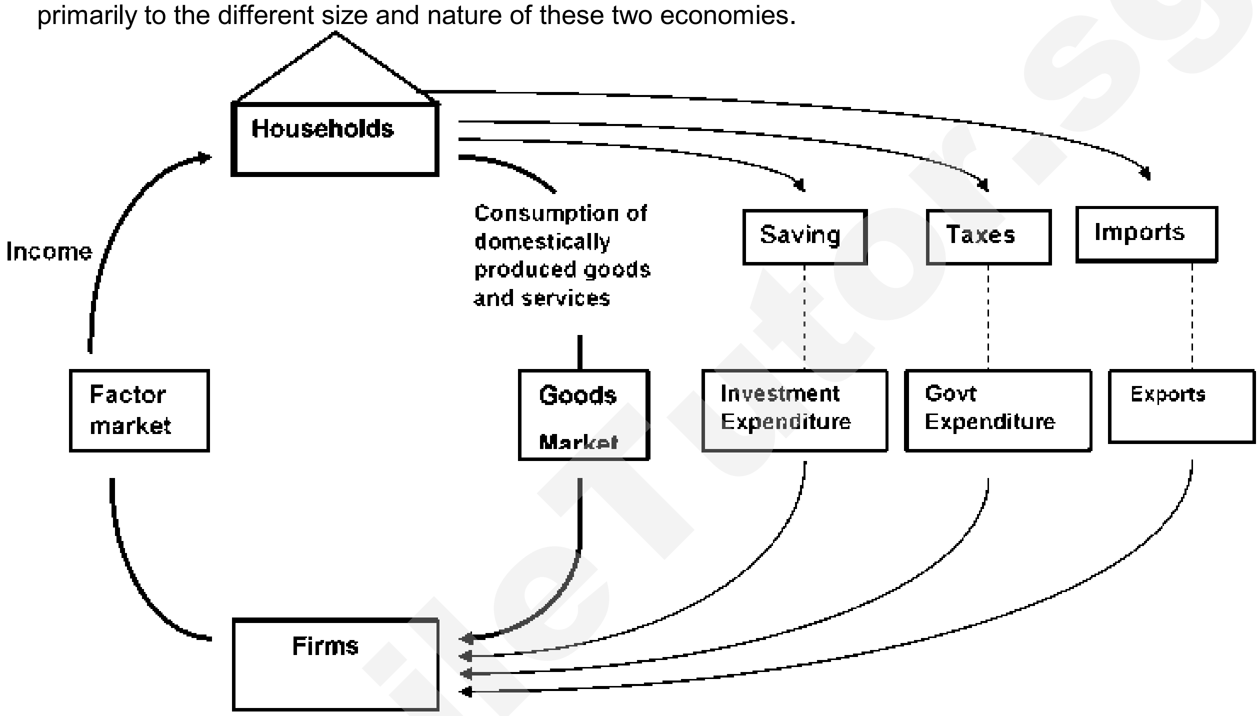
Question 4

(a) **Explain how the relative importance of the components of the circular flow of income for a small and open economy might be different from a large and less open economy.** **[10]**

(b) **Assess the usefulness of the components of the circular flow of income to compare different countries' standard of living.** **[15]**

Part (a)

- Explain the circular flow of income. Need to draw the diagrammatical model.
- In a 4 sector economy like Singapore and USA, withdrawals from the circular flow of income includes saving (S), taxes (T) and imports (M). Injections on the other hands are made up of investment (I), government expenditure (G) and exports (X).
- The relative size of these various components of the circular flow of income differs for Singapore and the USA due primarily to the different size and nature of these two economies.



- In a simple 2 sector economy, the circular flow of income comprises only of firms and households. Whatever that is produced by the firms are assumed to be consumed by the households paid for by the income given to the households by the firms.
- However, referring to the diagram above, we can see that for open economies like Singapore and USA, there are various factors which will cause money to 'leak' from the circular flow of income, and conversely, there are also injections into it.
- Total withdrawals from a country's circular flow of income can come from households saving part of their income (S), paying taxes (T) and buying of imported goods (M).
- Likewise, not all receipts arise from the consumption of domestic consumers. Some are injected in the form of exports (X), investment (I) and government expenditure (G).
- The Singapore economy is a much smaller country (no natural resources) compared to the USA economy and hence, is very dependent on imported goods, both in terms of raw materials and finished goods. Hence, Singapore will have a higher level of leakages relative to that of the US's.
- Singapore is also much more open compared to the USA. This would mean that Singapore would also experience high level of injections into the circular flow from exports (X). This is due to the fact that Singapore has a smaller domestic market compared to that of the USA, and hence most of the goods produced by the firms in Singapore are meant for export purpose. On the other hand, USA has a relatively bigger domestic market compared to Singapore, and hence, most of her goods are consumed domestically in the country.
- All in all, due to the different nature of the two economies, the relative importance of the components of the circular flow of income will be different. X and M will be much more important to Singapore than USA and C (affected by S and T) will be much more important to USA than Singapore.

Marking Scheme

LEVELS	DESCRIPTION	MARKS
3	• Shows good explanation of the circular flow of income using appropriate examples. • Ability to explain how the components (in particular C, X and M) might be important for the different countries • Well-illustrated diagram.	7-10
2	• Lack elaboration of examples of the different countries. May be just mere mentioned • Able to inadequately explain the circular flow of income with some minor mistakes	5-6
1	• Major conceptual errors with little coherent explanations.	1-4

Part (b)

Components can be useful	Not necessary useful indicators, Limitations and other indicators needed.
1) SOL measures ability to consume goods. Thus C (low level of S) and M will be proxy indicators for the different countries. • So if the countries have high level of C (low level of S) and M, (depending on whether capital or consumer goods are imported) material SOL may improve. If M is on consumer goods, the people in each countries would be able to consume high level of domestic and foreign goods → higher level of current material SOL. However, if M is on capital goods, future material SOL might increase with material SOL increasing due primarily to the high level of C. • For countries which tend to save more and import less consumer goods, the level of SOL may not be that high. 2) Level of T → high level of taxes may indicate lower level of disposable income for the people in the different countries. As such, this might indicate a lower level of current material SOL as it means less is left after tax for consumption. 3) Level of X → when more are being exported, does it means less is available for ppl in the country. If it is so, then the current level of material SOL will be affected. → It could also be that there is a difference in quality between those consumed within the country and those which are exported. If the better quality ones are being exported, then it could indicate a lower level of SOL for the residents compared to other countries. 4) Level and components of G → If there is high government expenditure on welfare payouts, then the lower income of the country will have a better SOL compared to those in countries which does not have such welfare system.	1) Better indicators could be used for the comparison across the different countries like Real National Income per capita (PPP-adjusted) to give a more general picture of the SOL. Even the value of the various components needs to be PPP adjusted to better compare. – it is crucial to look at the per capita figures to ascertain the difference in material standard of living, since population growth will be different for different economies. – As every economy measures the value of its components, output or GDP in their respective domestic or national currencies, there is a need for a common currency. Today, it is standard practice to use the US dollar as the common currency to measure GDP per capita for the purpose of international comparison of standard of living. Before any comparison is made the GDP of different countries must be first converted into US$. However, this poses a problem for international comparison, because the set of exchange rates commonly used are based on market or official exchange rates prevailing in the currency markets. Although the market or nominal exchange rates are easily available and are used on a daily basis by banks and money-changers, using these rates for the purpose of international comparison of GDP per capita poses 2 key problems: (1) Fluctuations of market exchange rates: Market exchange rates are determined by the market forces of demand for and supply of currencies in the foreign exchange markets. The exchange rates may fluctuate whenever the demand for or supply of currencies changes. The official exchange rates could even be the result of speculative activities and government interventions in the currency market. Ceteris paribus, using such exchange rates causes the value of the GDP to change arbitrarily whenever exchange rates fluctuate, making comparison of GDP per capita meaningless. (2) Inaccurate reflection of Purchasing Power: An even more serious drawback is the fact that international comparisons of Real GDP per capita based on market exchange rates are misleading as they do not reflect the relative Purchasing Power of the respective currencies. To overcome this problem, economists use Purchasing Power

→If govt spent on building infrastructure or national defense, then money are channelled away from consumption and thus a lower SOL.

5) Level of Investments (I)

→ An increase in investments through capital accumulation is likely to increase productive capacity which means the economy will be able to enjoy the utilisation of capital goods in the long run. This will increase future material SOL.

to purchase an amount of goods and services equivalent to what can be bought with one unit of currency of the base country, for example the US dollar (a commonly used base currency). This means that without the use of PPP figures, standard of living comparisons may not be fair as it may overstate or understate the standard of living of the economies under comparison.

2) Other limitations of measurement across countries.

- **Income Inequality :**

A country's GDP per capita may be higher than that of another country but its living standards may be lower due to greater inequality in the distribution of income.

Again, a better measure might be to use the Gini coefficient as a basis for comparison. Global Gini coefficients range from 0.23 (Sweden) to 0.40 (United States) and Singapore's Gini coefficient was at 0.463 in 2013, suggesting greater income inequality than the US and developed European nations. Also, poor or developing countries usually have wider disparities in income distribution. Wealth is concentrated in the hands of a minority group of people who might also wield political power.

- **Different size of the non-monetised sector**

Comparisons of GDP per capita between countries will be misleading if the relative importance of their non-monetised sectors is vastly different. Generally, developing economies tend to have a larger non-monetised sector than developed economies. For instance, developing countries with rural farming populations tend to have large non-monetised sectors. In farming communities, it is common to have unpaid family members and relatives helping out on the farms. Farmers also engage in subsistence farming, i.e. growing food for their own consumption. Such outputs are not measured and therefore not reflected in the official national income statistics.

The role of women in society also influences the size of the monetized sector. For example, more Asian women stay at home as full time housewives compared to their western counter-parts. However, the services provided by full-time housewives are not counted in the national income. Hence, national income statistics would tend to understate the true level of activity since they are not able to capture this level of economic activity in the economy.

- **Differences in the availability and reliability of data**

One of the greatest limitations when comparing standard of living between countries is the lack of accurate data. Comparing the relatively more accurate estimates of advanced countries with that of more backward countries will yield misleading results.

For example, it is a well-known fact that the official statistics issued by China are often fraught with such problems. It is not an easy task to collect accurate statistics in such a vast country where a large part of the population live in rural areas, and where the administrative machinery for gathering official statistics is relatively inefficient - not to mention that corruption is also a big problem.

3) Other indicators needed esp for non-material aspect of SOL.

- **Negative externalities**

	emerging economies. However, the higher output levels may be accompanied by higher levels of pollution, congestion and depletion of natural resources. Hence, it can be seen that higher output levels could lower the standard of living for such countries. Therefore, solely looking at national income statistics alone is insufficient to give a true picture of the standard of living between countries, i.e. it may **overstate** or **understate** the standard of living. Economists sometimes refer to the concept of 'green' GDP which takes into account differences in environmental quality. • **Disamenities** (Differences in the hours of work vs. leisure time) The higher real GDP per capita in some countries may be the result of people working harder or longer hours. A real higher GDP per capita does not therefore necessarily mean a better standard of living, if the increased GDP is due to longer working hours. In today's context, a key issue is work-life balance. The quality of life in a fast-paced urbanised society is often marred by 'unhealthy' work-life balance, i.e. a disproportionate amount of time is spent working. In order to improve the quality of life, people are increasingly striving to achieve a so-called satisfactory work-life balance, i.e. striking a balance between earning a desired income and having sufficient time for leisure.

Conclusion:

The components of the circular flow of income could be used as a proxy in absence of better indicators. Else the better indicator should be use with especially adjustment for PPP. We also need to consider the non-material aspect too as the components could be use to gauge the material aspect only.

Marking Scheme

LEVELS	DESCRIPTION	MARKS
3	• Discusses the components of circular flow thoroughly with an anti-thesis emphasising the need for indicators to be PPP-adjusted and data on the non-material aspect. • Clear analytical framework used to discuss the arguments. • Analysis adequately addresses the context, giving examples when possible.	**9 - 11**
2	• One-sided arguments lacking in scope such as the lack of consideration of the non-material aspect of standard of living and the need for PPP adjustment to indicators. • Analysis does not adequately address the given context (eg. cover some components of the circular flow of income) • May have some minor conceptual errors in some of the key concepts in the question or is very theoretical with minimal contextualised arguments.	**6 - 8**
1	• Major conceptual errors with little coherent explanations • No examples at all or examples are irrelevant or inappropriate • Missing link to key concepts in the question	**1 - 5**
E2	• Answer lacks a well-justified stand • Answer has a well-explained evaluative comment within the body of the essay.	3-4
E1	• Answer has a simple stand • Answer lacks any evaluative comment within the body of the essay or contains generic evaluative comments.	1-2

Question 5

Discuss whether the use of various policies by governments will inevitably lead to conflicts in macroeconomic objectives. [25]

Candidates are expected to examine how the used of macroeconomic policies leads to conflicts. They are to analyse 2-3 macroeconomic conflicts such as economic growth vs demand-pull inflation, imported inflation vs economic growth, economic growth vs BOP equilibrium and potential growth vs structural unemployment.

Candidates are explain the use of other policies that serve as anti-thesis of the conflicts.

The nature and state of economy can be used as limitations should be considered in examining if the extent of these conflicts would be justified. Other factors should also be used.

Policy 1: Expansionary FP: Economic Growth vs Inflation

Expansionary FP increases AD and via the multiplier process creates economic growth but conflicts with demand-pull inflation.

Antithesis: Such conflict with inflation may not occur if government combined with use of short-term and long-term supply-side policy that may lower SRAS and LRAS.
State of economy: If the economy is far below the equilibrium level of full employment level of income (such as a deep recession), the use of expansionary demand side policies may take a while to reach full employment level of national income,

Policy 2: Supply-side policy: Economic growth vs structural unemployment

For a country to have sustained growth, a government often adopt supply side policies to restructure the economy. Such policies will include tax incentives to attract high end foreign direct investment (free flow of capital), foreign talent (free flow of labour) and mechanisation. This will often result in structural unemployment.

Antithesis: Supply-side policy that provides complementary policies of retraining for local workers as well as calibrated foreign worker policy may not lead to such unemployment.

Nature of economy: Small and open economies are likely to pursue such supply-side policies as they need to attract FDI to increase potential growth. Changes in structural are also frequent given the nature of ever-changing globalisation trends. Larger economies may not have pressing needs to restructure hence the trade-offs may not be so evident.

State of economy: A country in recession usually will be more concerned with actual growth (increase in AD) and reducing unemployment (usually cyclical). Thus the trade-off may not be so significant. Whereas, a country facing full employment may want to increase the LRAS to achieve sustained economic growth since increasing actual growth may not be so easy in the SR. Hence it is more likely to embark on supply-side policy.

Time period: Structural unemployment is a long term process. Government may have sufficient time to respond by gradual planning the re-employment of workers affected in the restructuring.

Policy 3: Monetary Policy: Economic Growth vs BOP Equilibrium

With the use of lower interest rate results in higher economic growth, national income increases and that may lead to increase import expenditure. Thus it may lead to a decrease in BOP.

Antithesis: With lower interest rate, there will be hot money outflow resulting in exchange rate depreciation that may increase exports, resulting in an increase in BOP.
If a complementary expansionary fiscal policy with the lower taxes is undertaken, it may attract FDI that increases the financial account and BOP.

State of Economy: If economy is experiencing a recession or slow growth, any boost in national income may not result in a large increase in spending. This is due to the household pessimistic outlook of the economy. Households may instead opt to save rather than buy imports.

Nature of Economy: For a relatively large and closed economy, domestic stimulus would boost local businesses as domestic households buy goods and services from them. This is due to the fact that there are smaller leakages of imports as compared to small and open economies.

Conclusion – A well-reasoned judgment is expected focussing on the choice of policy for any government. Conflicts in macroeconomic objectives are not desired by any governments. Often good planning and execution of complementary policies can avoid such serious conflicts in the country.

Knowledge, Application, Understanding and Analysis	
For a well-balanced analysis that explained the government macroeconomic policy and further examines how their decisions when faced with trade-offs, could resolved by a complementary use of other policies. Other factors such as nature of the economy, state of the economy are also considered.	**15-21**
For an adequate explanation that examines how government's macroeconomic policy works. The answer have provides some trade-offs decisions are analyzed. Little mentioned of the use of other policies to complement the existing ones. Little or no mention of other factors that could be considered e.g. nature and state of economy.	**10-14**
For an answer that shows some knowledge of the use of various policies but insufficient elaboration on the trade-offs.	**1-9**

Allow up to 4 additional marks for Evaluation	
For an evaluative discussion that is based on economic analysis	**3-4**
For an unexplained judgement, or one that is not supported by economic analysis.	**1-2**

Question 6

Some countries like China use interest rates while others like Singapore choose exchange rates as their instrument for monetary policy.

(a) Explain how consumers, producers and government of a country could be affected by the appreciation of its own currency. [10]
(b) Discuss why governments use different instruments of monetary policy to control the rate of inflation. [15]

Part (a)

Requirements of the question
This part is not a question on Singapore, but general in nature. Candidates should examine the effects of **export and import prices** as well as some of its impact on the **macroeconomy**. This will in turn would affect the various economic agents favourably or adversely.

As a currency appreciates, this would lead to an increase in export price (P_X) in foreign currencies of its good. Assuming demand for exports is price elastic, it would lead to a decrease in export revenue (X) since quantity demanded will fall more than proportionate. Likewise, this would lead to a decrease in import price (P_M) of its good and services. Assuming demand for imports is price elastic, it would lead to an increase in import expenditure (M) as quantity demanded will rise more than proportionate. With exports revenue declining and imports increasing, balance of trade (BOT) and aggregate demand (AD) would decrease and it has a contractionary effect on the economy and increasing unemployment.

Consumer (households)

- With lower import price (P_M), they will consume more imported goods and services at lower prices. Consumer welfare will therefore improve.
- For example, the appreciation of the Chinese RMB over the decade has led to the Chinese being able to import Japanese cars at lower prices and go for holidays in Singapore or neighbouring countries in large numbers.
- As mentioned earlier, unemployment will increase due to the contractionary effect on the economy from the fall of net exports. This will affect the households which lose their income, and it will lower their material standard of living.

Producers

- At the same time, with higher exports prices, firms will become less export competitive compared to other countries producing close substitutes. This may lead to some of them closing down or even the demise of the industry. This may lead to the loss of comparative advantage of that industry. Some firms may choose to invest overseas to take advantage of lower foreign currency
- For example, a strong Japanese yen in the past had made its car manufacturer lost some of its advantage. Some of them turn to investing in Thailand took take advantage of the lower cost of labour and land, as well as relatively weaker Baht.
- But for a producers that require high amount of imports as factor inputs, an appreciation of its own currency will lower down its cost of production, which is favourable to lower down the price that it wants sell domestically or as exports.

Government

- The government would be concern about the indirect effects on its budget. With lower P_M the government is able to purchase goods and services at lower prices that saves on its expenditure. For example, if S$ appreciates, she is able to buy F16 jets for its national defence from America that could potentially save millions.
- If the appreciation leads to lower competitiveness of its firms, the government may spend more to provide unemployment benefits to its workers that are laid off. At the same time, it may also collect lower tax revenue from a contracting economy.

(Little credit given if students assume government will conduct expansionary policy and its accompanying impact on the government's budget. Separately, impact on four macro goals will not be accepted because they do not directly impact the government itself unless linked to government budget.)

Level	Descriptor	Marks
L3	Theoretical analysis of impact on imports and exports must be present. Discussion must cover all 3 parties with good economic analysis for at least 2 of the parties. No GLARING conceptual errors.	7-10
L2	Theoretical analysis of impact on imports and exports must be present. Discussion must cover at least 2 parties with good economic analysis for at least 1 of the parties OR 2 adequate explanations. No GLARING conceptual Errors	5-6
L1	Some attempt to answer the question with conceptual errors	1-4

Part (b)

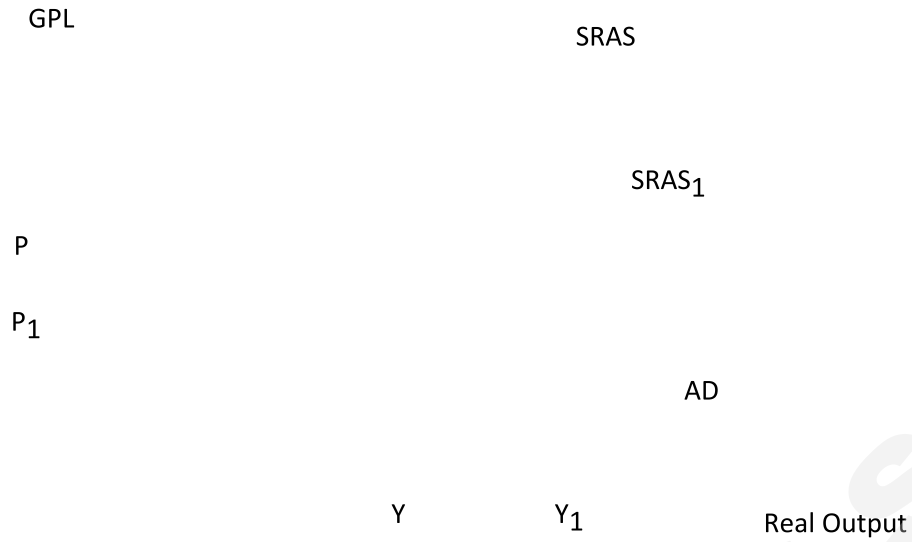
Requirements of the question
Candidates are to identify the main sources of inflation such as imported inflation and demand-pull inflation. In the traditional theory of monetary policy, the use of interest rate is often used to reduce inflation. However, in some limited cases (as in Singapore and Czech Republic), the use of exchange rate policy is preferred over interest policy. Candidates should examine how exchange rate policy as well as interest policy could be used to tackle inflation. More importantly, candidates need to demonstrate the factors and conditions why one instrument preferred is over another

Thesis 1: Exchange Rate Policy to contain imported-price push inflation (such as for Singapore)

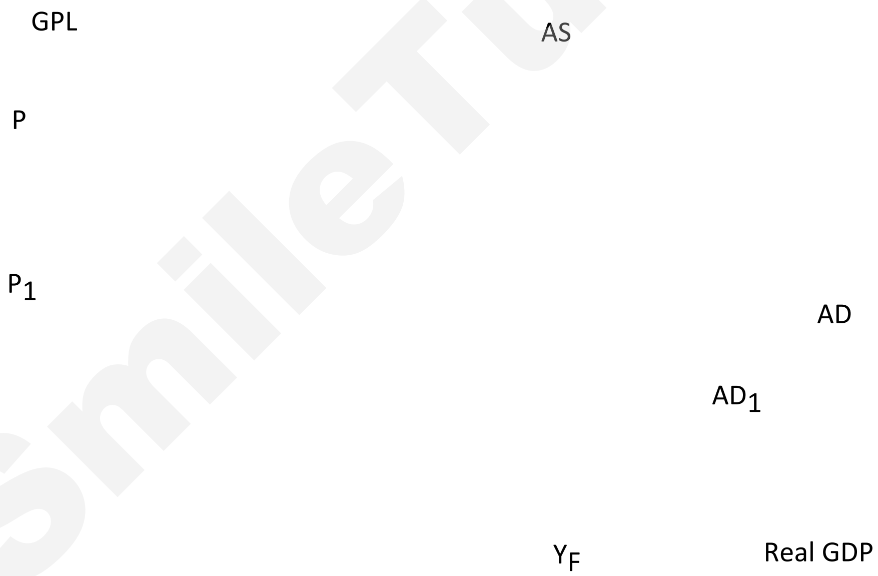
- Being a small and open economy, Singapore is particularly susceptible to import-price-push inflation. This is because Singapore has limited natural resources and is heavily reliant on imports of necessities, raw materials and semi-finished goods for consumption and production of goods for export. Imported inflation thus accounts for a significant portion of the overall inflation observed.
- As such, exchange rate appreciation is arguably the most important and effective policy instrument in managing inflation in Singapore. The Monetary Authority of Singapore (MAS) has had implemented a gradual modest appreciation policy of Singapore dollar since 1981. This policy has continued when external prices are volatile but can be temporarily adjusted (such as to zero appreciation) if the external prices are not threatening Singapore's imported inflation.
- Appreciation of S$ will make imports relatively cheaper in terms of domestic currency. Cheaper import prices will lower the cost of production for firms in general. This has the effect of shifting the SRAS to the right, leading to a reduction in price levels from P to P_1 and thus reducing inflationary pressures.

Evaluation:

Supply-side policy to reduce reliance on imports/obtain cheaper alternatives, as well as to increase productive capacity may be used to complement the exchange rate policy in combating inflation.



Furthermore, a strong S$ implies that our exports will be less price competitive, ceteris paribus, as exports now become more expensive in terms of foreign currencies. Assuming that the Marshall-Lerner condition holds, Singapore's balance of trade will worsen, resulting in slower economic growth. With a fall in net exports, AD will fall from AD to AD_1, GPL falls from P to P_1, relieving demand-pull inflationary pressures. This occurs even though the level of national income remains at the full employment of national income, Y_F.



Evaluation: As a small and open economy, much of Singapore's growth depends on external demand for Singapore's goods and services. A rise in X due to a pickup in demand from trade partners such as the US, Japan and the Eurozone (as was the case in 2013) will likely result in a sizable increase in AD, which could lead to demand-pull inflation.
The use of exchange rate appreciation is largely to address the imported inflation and to some extent, demand-pull inflation as it served as a basis of price stability for sustainable growth.

Separately, demand-pull inflation in Singapore can also be due to higher demand from property and cars/COEs. If so, macroprudential policies such as curbing bank loans may be more appropriate.

Thesis 2: Interest Rate Policy to contain demand-pull inflation (such as for China)

- The main source inflation in large economies like China is demand pull inflation due to its large domestic C and I
- Higher interest rates help keep cost of borrowing high for consumers who purchase durable goods or big-ticketed items, discouraging consumption. At the same time, higher cost of borrowing also decreases the expected rate of returns from private investment (MEI < r) and discourages investment by firms.

- Besides, if interest rates set by the Central Bank are relatively higher than that of other countries, short-term capital inflow results even as investors search for higher interest rates. This would result in in appreciation, which leads to net exports to fall.
- Thus a fall in consumption, investment and net exports reduce AD from AD_1 to AD_2. This result in unplanned increase in stocks, causing production levels to fall as firms employ fewer factor inputs.
- Through the multiplier effect, national income increases from Y_1 to Y_2, but more importantly, reduced the General Price Level to fall from P_1 to P_2

Figure 1: Effect of Contractionary demand management policy

P_2

Evaluation:
Consumer & Investor Optimism: Given the economic boom is still felt by the Chinese consumers and producers, it is likely that consumer and investor optimism will persist. This implies that despite a higher interest rates by the Central Bank of China adopting contractionary interest rate policy, consumers and investors will be continue to borrow. Thus in such a buoyant economic environment, firms and consumers may not reduce investments and spending respectively.

Comparison of both instruments – Why interest rate policy cannot be used in countries like Singapore.
(a) Small capital market and Openness to Capital Flows making it difficult in controlling interest rate

- Singapore's role as an international financial centre means that small changes in the difference between domestic and foreign interest rates result in large and quick movement of capital flow, making it difficult to target interest rate in Singapore.
- Assume that Singapore government increases interest rate to rein in demand-pull inflation.
- This rise in interest rate, assuming it is significantly higher than interest rate of big or large economies like the US will result in **short-term capital inflow (i.e. hot money)** as Singapore is a **small and open economy with no capital control.** This will mean, foreign investors e.g. US investors will sell their own currency (i.e. USD) and buy S$ to save with Singapore banks. Banks in Singapore will now have more cash or liquidity to create bank credit or loans. Thus, the supply of bank credit will rise, causing interest rate to fall, until the domestic interest rate equalises or is on par with global interest rates. At this point, there is no more incentive for foreigners to transfer their funds to Singapore since interest rates are identical or on par.
- Thus, it is not possible for the Singapore to set interest rate independently from the rest of the world.
- As a small and open economy, the MAS cannot control interest rate in Singapore and thus it is said to be a interest rate taker. In practice, interest rate in Singapore generally follows interest rate of big economies like that of the US.
- Conversely, large economies like China are better able to withstand more capital flows, or they may practise capital control, and hence are not interest rate takers.

(b) Controlling interest rate will make exchange rate very volatile and will have adverse impact on trade.

- Adjusting interest rate will subject our exchange rate to volatility which in turn affects investors' confidence and thus may affect our trade volume adversely.
- As mentioned above, a change in interest rate will result in short-term capital flows. This will have adverse impact on our exchange rate.
- E.g. a fall in interest rate that attracts huge capital outflow will mean a rise in supply of S$ causing our exchange rate to depreciate. Similarly, a rise in interest rate will attract huge capital inflow causing demand for our currency to rise, strengthening S$.

- If interest rate is often adjusted, our exchange rate will be very volatile and this is very detrimental to Singapore as we are an export-driven country and we are also heavily dependent on imports for survival and raw material.

Conclusion:
The appropriateness of the monetary policy instruments for a country depends on the nature and openness of the economy of a country. Usually economies may choose interest rate policy if they have sizeable domestic economy and less open to financial flow. Countries like Singapore which is prone to imported inflation and has a large financial sector would prefer to use the exchange rate. Other sources of inflation such as wage push inflation would require policies other than monetary ones.

Level	Mark	Descriptor
L3	9-11	Well-elaborated answer with diagram(s) to explain the use of instruments to reduce inflation and a strong rationale on how the factors/conditions, i.e. nature of economy and the main cause of inflation, play the role to choose the instrument.
L2	5-8	Answer shows adequate understanding of both instruments of monetary policies and some but underdeveloped attempt at analysing the factors/conditions, i.e nature of economy and the main cause of inflation, to determine the choice of instrument.
L1	1-4	Answer shows some understanding of both instruments of monetary policies but little or no attempt at analysing the factors/conditions to determine the choice of instrument.
Evaluation		
E2	3-4	Reasoned judgment on the use of the policies to tackle inflation.
E1	1-2	Evidence of some evaluation.

INNOVA JUNIOR COLLEGE
JC 2 PRELIMINARY EXAMINATION
in preparation for General Certificate of Education Advanced Level
Higher 2

ECONOMICS 9732/01

Paper 1

19 August 2016

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.

Begin each question on a fresh sheet of paper.

At the end of the examination, attach cover pages provided to **Case Study Q1 and Q2.**
Fasten all questions **separately** and securely.

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 and **1** blank page.

Answer **all** questions

Question 1

Global Steel Woes

Table 1: Global Steel Production Geographical Distribution

	2004	2014
China	25.6%	49.4%
Japan	10.6%	6.6%
Other Asia	11.1%	12.2%
EU	19.0%	10.2%
NAFTA*	12.5%	7.2%
Other	21.1%	14.4%

* NAFTA refers the FTA signed between Canada, North America and Mexico to form a free trade region.

Source: *World Steels in Figures* 2015

Extract 1: Why the world has too much steel

The two giant furnaces at Port Talbot steelworks, Britain's biggest, were still hard at work this week, pouring out vast quantities of molten iron. But production of steel from iron ore here may soon come to an end. At the end of March, the plant's owner, Tata Steel, said that the operation was losing more than £1m ($1.45m) a day due to the low price of steel on global markets, and that it planned to sell off or close down its British operations as it could no longer shoulder the losses; bidders were given until May 3rd to state whether they were interested in buying it. Britain's steel industry is not the only one in the West feeling the pinch from the collapse of global steel price. Both Belgium and Italy are spending public money to keep their steel mills open and the American industry there has been announcing a steady flow of job losses.

Between 2000 and 2014, global production doubled from around 800m tonnes to around 1.6 billion tonnes a year. Until 2014, Chinese demand rose at approximately the same rate as its steel mills could produce, meaning that the impact on the rest of the world was limited. But as its construction boom came to an end, demand sagged, prompting the country's state-owned steelmakers to sell their growing surpluses on foreign markets. Exports of steel from China increased from 45m tonnes in 2014 to 97m tonnes last year—marking a bigger rise than Germany's entire output of the past year: 43m tonnes. This has triggered demands from rival firms for protection.

Many economists argue that government subsidies are responsible for the overcapacity in the industry lasting so long. The flood of Chinese steel around the world should have caused high-cost producers elsewhere to extinguish their blast furnaces, eventually allowing supply and demand to reach a new equilibirum. But because steel is often seen as a strategic industry, providing lots of jobs in areas where there are few other employers, governments are usually keen on propping them up, either through subsidies or nationalisation.

Rising steel prices in America and Europe since January have raised hopes that plants such as Port Talbot may soon be able to break even without any government assistance. But many commodities and metals analysts predict this will simply encourage Chinese plants to increase production again, causing more overcapacity and lowering prices again later this year. Last month the OECD, a club of rich countries, convened a bunch of ministers in Belgium to discuss measures to deal with the crisis. But until countries stop subsidising their plants, or imposing tariffs to artificially raise prices, progress towards ending the steel glut will be slow.

Source: The Economist, 4th May 2016

Extract 2: Tata's Effort to seek a way out of UK Steel Woes

Tata Steel is in talks with its rival ThyssenKrupp about merging their European operations in a deal that appears to give a stay of execution to the stricken Port Talbot steelworks. The Indian conglomerate said on Friday evening that it was exploring a joint venture with its German competitor that would include a large part of its troubled UK arm.

The proposal offers a glimmer of hope to the 11,000 workers at the collection of British factories, which had experienced years of losses, but the announcement does not dispel the cloud of uncertainty that has been hanging over the business. Koushik Chatterjee, group executive director at Tata Steel, said the discussions could lead to the creation of a "premium, world-class strip steel business" and it is too early to give any assurances about the success of these talks. Any deal could lead to massive restructuring to streamline the production lines and management offices as part of an attempt to find further cost savings in the business.

Although the possible joint venture was "encouraging" and the government will continue to work closely with Tata to find a long-term solution for sustainable blast furnace steel manufacturing in Port Talbot. However, there are also calls for the UK government to nationalise the entire business temporarily.
Source: The Financial Times, 8th July 2016

Source: The Financial Times, 7th July 2016

Extract 3: China's increased effort to curb pollution

Steel producers in top market China may face more shutdowns next year as the government steps up its fight against air pollution, although recent closures in the Hebei province have been restricted to the key producing region for now, sources said. Hebei produces about a quarter of China's crude steel output, which hit a record 716.5 million tonnes last year and is forecast to rise to 780 million this year. But output may suffer next year as China aggressively enforces more pollution control measures and focuses on industries like steel where there is an estimated overcapacity of around 200 million tonnes.

Last week's order to shut some facilities in Wu'an city in southern Hebei to curb power use had stoked steel output worries, pushing Shanghai rebar futures to 11-week highs. But prices have come off almost 2 percent since then on expectations the closures will last for only about 15 days.

"This temporary shutdown should not have any significant impact on steel output this month but we are afraid that Beijing might take more measures targeting steel mills next year to ease air pollution," said an official with a steel mill in Wu'an.

"The government can't just shut down everything as this will cause social instability and high unemployment rate, but they will do it step by step, and it's a gradual, long-term process." China's large steel mills had only seen an average profit margin at 2.99 percent for the first three quarters of this year, far lower than the average 6-7 percent margin for the whole manufacturing industry, according to state-owned media Xinhua, citing the China Iron and Steel Association.

If China follows through in closing mills that fail to meet pollution control standards and regularly inspects the approved ones, it could mark a "turning point" in both the enforcement of environmental standards as well as management of overcapacity, Citigroup analyst Ivan Szpakowski said. So far closures have mostly been in Wu'an, which has an annual capacity of around 40-50 million tonnes, where mills have started shutting down rolling lines and brought forward annual maintenance on blast furnaces since last week.

Source: Reuter, 13 Dec 2013

Questions

a) Suggest **one** possible reason for the change in geographical distribution of crude steel production between 2004 and 2014. **[2]**

b) Account for "the collapse of global steel prices". **[6]**

c) Explain why that the rise in China steel export "triggered demands from rival firms for protection" as mentioned in extract 1. **[2]**

d) **(i)** Explain how the merger between Tata and ThyssenKrupp brings about "further cost-saving" to the firms. **[2]**

(ii) Assess whether nationalisation will be effective in aiding the UK steel firms in surviving the steel crisis. **[8]**

e) Discuss the factors that will determine whether China should extend the mandatory "shut-down" beyond Wu' an, Hebei Province. **[10]**

[Total: 30 marks]

Question 2

Currency War
Figure 1: US Dollar to Chinese Renminbi Yuan (CNY) in 2014

Source: *fx Currency Exchange*

Extract 4: Yuan depreciation poses risk to Chinese economy

A weaker yuan was once one of the magic pills for China's economic boom. It was considered such an effective stimulus to Chinese exports. Some still argue that the Yuan, after years of appreciation, is still undervalued. The central bank, People's Bank of China (PBOC) initiated its campaign to tighten liquidity and raise interest rates last year, hot money flowed into China, which built up the market's one-way yuan appreciation sentiment. By sending the speculators a message that the yuan can depreciate, as well as the recent lowering of short-term interest rates, PBOC has tried to stem the inflow of hot money.

Adapted from *Globalrisk Insights*, 6 March 2014

Extract 5: US warns China after Yuan depreciation

The US has warned Beijing not to go back to manipulating its currency, following a sharp depreciation of the Yuan since the start of 2014. The US comments highlight concern in Washington that China will be tempted to respond to a slowing economy by holding down its currency in order to boost exports. Such moves could lead China to reduce global demand at a time when several other regions of the world, such as the eurozone, are weak. That in turn could hamper US growth. The Obama administration thinks that moving away from exports, via a more fairly valued currency, is in China's own interests and has generally sought to avoid pushing too hard. "To secure its own long-term growth and contribute more to global growth, China needs to shift to a growth model that relies more on consumption and less on investment and exports," said the Treasury official.

Adapted from *Financial Times*, 8 April 2014

Extract 6: Chinese targets to boost foreign trade

In response to a recent slump in foreign trade, China's State Council has announced a swath of new export tax measures, including plans to improve the country's export tax rebate system and simplify the application process for claiming rebates. In a similar move, export VAT refunds were recently extended to foreign trade comprehensive service providers—defined as foreign trade enterprises who provide export-related services for domestic SMEs in the manufacturing industry. Both measures show the Chinese government's concern with maintaining strong growth in foreign trade (especially as a means to maintain the employment rate).

Meanwhile, domestic companies received new incentives to import advanced technology and engage in outward investment for business development purposes. The announcement further called upon the Ministry of Commerce to speed up the implementation of China's free trade agreements and actively support domestic companies in anti-dumping and anti-subsidy trade suits.

Adapted from *China Briefing*, 21 May 2014

Extract 7: Why countries wage currency war

The U.S. dollar has been on a tear this year, rising against the currencies of virtually all major developed economies. What we're seeing around the world is intense -- and in some cases, deliberate -- devaluations. One reason for the devaluations is that, when economic growth is weak -- as it has been globally for five years -- governments feel tremendous pressure to increase exports and reduce imports to restore growth.

The European Central Bank, for example, wants to depress the euro to keep deflation at bay. The euro's earlier strength drove down import prices, forcing domestic producers who compete with imports to slash their prices. As a result, consumer price inflation moved steadily toward zero. It was a mere 0.4 percent in October versus a year earlier. The euro-zone economy remains stagnant, with a third recession since 2007 a possibility. Unemployment is high. Youth unemployment tops 25 percent in many countries; it exceeds 50 percent in Spain and Greece. Meanwhile, consumer sentiment, which never recovered from the last recession, is again dropping.

On the other side of the globe, Japanese Prime Minister Shinzo Abe is curbing deflation and reviving the economy. The use of monetary easing and yen-cheapening is to spur exports, retard imports and reverse the growing foreign-trade deficit. Fiscal stimulus, is difficult to carry off in view of Japan's already high government deficit and debt. Still, the Abe government is discussing some less-disruptive structural reforms that could raise Japan's growth potential. A cut in the top corporate tax rate to below 30 percent from above 35 percent, in line with the 29 percent average among developed nations, is one possibility. Also under consideration are "special economic zones" that would give companies the freedom to cut the red tape that constrains everything from hiring and firing to land ownership and management.

Adapted from *The Bloomberg,* 23rd November 2014

Extract 8: China is preparing for a currency war

The idea that central banks in China, Japan, the US and the eurozone have deliberately attempted to devalue their currencies to improve competitiveness has since taken hold. Many others, however, insist currency wars remain very much alive and thriving, to the detriment of investors and savers in emerging and developed markets. Investors are bracing for further surprising, unwanted monetary policy shifts in the belief that volatile markets since the start of the year are likely to encourage central bankers to employ protectionist tactics.

Some are sceptical about whether the ceasefire will last. David Riley, head of credit strategy at BlueBay Asset Management, the London-based hedge fund company, says: "Markets have decided that, by accident or design, there is a ceasefire in the global currency war. Currency wars leads to "protectionism and trade barriers which will be detrimental to global trade and economic activity", says Abi Oladimeji, head of investment at Thomas Miller Investment, the London-based wealth manager. "This in turn will undermine investor confidence and result in higher volatility. "So long as the global economy stays gloom, the temptation to adopt 'beggar-thy-neighbour' policies will persist."

Adapted from *The Financial Times*, 3rd April 2016

Questions

(a) **(i)** From Figure 1, describe the change in the external value of Chinese Yuan in 2014. [1]

(ii) With the help of a diagram, explain a possible reason for the change in the external value of Chinese Yuan. [3]

(b) Explain how People's Bank of China tried to stem the inflow of hot money. [2]

(c) Using an elasticity of demand concept, explain how China reduces global demand as mentioned in extract 5. [3]

(d) Using extract 6, discuss the effectiveness of measures adopted by China to improve export competitiveness. [8]

(e) Explain why governments aim to curb deflation identified in extract 7. [3]

(f) In view of the problems faced by different economies, assess whether, on balance, currency war can ever be justified. [10]

[Total: 30 marks]

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INNOVA JUNIOR COLLEGE
JC 2 PRELIMINARY EXAMINATION
in preparation for General Certificate of Education Advanced Level
Higher 2

ECONOMICS 9732/02

Paper 2: Essay Questions **23 August 2016**

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.

Begin each question on a fresh sheet of paper.

At the end of the examination, attach cover pages provided to **Section A and Section B Essay.**

Fasten all sections **separately** and securely.

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 **3** printed pages and **1** blank page.

Answer **three** questions in total.

Innova Junior College **[Turn over**

Section A

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

1 Oil prices fell sharply in the second half of 2014 amidst slow global economic growth.

Discuss the relative importance of factors influencing consumers' expenditure in air travel. **[25]**

2

Universal Studio Singapore Ticket Pricing	
Ticket Type	**One Day Pass**
Adult (Ages 13 to 59)	S$74
Child (Ages 4 to 12)	S$56
Senior (Ages 60 and above)	S$36

(a) Explain how the above pricing decision could be an example of price discrimination. **[10]**

(b) Discuss whether price discrimination will always improve society's welfare. **[15]**

3 'The market should be left alone as government intervention results in greater inefficiency.' Discuss. **[25]**

Section B

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

4 Chinese consumption decreased from 51% of Gross Domestic Product in 1985 to 43% in 1995, 38% in 2005, and 34% in 2013. By comparison, consumption is around 61% in Japan and 69% in the United States. Regardless of its relative percentage of GDP, China's consumption has been growing faster than any other economy's in absolute terms.

(a) Explain whether the size of national income multiplier is the main determinant in influencing the change in national income of an economy. **[10]**

(b) Discuss whether raising domestic consumption as percentage of GDP is the best approach to achieve sustainable economic growth. **[15]**

5 The slow economic recovery from world-wide financial crisis has caused emerging countries which exports commodities to suffer from currency depreciation and unsustainable balance of payment deficit. Growth of advanced economies is affected by the lower growth in commodities exporters and productivity growth remains weak. Amid slowing international trade growth, countries have turned to mega-regional trade agreements like Transpacific Partnership (TTP) and Transatlantic Trade and Investment Partnership (TTIP).

Explain the likely causes of balance of payment deficit and discuss the alternative policy approaches that are appropriate for a country to achieve healthy balance of payment amidst slow economic recovery. **[25]**

6 **(a)** Explain the factors that change Singapore's trade pattern. **[10]**

(b) Discuss the view that globalisation will always improve a country's standard of living. **[15]**

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Question 1: Global Steel Woes

Case Q1 Suggested Answers

a)	Suggest <u>one</u> possible reason for the change in geographical distribution of crude steel production between 2004 and 2014. Identify the change (1 mark): Increase in China and Other Asia countries **<u>share of global crude steel production / geographical distribution of crude steel production</u>** while there is a fall in other countries share of global crude steel production Explain the reason (1 mark): The China/other Asia countries has comparative advantage in crude steel production due to their relatively cheaper labour cost hence increasing level of production, hence attracting more steel manufacturing firm to relocate to China and Other Asia. (can also accept: possible relatively higher subsidy provided by Chinese govt than that of EU and Japan/increase construction and manufacturing activities in China than EU and Japan) Marker's comment: Many students mistaken that the production level of steel by a countries is the geographical distribution of crude steel production. Many students gave subsidy by Chinese govt as the cited reason from the extract but extract mentioned subsidy by countries hence need to look at the relatively level of subsidy given to explain for why china might increase production more that the othe countries.	[2]
b)	Account for "the collapse of global steel prices". DD – slowdown of world economy and end of China's construction boom → steel is FOP for construction and production of many manufactured goods such as cars and machineries → fall in dd for steel. PES is elastic due the high level of stock/short production time → fall in price less than proportionate to the fall in qty. SS – Government subsidy → lower COP of steel production → increase in SS. PED is inelastic due basic necessity as a FOP for production of many manufactured goods → fall in price more than proportionate to increase in qty → result significant fall in price of steel Combined Shift → fall in DD and increase in SS → resulted in the surplus at original price → downward price pressure → fall in price. With fall in DD and increase in SS, reinforce the fall in price → collapse of steel price. Only DD and SS factor (with combined shift) – cap at 4 One sided with price elasticity – cap 3 If no adjustment process – max 5 Markers' comment: Students have mistaken that the increase in China export of steel will increase the global supply. Most students tend to state or cite the evidence of DD and SS from the extract but failed to explain how they affect the DD & SS. Most students failed to recognised that the collapse of price refers to a significant fall in price and hence did not bring in PED and PES in the	[6]

	explanation as well as combined effect of a fall in DD and rising SS on the price.	
c)	Explain why that the rising in China steel export "triggered demands from rival firms for protection" as mentioned in extract 1. The increase in China steel export → **consumers will switch to relatively cheaper China Steel → fall in demand of steel from European or Japan's steel** (1 mark) → European or Japan steel producers will face **a fall in their TR and hence experience subnormal profit** (1 mark)→ need government to protect. Marker's comment Most students answer this question from the perspective of a government and not a producers hence bring unemployment and infant/sunset industries as the reason. Many students have also generalised that increase China steel as an act of dumping which was not accepted.	[2]
d)	i) Explain how the merger between Tata and ThyssenKrupp brings about "further cost-saving". The merger able to reap **Economies of scales such as Managerial EOS due to their increase production level** (1 mark) → streamline the production process and management offices like Finance Dept or Human resource dept (as in extract 2) → **less specialised workers will be required and the wage of these specialised workers will be spread over a larger output → average cost fall → cost-saving** (1mark on the explanation) Marker's comment: Most students have failed to link the increase the ability to reap EOS is due to the increase production level and merely listed the type of EOS without explanation on how the ave cost . Many provided EOS without the evidence from case.	[2]
	ii) Assess whether nationalisation will be effective in aiding the UK steel firms in surviving their steel crisis. Intro: Briefly explain UK steel crisis: - Losing competitiveness against the relatively cheaper China steel → fall in demand for UK steel - Falling global price of steel & fall in demand → fall in revenue → insufficient to cover cost of production → subnormal profit → shut down of steel firms → retrenchment of steel workers Thesis: Nationalisation can effectively aid UK firms - Define: Nationalisation is the process whereby the government take over the ownership of the firms in the industry and have direct control on the operation of the firms. - With Nationalisation, the government will be able to provide the fund needed to cover the subnormal profit and allow the firms to continue production of the steels → prevent the retrenchment of steel workers. - In addition, the nationalised firms can be merged and they will be able to reap more EOS, the cost-saving allows the firms to price their steels at a competitive price level so as to better compete with foreign steel producers and re-capture some of the global demand → which will increase their revenue → reducing the sub-normal profit in the LR.	[8]

Anti-thesis:
Nationalisation → firms to be complacent due to the government protection and govt objective is to not profit-maximising → remove the incentive for the firms to R&D or to seek for more cost-efficient method of production → more productive and dynamic inefficient firms → unable to regain its competitiveness against foreign steel producers → inability to re-capture the global market share. However, this is dependent on the

Nationalisation unable to resolve the problem of low global price due to over-production of steels in the world. Since EU is not the significant producer in the global market (10.9% in 2014), even if UK government reduce the amount of steel production after nationalisation → will not be able to increase the global price. In addition, it is fear that China (world's biggest steel producer of 49%) will take the opportunity to increase their steel supply in the world and hence resulting to the global price remain relatively low → worsen the profit position of UK steel producers.

Conculsion:
Effective in the SR – able to help firms cover the subnormal profit in the SR so as to prevent the shutdown of the steel firms and retrenchment of steel workers but not effective in the LR as the UK government has huge public debt, not sustainable for government to provide the support if the global price don't increase. In addition, might promote inefficiency → greater lost of competitiveness.

Level	Descriptors	Marks
L2	Balanced response and detailed analysis on the effectiveness and limitation of the Nationalisation in helping the UK steel firms cover cost, increase revenue or re-gain competitiveness	4-6
L1	One-sided or descriptive or limited explanation on the effectiveness and limitation of the Nationalisation in helping the UK steel firms cover cost, increase revenue or re-gain competitiveness	1-3
E2	Sound judgment with analysis	2
E1	Judgment without analysis	1

Marker's comment:
Many students have mistakenly took nationalisation as subsidy, hence provide an incorrect analysis based on subsidy. Most answers were descriptive.

e) Discuss the factors that will determine whether China should extend the mandatory "shut-down" beyond Wu Han, Hebei Provience. [10]

Benefit:

1) Ablility to reduce pollution
Production of steel → negative externality in production such as pollution → increase healthcare cost in China. The shut down of steel

factory → fall in the production of steel → reduce emission of the carbon → improve non-material SOL.

Anti-thesis for pt 1): Other policies like pollution control regulation can also reduce the pollution level. More stringent pollution control regulation (extract 3) → increase in cost to steel producers → force them to internalise the 'cost' of pollution. Hence may not need to further shutdown the more steel mill beyond Wu An.

Evaluation for pt 1): Given that China has a large manufacturing sector and is also producing many other primary commodities, the steel industry may not be only major polluting industry → hence a further shutdown of steel mill beyond Wu An may not significantly reduce pollution in China.

2) Reduce problem of over-capacity in steel industry
   a) lower steel production → Given that China contribute 54% (Table 1) → greatly reduce global supply of steel → allow global steel price to increase → given that demand is steel is relatively price inelastic → increase export revenue for China → improve BOP & increase profit for China steel producers
   b) reduce wastage of resources → can relocate the resources to the production of other goods and services

Cost:
1) Increase unemployment & lower SOL for steel industry workers
   Further Shutdown beyond Wu An → lose of job opportunity in the steel industry → increase cyclical unemployment → fall household income of steel workers → material SOL fall.
2) Further Shutdown beyond Wu An → Fall in export qty of steel → AD fall → fall in NY
3) As mentioned, with the further shutdown of steel mills → price of steel to increase → Higher COP for China's manufacturing producers in → cost-push inflation

Conclusion:
China Govt needs to weigh the cost and benefit → margin cost > margin benefit for shutting another steel mill beyond Wu An → should not extent the mandatory shut-down

Leve l	Description	Marks
3	Balanced discussion and detailed analysis on extent of costs and benefits that China will experience to decide whether to should extend the mandatory "shut-down"	6-8
2	Undeveloped analysis on costs and benefits that China will experience to decide whether to should extend the mandatory "shut-down	4-5

	One-sided detailed – cap 4 marks	
1	Merely lifting of evidence with/or descriptive analysis on costs and benefits that China will experience to decide whether to should extend the mandatory "shut-dow	1-3
Level	**Evaluation**	**Marks**
E2	Well-justified evaluation	2
E1	Some attempt to evaluate but may not be supported by sound economic reasoning	1

Markers' comment:
Most answers anchored their answer on "pollution/externality" incorrectly as they have on the how steel industry have created the pollution and market failure, rather than focusing on how the shut-down can resolve the problem of "pollution/externality". Most student merely lifted out the "unemployment and social unrest" from the extract without explanation. Some have mistaken that the unemployment that arises is structural unemployment. Many failed to consider the extent cost or benefit that will arise from the action of "extending the shutdown".

Suggested Answers for 2016 IJC Prelim Case 2

(a)	**(i)**	From Figure 1, identify the exchange rate of Chinese Yuan in January 2014 and December 2014. - Currency has depreciated. [1] **Examiner's Comment:** The diagram was misinterpreted by a handful of candidates.	[1]
	(ii)	With the help of a diagram, explain a possible reason for the change in Chinese Yuan. DD or SS shifting Reason: Extract 2, slowing EU and US economy, decreasing demand for imported goods and services, decrease in demand for Yuan [1] OR Government Manipulation of currency, increase Mss [1] Graphical Analysis with right diagram [2] **Examiner's Comment:** Candidates did not show understanding of what diagram to draw, ended up with an AD/AS graph which does not help explain the change in the value of Chinese Yuan	[3]
(b)	Explain how People's Bank of China tried to stem the inflow of hot money. Lowered interest rate and depreciation Lower rates of return [1] in terms of foreign currency [1] **Examiner's Comment:** Candidates failed to identify both components or did not explain.		[2]

(c)	Using an elasticity of demand concept, explain how China reduces global demand as mentioned in extract 5. Depreciation of Chinese Yuan Decreases the global demand for g&s for other exporting countries - Due to close Substitutes XED [1] - Lowered prices of Chinese exports [1] - Decrease in demand for other economy's G&S [1] OR Decreases the global demand for other economies - By Marshall Lerner's Condition, sum of price elasticity of demand for imports and exports is more than 1 [1] - Depreciation leads to an increase in net export in China [1] - Interconnectedness between world trade would therefore meant that the other economies would suffer from a net export deficit [1] **Examiner's Comment:** Candidates did not make use of elasticity concepts in the explanation or used the wrong concept in explaining.	[3]
(c)	Using extract 6, discuss the effectiveness of measures to improve export competitiveness in China. **Tax Rebates** Extract 3: Improvement of the country's export tax rebate system and simplify the application process for claiming rebates. In a similar move, export VAT refunds were <u>recently extended</u> to foreign trade comprehensive service providers—defined as foreign trade enterprises who provide export-related services for domestic SMEs in the manufacturing industry. Economic Analysis: The improvement of the tax rebates system and the simplification of the process makes it more accessible and easier for producers to claim tax rebates. In addition, the extension to service providers meant that more exporters will be able to benefit from the tax rebates. Tax rebates reduces the amount of taxes that the producers have to pay and with the extension to the service providers affecting a wider group of export providers, tax rebates would reduce the prices of exports. This allows China's exports to be more competitive in terms of its pricing for most of the exported goods and services. Effectiveness: Dependent on whether the producers pass on the cost savings & the cross elasticity of demand for the good. Furthermore, if the demand for the good is already lower due to taste and preference, the lowering of the prices would be insignificant in increasing the competitiveness of the exports. **Incentives for R&D** Extract 3: Domestic companies received new incentives to import advanced technology and engage in outward investment for business development purposes Economic Analysis: Increased ability to import advanced technology could lead to the production of better quality goods and services with at a lower price. Better quality exports will meet the taste and preference of the consumers increasing the non- price competitiveness of the exports in addition to the increasing price competitiveness when the producers pass on cost savings from cheaper production process. Effectiveness: Dependent on whether the technological readiness of the Chinese economy is sufficient to fully utilize the advanced technology imported. Without the	[8]

	skilled labour to tap on the new technology it will be like a white elephant. **FTA** Extract 3: Ministry of Commerce to speed up the implementation of China's free trade agreements and actively support domestic companies in anti-dumping and anti-subsidy trade suits. Economic Analysis: Signing of free trade agreements increases accessibility to new economies at a lowered tax rate. It allows for an increased consumer base which increases export demand for China's exports and it will be at a lowered price level with the reduced trade barriers therefore enhancing the export competitiveness of the exports. Effectiveness: China has been frequently commented on dumping and excessively subsidising their firms bringing about unfair competition in the international market. Although the signing of FTA could have taken place, countries would still impose protectionism against some products that were suspected of dumping. Conclusion: Tax rebates seemed like the most effective policy in the short run where the response on the fall in prices is most significant and immediate. On the other hand, for a long term effectiveness of sustaining export competitiveness, subsidies would be more desirable. Especially with its ability to improve on both price and non-price competitiveness, if China is able to effectively utilise the new technology, subsidies would be a more effective approach. FTAs would be an effective approach in consideration of the potential increase in the size of the consumer market China could have access into, where its competition can increase across the different economies. The influence and impact of the increased competitiveness is beyond the current economies.	

Levels	Descriptors	Marks
3	Explanation of at least 2 measures that relates to rise in export competitiveness in China with reference to the extract. Clear attempts to compare the effectiveness with a judgement on which measure is most effective.	7- 8
2	Explanation of at least 2 measures that relates to rise in export competitiveness in China with reference to the extract. Some attempts to compare the effectiveness. Max 4: No reference to extract	4- 6
1	1 sided analysis without comparison or a brief explanation of 2 measures without relating to the rise in export competitiveness with reference to China. Answer failed to consider measure recommended by the extracts.	1- 3

	Examiner's Comment: Candidates did not anchor and answer what was most effective. Policies mentioned often lacks economic analysis and were highly descriptive.	
(d)	Explain why governments target to curb deflation identified in extract 7. Consequences of deflation: -Expectation of lowered prices [1] - postpone current consumption and investments & fall in AD [1] - Decrease in actual economic growth/ employment [1] **Examiner's Comment:** Candidates explained the causes of deflation and did not recognise the question requires discussion about the consequences.	[3]

(e)	In view of the problems faced by different economies, assess whether, on balance, currency war can ever be justified. Justifiable: Devaluation-> Enhances Economic Growth, employment, deflation *** Use AD/AS expain how it can achieve the different macroeconomic goals Extract 4: US, EU & Japan trying to revive their current growth Economic Analysis: - Fall in external value of currency - Price of exports relatively cheaper in terms of foreign currency - Price of imports relatively more expensive in terms of domestic currency - Given that price elasticity of demand for exports is usually elastic due to availability of substitutes from international trade, Marshall Lerner's condition is satisfied. - Increase in net export - Increase in AD and RNY, achieving actual economic growth. Extract 4: Unemployment is high. Youth unemployment tops 25 percent in many countries; it exceeds 50 percent in Spain and Greece. - Increase in output - Increase in demand for factor input (Labour) - Especially in cases of labour intensive economies - Increase employment Extract 4: Deflation is an issue in Japan and EU - Increase in AD to increase GPL of the economy - Higher prices of imports could bring about a higher price of imported raw materials - Upward shift of SRAS to increase GPL - Reduction of deflation in the economies Not justifiable: Persistent devaluation of currency, deems devaluation ineffective Consistent devaluation might increase interest rates in the long run Extract 5: Currency wars remain very much alive and thriving, to the detriment of investors and savers in emerging and developed markets. Investors are bracing for further surprising, unwanted monetary policy shifts in the belief that volatile markets since the start of the year are likely to encourage central bankers to employ protectionist tactics. Economic Analysis: Devaluation of money would increase the GPL of the economy which would reduce the real interest rates from savings discouraging savers. The decrease in money supply available for loanable fund would increase interest rate eventually increasing the cost of borrowing, decreasing investments and consumption of big ticket items. Furthermore, with the banks worried about the volatility of markets and less willing to loan, they would increase the requirements for loaning or increase the interest rates therefore further dampening investments and consumption. Beggar thy neighbour Extract 5: This in turn will undermine investor confidence and result in higher volatility. "So long as the global economy stays gloom, the temptation to adopt 'beggar-thy-neighbour' policies will persist." Economic Analysis: The persistent devaluation of currency will eventually lead to undervaluation of currencies across economies. Even though the devaluation of the currency brings about an increase in net export, a surplus in trade balance in one	[10]

economy is created from the deficit in the trade balance for other economies. In the long run, a persistent trade deficit from trading partners due to currency war would lead not be sustainable and economies might eventually lead to a fall in net export and experience a slowdown in actual economic growth via the decrease in AD.

Conclusion:
A devaluation is justifiable for economies that is export dependent and requires to increase export competitiveness to drive economic growth, employment or even the reduction of deflation. However, the justification is only for devaluation and in the short run. In the long run, persistent devaluation across economies lead to a currency war which would eventually offset the benefits of the devaluation, therefore not justifiable.

The justification of currency war is dependent on the types of economies, it would be justifiable for small economies like Singapore or Hong Kong that is highly dependent on trade to drive economic growth. However, for large economies like USA, UK and Japan that has a relatively larger domestic market, it would not be justifiable to engage in devaluation and eventually a currency war. They could focus and develop their domestic market instead.

Lastly whether the currency war is justifiable is also dependent on the key problem the economy is facing. If the root cause of the problem stems from net export, it would be justifiable. However, if the main problem faced by the economy is due to domestic factors, other policies that targets internal factors might be more relevant.

Level	Descriptor	Marks
2	A 2 sided analysis showing the effects of currency war and justifying the devaluation of currency in consideration of the different problems faced by different economies. Max 5m: Without consideration of problems faced by different economies.	5- 8
1	A brief 2 sided analysis showing the effects of currency war and without justifying the devaluation of currency in consideration of the different problems faced by different economies. Or A 1 sided analysis showing the effects of currency war and justifying the devaluation of currency in consideration of the different problems faced by different economies.	1- 4

Level	Descriptor	Marks
2	Justification of the currency war with clear explanation using different context with provision of judgement.	2
1	Attempts to justify currency war without supporting statements	1

Examiner's Comment:
Some candidates were unable to accurately explain Marshall Lerner's Condition in the explanation of currency war while some did not even explain how the currency war could lead to different consequences. Many failed to address the problems faced by different economies and could not make use of the extract to justify the currency war.

[Total: 30 marks]

IJC H2 Economics Preliminary Examination 2016

Paper 2/ Essay Question 1
Oil prices fell sharply in the second half of 2014 amidst slow global economic growth.

Discuss the relative importance of factors influencing consumers' expenditure in air travel. [25]

Question Analysis:

Command Word	**Concept Word**	**Context Word**	**Comparative word**
'Discuss' Examine closely taking account of strengths and weaknesses in an argument; offer **reasons for and against**	**'consumers' expenditure'** refers to P x Q	**'air travel' market**	**'relative importance'** Weighing relative importance of DD & SS factors

Approach

- Using demand & supply & elasticity concepts, explain the factors that influence consumers' expenditure
- Discuss the relative importance of factors influencing consumers' expenditure
- Judgement – Weighing relative importance of DD & SS factors

Suggested Answer:

Introduction:

Air travel provides economic benefits not just for its passengers, but also for the wider economy by connecting businesses and individuals to global markets. The demand for air travel is sensitive to changes in air travel prices and incomes. However, the degree of sensitivity (i.e. its demand elasticity) will vary according to different situations.

Part I: Explain in total at least 3 demand & supply factors influencing consumers' expenditure

Demand factors

- **Slow global economic growth ➔ ↑ in DD [must explain]**
- Internet increasing price transparency ➔ ↑ in DD [optional]

The above 2 demand factors lead to reinforcing effect on both equilibrium price & equilibrium quantity of air travel.

Figure 1: Rise in demand & supply of Air Travel Market

Supply factors

- **Fall in oil prices ➔ fall in cost of production ➔ ↑ in supply [must explain]**
- National aviation tax imposed by governments [optional] [preferred]
  ➔ rise in cost of production ➔ ↓ in supply
  Can explain the offsetting effect of the above 2 supply factors on equilibrium price & equilibrium quantity.
- No frill carriers increasing competition ➔ ↑ in supply [optional]

Discuss the relative importance of the above demand & supply factors

- the net impact on equilibrium price and quantity (Q ↑, P is indeterminate) &
- thus, the changes of consumers' expenditure on air travel
- Preferred outcome: ↑DD > ↑SS ➔ ↑P, ↑Q ➔ ↑ consumers' expenditure

Part II: Price & income elasticity of demand are important factors that influence consumers' expenditure on air travel 0

Demand elasticities measure the change in the quantity demanded of a particular good or service as a result of changes to other economic variables, such as its own price, income levels and the price of competing or complementary goods and services.

Price elasticity of demand

Goods with elasticities less than one in absolute value are commonly referred to as having price inelastic or price insensitive demand. In other words, the proportional change in quantity demanded will be less than the proportional change in price. In this situation, increasing the price will increase the expenditure incurred by the consumer, since the expenditure lost by the decrease in quantity is less than the expenditure gained from the higher price.

Goods with elasticities greater than one in absolute value are referred to as having price elastic or price sensitive demand. In other words, the proportional change in quantity demanded will be greater than the proportional change in price. A price increase will result in a decrease in expenditure to the consumer since the expenditure lost from the resulting decrease in quantity consumed is more than the expenditure gained from the price increase.

Different consumers market segment:

Either explain Business Travel Versus Leisure Travel

In general, all else being equal, business travellers are less sensitive to travel price changes (less price elastic in demand) than leisure travellers. Business travellers generally have less flexibility to postpone or cancel their travel than leisure travellers. Nevertheless, the studies do show that even business travel will increase in the face of price decreases, albeit not to the same extent as leisure travel.

Explain the impact on price, quantity & consumer expenditure.

OR Short-Haul Versus Long-Haul Travel

Air travel price elasticities on short-haul routes were generally higher than on long-haul routes. In part, this reflects the opportunity for inter-modal substitution on short-haul routes (e.g. travellers can switch to rail or car in response to air travel price increases).

Explain the impact on price, quantity & consumer expenditure.

Evaluation:

The elasticity of air travel demand varies according to the coverage and location of the market in which prices are changed and the importance of the air travel price within the overall cost of travel.

In particular, there is an apparent paradox whereby:

Consumers are becoming increasingly sensitive to price, led by the boom in low cost travel, the transparency brought by the Internet and the intense competition on deregulated markets.

But, passengers are also becoming less sensitive to price, as increasingly lower air travel prices, in real terms, mean that the air travel price itself becomes a smaller and less important part of the total cost of a typical journey.

Income elasticity of demand

The income elasticity measures the sensitivity of demand for a good to changes in individual or aggregate income levels.

An income elasticity between 0 and +1 indicates a normal good, where the quantity demanded increases at the same or a lesser rate than the increase in income. For example, a good where a 10% increase in income results in a 0-10% increase in consumption would be considered a “normal” good.

An income elasticity greater than +1 indicates what economists call a luxury good, where consumption increases by a greater proportion than income. For example, as discretionary incomes rise consumers can afford to buy higher quality and/or leisure related goods that were previously beyond their reach. This does not mean these goods are the exclusive preserve of the rich, but that as living standards rise consumers value buying these goods the most. It is a measure of a highly valued good in consumer welfare terms.

There is some evidence that income elasticities decline as countries become richer and markets mature. Developing countries typically have a greater responsiveness, with an estimated short-haul income elasticity of around 2.0 at the route level and 1.8 at the national level.

There is also evidence that long-haul journeys are seen by passengers as different, more desirable, to the more commoditised short-haul markets, and so income elasticities are higher the longer the distance. This suggests that middle to lower income individuals are more likely to travel on short to medium haul routes, with higher incomes leading to a higher frequency of long haul travel.

Evaluation
It has been found that the growth of incomes, often proxied by GDP, is the fundamental driver of the demand for air travel. During the past twenty years global passenger traffic has expanded at an average annual growth rate of 5.1%, while global GDP grew by an average annual rate of 3.7% over the same period. That implies an average income elasticity of 1.4, similar to the average estimated above for developed economies. The implication is that economic growth can explain most of the expansion in air travel seen in the past twenty years. The fall in real air travel prices has played a part, but mostly in diverting travel between airlines and markets rather than significantly boosting overall travel volumes. In addition, economic growth is now increasingly being driven by developing economies, where income elasticities are higher.

Conclusion
Falling real air travel prices are important in passengers switching from one airline to another, and from one destination to another, but are much less important in driving aggregate national-level air travel or tourism growth. Growth of incomes, often proxied by GDP, is the fundamental driver of the demand for air travel, thus, the rise in consumers' expenditure in air travel.

Level	Knowledge, Comprehension, Application & Analysis	Marks
3	For a well-analysed and balanced discussion that addresses the relative importance of factors influencing consumers' expenditure in air travel market.	15 - 21

2	For an underdeveloped answer that discussed the factors influencing consumers' expenditure in air travel market.	10 - 14
1	For an answer containing a description of the demand and supply factors or one that contains conceptual errors.	1 - 9
Evaluation Marks		
E2	Evaluative judgement supported by appropriate analysis	3-4
E1	Unexplained judgement	1-2

Examiners' Comments:

This is the least popular question in Section A.

Most candidates made good use of well-drawn supply and demand curves. The majority gave at least one factor for a shift in the demand curve and at least one for a shift in the supply curve. However, the relative importance of the factors was not discussed.

Better responses related these factors to the air travel market. For example, they linked the rise in the supply curve with a sharp fall in cost of jet fuel or an insignificant increase in demand to the slow global income level. In addition, clear and well thought out evaluation led to a decision about the relative importance of factors influencing consumers' expenditure based on good use of various elasticities concepts.

Weaker responses drew correct diagrams without a detailed analytical explanation of what had been drawn. In addition, they did not relate the factors to the air travel market or the change in consumers' expenditure.

Oil prices fell sharply in the second half of 2014 amidst slow global economic growth.

Discuss the relative importance of factors influencing consumers' expenditure in air travel. [25]

by Jet New Jun Jie 1512A

Consumer expenditure is calculated using price x quantity and can be affected by both demand and supply factors. Supply factors include a sharp fall in price of oil while demand factors include a change in tastes and preferences and slow rise in average income levels, etc. The relative extent of these factors determining consumer expenditure depends on the respective price elasticities of demand and supply, income elasticity of demand as well as cross elasticity of demand.

A sharp fall in the price of oil has helped increase consumer expenditure in the air travel industry. As oil prices fell sharply, unit cost of production for air travel drastically falls as oil is a major factor of production. This means that there is a rise in supply of air travel.

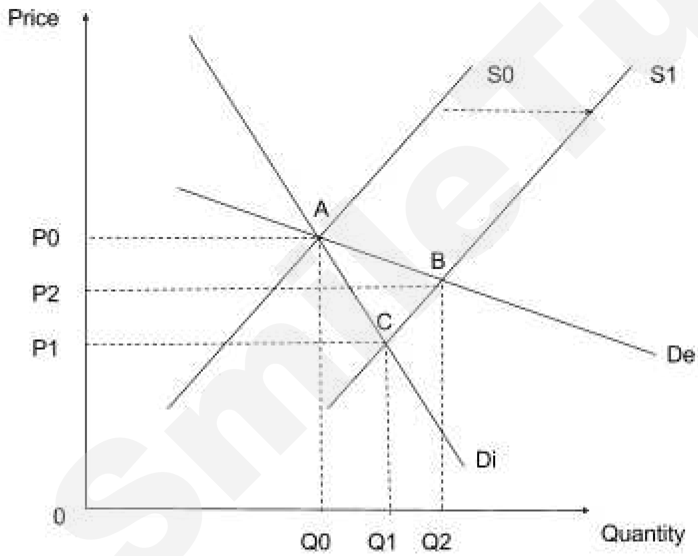


Figure 1: Sharp fall in price of oil

As shown on Figure 1, as S_0 increases to S_1 due to a lower unit cost of production, price fell from P_0 to P_2 while quantity demanded rose from Q_0 to Q_2 at a more than proportionate rate. This analysis is based on the group of consumers (middle-income bracket) where air travel tickets, as well as holiday trip costs, take up a large proportion of their income, hence price elasticity of demand, $|\varepsilon_p|>1$. Price elasticity of demand refers to the degree of responsiveness of demand in response to a change in price. Consumer expenditure also rose from $0P_0AQ_0$ to OP_2BQ_2.

As compared to another group of consumers, higher-income earners or businessmen, $|\varepsilon_p|<1$ is likely because prices of air travel are either covered by their companies or that they are able to afford them easily. When $|\varepsilon_p|<1$, when S_0 increases to S_1, P_0 falls to P_1, Q_0 rises to Q_1 along Di, resulting in a loss of consumer expenditure from $0P_0AQ_0$ to $0P_1CQ_1$. Hence, a fall in price of air travel due to a fall in cost of production can result in both rise and fall in consumer expenditure, depending on $|\varepsilon_p|$.

In addition, there is an inherent paradox where consumers are being increasingly sensitive to prices, led by the boom in low cost air travel, the transparency of air travel prices brought about by the Internet and the intense competition in deregulated markets, yet are also being less sensitive to prices as declining air travel prices mean that air travel price becomes less significant in the total cost of travel.

Furthermore, a large consumer base for air travel are likely businessmen who need to frequently travel overseas for business trips, hence overall, consumer expenditure is likely to fall due to a fall in price of air travel. However, it is important to take into account demand factors such as a rise in average income levels, resulting in increased consumer base of lower/ average income brackets.

A rise in income levels may result in an increase in consumer expenditure as consumers have higher ability and willingness to consumer the good or service of air travel. This is based on $|\varepsilon_y|$, the degree of responsiveness of demand with respect to a change in income.

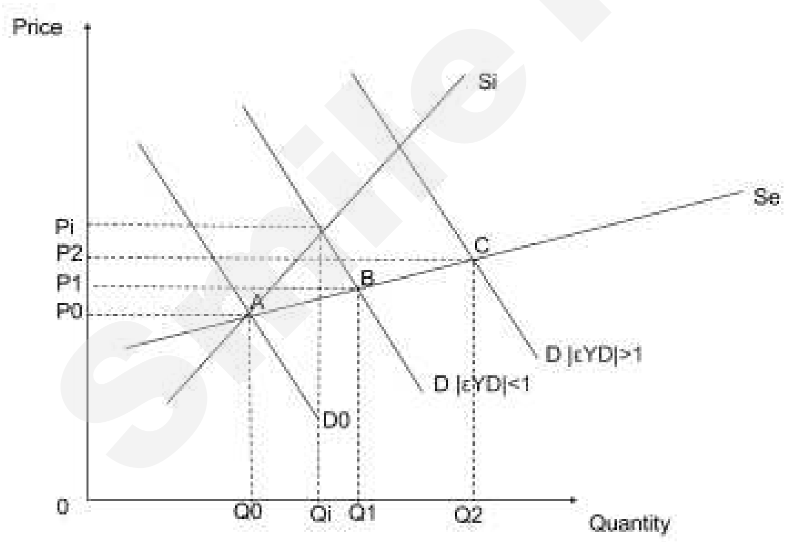


Figure 2: Rise in income levels

As shown on Figure 2, as income level increases, demand rises at varying extents depending on $|\varepsilon_y|$, affecting consumer expenditure. For consumers who are already able to afford air travel with ease, such as high income earners, a rise in income may not necessarily result in a large rise in demand. D_0 will only increase to D|εYD|<1. Price will rise from P_0 to P_1, where Q_0 increases to Q_1, since supply of air travel is relatively price elastic. In comparison, for consumers who are from middle to lower middle income groups, a rise in income leads to large rise in demand from D_0 to D|εYD|>1 as they are now able to secure precautionary savings and have higher purchasing power. This results in P_0 increasing to P_2 and Q_0 increasing to Q_2. Hence, this shows that consumer expenditure when |εYD|<1 only increases from $0P_0AQ_0$ to $0P_1BQ_1$, where when |εYD|>1, consumer expenditure increases largely from $0P_0AQ_0$ to $0P_2CQ_2$.

However, it is important to take into consideration that high income earners experience a larger absolute rise in income than lower-middle income earners, i.e. higher income earners earn more. Hence, the difference in change in consumer expenditure between the two consumer groups may be larger than expected in the analysis. In addition, this is based on the assumption that supply is price elastic, i.e. $|\varepsilon_s|>1$. When $|\varepsilon_s|<1$, when D_0 rises to D|εYD}<1, P_0 rises from P_0 to P_i, Q_0 rises to Q_i, reflecting a slower rise in consumer expenditure. Nonetheless, supply of air travel is relatively price elastic due to the advancement of technology bringing about new online ticketing services, allowing for easier control of supply of air travel.

Another demand factor is changing tastes and preferences of consumers, which can affect consumer expenditure. Pervasive advertisements for Korean products and tourism with the importation of Korean shows for free on TV has led to rise in demand for Korean products and tourism. In addition, as more consumers around the world get exposure to the Japanese anime craze, they become interested to visit tourist hotspots such as Akihabara. Hence, consumers increase demand for air travel and consumer expenditure rises.

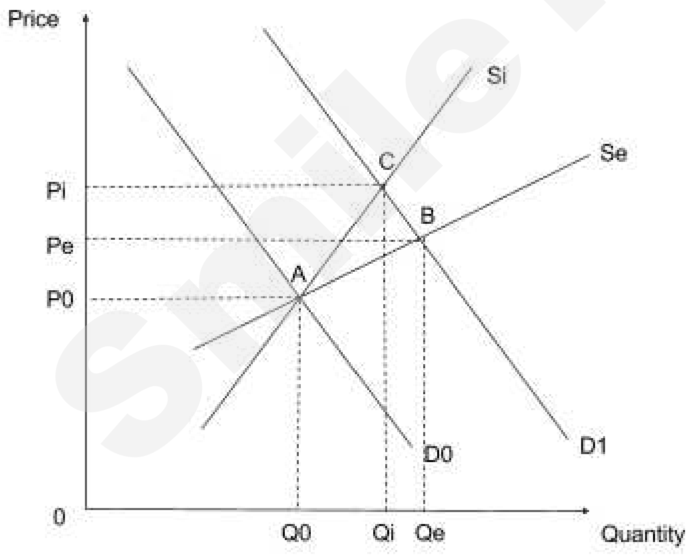


Figure 3: Rise in demand due to changing tastes and preferences of consumers

As shown on Figure 3, when demand rises from D_0 to D_1, due to changing tastes and preferences, P_0 rises to P_e and Q_0 to Q_e along S_e. This is due to supply being price elastic, explained previously. Consumer expenditure hence rises from $0P_0AQ_0$ to $0P_eBQ_e$, in comparison to $0P_0AQ_0$ to $0P_iCQ_i$ when supply is price inelastic.

However, the extent of demand shift is also dependent on average income levels. In developing economies where income is relative lower, changing tastes and preferences may not lead to a large rise in demand for air travel since price is a large factor of consideration. In advanced economies, however, price does not take up as much of a priority, hence demand rises to a larger extent, resulting in different extents in consumer expenditure.

It is also important to consider the simultaneous shifts in demand and supply when considering the change in consumer expenditure in air travel. Despite the fact that falling oil prices greatly increase the supply of air travel tickets, it is speculated that demand would double by 2035, due to the ascent of emerging markets and their rising middle classes who desire to travel to distant places by air, such as from China and India. Hence, it can be concluded that the rise in demand for air travel would outweigh the rise in supply and hence place upward pressure on the price of air travel.

<u>Figure 4: Simultaneous increases in both demand and supply</u>

Price

S0

B

P1

P0

A

D0

0

Q0

Q1

As shown on Figure 4, when the rise in demand from D_0 to D_1 outweighs the rise in supply from S_0 to S_1, there is a shortage of air travel, causing upward prices of air travel from P_0 to P_1. This results in an increase in consumption expenditure from $0P_0AQ_0$ to $0P_1BQ_1$.

The magnitude of cross elasticity of demand between air travel and domestic tourism also plays a part in affecting consumer expenditure. Air travel is overseas tourism and may be considered a substitute for domestic tourism. Since oil prices fell sharply, price for domestic tourism activities may also fall, resulting in a shift in consumption from air travel to domestic tourism, i.e. an increase in air travel demand to a smaller extent.

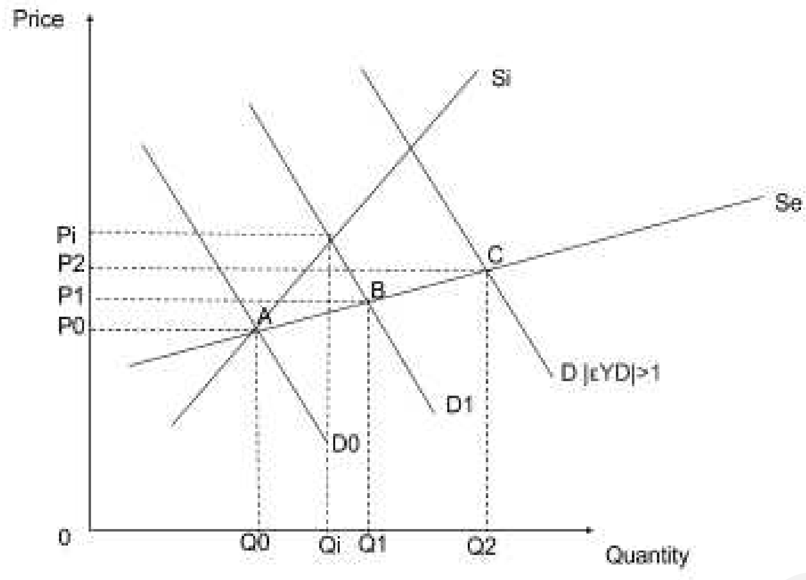


Figure 5: Differing cross elasticity of demand for air travel

As shown on Figure 5, when D_0 rises to D_2 due to low cross elasticity of demand, when consumers perceive domestic tourism as non-substitutes to air travel, P_0 rises to P_2 greatly while Q_0 rises to Q_2, increasing consumer expenditure to a large extent. When D_0 rises to D_1, due to high cross elasticity of demand, as some consumers may be first-time travellers, P_0 rises to P_1, while Q_0 rises to only Q_1. Hence, consumer expenditure increases to a much lower extent, from $0P_0AQ_0$ to $0P_1BQ_1$.

However, in countries which do not specialise in the tourism industry, there may be a smaller variation in cross elasticity in demand since most people would perceive domestic tourism as non-substitutes. Hence, cross elasticity of demand may be less significant in affecting consumer expenditure in air travel.

In conclusion, demand and supply factors depend on relative elasticities of demand and supply and income elasticity of demand to affect consumer expenditure in varying extents.

2

Universal Studio Singapore Ticket Pricing	
Ticket Type	**One Day Pass**
Adult (Ages 13 to 59)	S$74
Child (Ages 4 to 12)	S$56
Senior (Ages 60 and above)	S$36

(a) Explain how the above pricing decision could be an example of price discrimination. **[10]**

(b) Discuss whether price discrimination will always improve society's welfare. **[15]**

(a) Explain how the above pricing decision could be an example of price discrimination. **[10]**

Command: Explain how

Content: Price Discrimination

Context: Universal Studio Singapore Ticket Pricing

ATQ: Basic understanding of price discrimination and the application of the context to the definition and conditions required for price discrimination would be necessary.

Definition: Price Discrimination is the act of selling the same product at different prices to different buyers not accounted by cost differences.

Conditions of price discrimination

1. The firm must operate in imperfect competition, it must be a price setter
2. The firm must be able to separate markets and prevent resale. E.g. stopping an adults using a child's ticket.
3. Different consumer groups must have elasticities of demand. E.g. students with low income will be more price elastic.

Topic Sentence 1: The above could be a form of price discrimination by definition.

- Entrance to USS offers a range of similar services to the consumers of different age group.
- The consumer could be a child, adult or elderly, the entrance to the USS warrants a variety of services to all, ranging from exciting rides, spectacular performances to attractions based on blockbuster movies and TV series.
- The services would be available to all types of consumers, regardless of their age group and the amount they paid with respect to their age.

- Furthermore, since the provision of the services was identical, the cost to provide the services would also be similar.
- These meant that prices charged differently for the consumers were not due to cost differences and this could be illustrating a form of price discrimination.

Topic Sentence 2: The identification of price discrimination by the conditions for PD, price setter

- The provision of the USS service is in an imperfect market where USS is a price setter
- High barriers to entry in the theme park market, high market dominance
- High fixed cost due to the large land space required.
- High maintenance fee and labour cost
- One themed park in Singapore, acts like a monopoly with no close substitute
- Ability to set price due to market dominance.

Topic Sentence 3: The identification of price discrimination by the conditions for PD, must be able to separate markets and prevent resale

- Separate market by differing age group
- Age will be checked via the use of identity card during the purchase of the entrance tickets
- Tickets will be labelled with the age to differentiate the tickets bought
- Barricades at the entrance to check and ensure that the tickets bought matches the age group of the patron
- Resale of tickets to patrons of other age group would not take place

Topic Sentence 4: The identification of price discrimination by the conditions for PD, Different consumer groups must have elasticities of demand

- Price elasticities of demand differs across the age group
- Adults pay the highest for the tickets as the demand is the most inelastic across the different age group
- Adults of ages 13 to 59 have a relatively greater need for the tickets in comparison to children and elderly as they are of the age in the pursue of fun and entertainment and would have a greater desire to search for more fun elements.
- Unlike seniors who might have lesser desire for these forms of entertainment and children who might be too young to appreciate all of the rides, shows and entertainment.
- The differing PED allows the firms to charge at different prices where consumers with the most inelastic demand pays the highest as mention.

Level	Description	Marks
3	Clear explanation of the context and applying the definition and conditions for price discrimination to explain how the context is a form of price discrimination. Max 8m: 2 very well explained points where one of it must be from the definition and one from the differences in PED (2 Key points of analysis)	7- 10

2	Some explanation of the context and applying the definition and conditions for price discrimination to explain how the context is a form of price discrimination. Max 5m: Clear theoretical answers that did not explain using the context.	5- 6
1	Explanation of the context and attempts to applying the definition and conditions for price discrimination to explain how the context is a form of price discrimination with errors.	1- 4

Examiner's Comment:

Candidates were able to define price discrimination but did not apply the context to the explanation. The question requires candidates to explain how the pricing could be a form of price discrimination, however, candidates were just explaining how price discrimination works. Some were able to clearly identify the differences in price elasticity of demand for the different consumer groups, however wrote too much about the effects on total revenue which would be more useful in part b). Conditions of price discrimination were briefly brought up by students without application to context too.

(b) Discuss whether price discrimination will always improve society's welfare. **[15]**

Command: Discuss

Content: Consequences of price discrimination on society's welfare

Context: General

ATQ: Price discrimination and its effect on society's welfare, considering the society as a whole and examining the impact of consumers and producers within the society. Consideration of the word ALWAYS in identifying situations and scenarios where the statement hold and would not hold.

Thesis: Price Discrimination will improve the society's welfare in the case of a third degree price discrimination.

- Lowering of prices for lower income groups while higher income earners to pay a higher fee
- For the society as a whole, it increases the availability of the good for low income earners since the lowered prices increases the ability of the low income earners to demand for the goods.
- Ensures greater equality in the society where producers are more willing to produce for low income earners, increases the standard of living for low income earners at the expense of higher income earners.
- The ability to charge at a lower price for the lower income earners with a more price elastic demand leads to a more than proportionate increase in quantity demanded brings about a higher total revenue for the producers.

- Similar to the case where prices are charged higher for higher income earners with a price inelastic demand, it leads to a less than proportionate quantity demanded therefore allowing a higher total revenue.
- In addition to the greater equality, price discrimination is able to increase the revenue, rising the profits of the producers.

EV: The ability to be charging different prices to different consumers might not necessary improve equality among the consumers. This is dependent on the industries and how the price discrimination is carried out. In the case of the USS tickets, adults could also be the low income earners and might end up having to pay more too.

Thesis: Price Discrimination will improve the society's welfare in the long run

- This could be in seen in the case for second degree PD where consumers are charged by block pricing
- The additional revenue earned for charging a higher price for lesser quantity of goods and services would allow the producers to earn more profits
- Especially when producers earn sufficient total revenue and are able to product differentiate in the long run
- Improvement in the production methods would lower cost of production and pass on cost savings, lowering prices of g&s for consumers
- Improvement on the quality of the products will enhance satisfaction for the consumer, increasing their welfare.

EV: Depends on the willingness of the firms to re- invest their increase in revenue for R&D. Furthermore, even if they are willing to spend, R&D might not necessary be effective and successful.

Thesis: Price Discrimination will improve the society's welfare when looking at the view of producers

- Price discrimination targets at increasing producers welfare
- Any explanation of different PD to increase TR &/or producer surplus
- With inclusion of graphical analysis

Anti- Thesis: Price Discrimination will not improve the society's welfare in the case of a 1st & 2nd degree price discrimination when looking at the view of consumers

- Exploitation of consumers welfare
- Show how the PD works and illustrate the higher prices, lower output and loss of consumer surplus

EV: Dependent on the ability of the firms to price discriminate and whether there would be government regulation restricting the extend of PD.

Conclusion:

The impact of price discrimination on society's welfare is often dependent on the types of price discrimination that is being engaged. More often than not, PD generally improves the welfare of producers in increasing the ability of them to charge at a higher price and earning a higher revenue, contributing to a rise in profits. On the other hand, consumers are often exploited into paying a higher price for the same type of goods and services. Whether it will eventually benefit the consumers would depend on the willingness of the producers to engage in R&D to benefit them.

Level	Description	Marks
3	A clear analytical explanation about the effects of price discrimination on different the society as a whole and the different economic agents in the economy. Provision of a 2 sided analysis of context when it does not improve and cases when it would. Max 10m for a discussion without consideration of the effects on the entire economy as a whole Max 9m for an analysis without the use of examples	9-11
2	An analytical explanation about the effects of price discrimination with some missing links on different the society as a whole and the different economic agents in the economy. Max 6m for a discussion on one economic agent Max 6m for a one sided analysis	6- 8
1	An unclear explanation about the effects of price discrimination on different the society as a whole and the different economic agents in the economy.	1- 5

Level	Descriptors	Marks
2	Judgement that is justified with analysis	3- 4
1	Judgement without justification	1- 2

Examiner's Comment:

Candidates showed a lack of content mastery for this question. The results of the question was diverse where candidates who knew the topic well could easily score while those who were unsure about the content had difficulty explaining without concept error.

Some common misunderstanding by candidates include the idea that when consumers are charged at the highest price they are willing and able to pay, their welfare is fully maximized. THIS IS NOT TRUE! Their welfare has been compromised in the process. Some wrote about subsidies as a form of price discrimination. WHY? If it is a subsidy, it is a SUBSIDY, there is no pricing strategy by the firms.

3. 'The market should be left alone as government intervention results in greater inefficiency.' Discuss. [25]

Command: Discuss	Provide different view points / thesis-anti thesis on how Govt intervention may or may not results in greater inefficiency
Content: Market, Govt intervention, greater inefficiency	-How would market allocate resources without government? -Why is this form of allocation inefficient? - How would Govt intervention causes bring about efficiency? - How would Govt intervention cause greater inefficiency? - Your stand/conclusion
Context: General	Need to bring in relevant examples

Introduction

There are 3 main kinds of efficiencies, allocative, dynamic and productive efficiency. Having allocative efficiency as one of the microeconomic aims of governments, it is often debated if government intervention is needed in order to achieve allocative efficiency. This is especially so since the price mechanism that is used in the free market to allocate resources would only work under strict conditions and assumptions that includes: market is operating under perfect competition, there is perfect information, no presence of externalities, and all goods and services are produced (i.e. no missing market of public goods). Because these assumptions does not hold in reality, market failure arises, giving rise to the need for government intervention. But, government intervention may or may not necessarily lead to greater efficiency, depending on the cause of the market failure and the different context in which the market fails and the effectiveness of the policy enacted.

Explain how free market can allocate resources efficiently via price mechanism

For instance, in the market for burger, the demand curve for burger (DD) reflects the value of the burger to consumers, which is measured by the prices consumers are willing and able to pay. At any quantity, the demand curve shows the respective value of the last unit of burger that consumers will be willing and able to buy. Hence, the demand curve shows the consumers' marginal benefit (MB) derived from purchasing the last unit of burger.

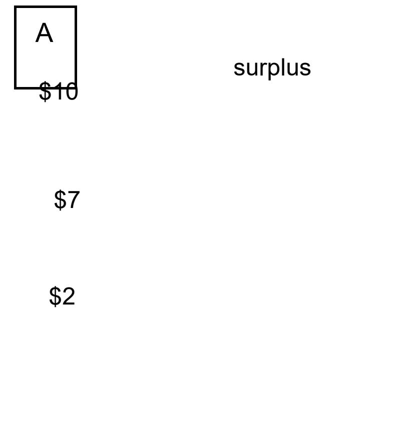


Figure 1: Market for burger

On the other hand, supply curve (SS) reflects the marginal costs (MC) of producing the additional unit of burger. At any quantity, the supply curve shows the opportunity cost in terms of resources used in producing the last unit of burger.

Allocative efficiency is achieved when price of the burger equals to the marginal cost of producing the burger as the value that society places on the last unit of the good (P) is equal to the opportunity cost in terms of resources used in producing that last unit (MC). In the free market, this equilibrium is achieved through the workings of the price mechanism where the price adjusts to equate the supply and demand for burger.

With reference to figure 1, the equilibrium price of burger is at $7. At prices above the equilibrium price, example, $10, the quantity supplied exceeds the quantity demanded. There is a surplus in the market which causes a downward pressure on the price to fall. This is because producers will find that they are unable to sell all their output at that price. They will begin to compete against each other to sell their excess supplies by asking for lower prices. Consumers will also recognize the excess supply and begin to offer lower prices. As prices begin to fall, according to law of supply, quantity supplied will fall from Q_2 while according to law of demand, as prices fall, quantity demand will start to rise from Q_1. This price adjustment process will take place until the market equilibrium is reached at $7 with number of burgers at Q where quantity demanded equals to quantity supplied.

The reverse is true. At prices below equilibrium of say $2, quantity demanded exceeds quantity supplied; resulting in a shortage that exerts an upward pressure on the price.

Competition among consumers will drive up the market price where consumers who do not succeed in purchasing all they want of the good at the current price would offer higher prices. As prices begin to rise, according to law of demand, as quantity demand will fall from $Q_{2;}$ while according to law of supply, quantity supplied will rise from Q_1 as prices rises. Similarly, this price adjustment process will take place until the market equilibrium is reached at $7 with number of burgers at Q where quantity demanded equals to quantity supplied.

Because of the ability of price mechanism to adjust itself according to market demand and supply to bring the market to an allocative efficient market-clearing equilibrium where the marginal benefit of consuming the last unit of burger (reflected by the price: MB=P) equals to the marginal cost incurred in producing that last unit of burger (MC), it is hence argued that there is no need for government intervention.

Nonetheless, as mentioned above, since price mechanism would only work under strict assumptions that do not hold in reality, market failure arises, giving rise to the need for government intervention which may or may not lead to greater inefficiency.

Explain how free market allocate resources (inefficiently) with presence of externalities in the market

In the example of a good that generates negative externalities in production such as Electricity in coal-fired power stations, external costs are generated during the production process.

These external costs that are borne by third parties in society who are not directly involved in the production or consumption of the electricity may include the air pollutants that causes acid rain which damages environment and buildings and will lead to the need for third parties such as the government to incur cost to 'clean-up' the environment and restore the infrastructure.

In a free market that operates under price mechanism, consumers only consider marginal private benefit (MPB) in their demand curve, such as the satisfaction that they will get from being able to use electricity powered appliances while producers only consider marginal private cost (MPC) in their supply curve, such as cost of buying coal as raw material. This means that in a free market, equilibrium is at $Q_{E,}$ where MPB and MPC intersects.

MSC=MPC+MEC

Price/ Cost/Benefit

A MEC

SS=MPC

DD= MPB = MSB

Figure 2: Negative externality in production resulting in over-production

However, this decision making process in a free market unfortunately do not take into consideration the negative externalities in production (marginal external cost, MEC) that was generated during the process. In fact, in order to reach the socially optimal equilibrium, marginal external cost (MEC) which is the divergence between MPC and marginal social cost (MSC) needs to be considered and the socially optimal quantity is at Qs where MSB=MSC.

Failure to account for externalities results in an over-production of electricity from coal-fired power stations (QE > QS) leading to a deadweight loss to society of area AEEs. Hence, it can be said that using price mechanism, resources will in this case be over-allocated to the market of production of electricity – market has fail to achieve allocative efficiency of resources.

Discussion if Government intervention results in greater inefficiency with presence of externalities in the market *(Anti-thesis +Thesis)*

When there is market failure due to presence of externalities, the government may choose to intervene to correct it. In this case of negative externalities in production, government could step in by introducing a carbon tax on the producers.

**(Please draw/indicate on figure 2 on your own)*

With the per unit tax set that is equal to the MEC, government aims to increase producers' marginal private cost (MPC) to ensure that producers fully internalize the MEC and reduce production to the socially optimal output (Qs) to achieve allocative efficiency. With this tax policy implemented, the government is able to correct the inefficiency caused by market failure to reach higher allocative efficiency.

However, due to the problem of imperfect information, governments too have limited information on the actual value of MEC in order to set an accurate and effective amount of tax to attain the socially optimal quantity, Qs. Under-estimating MEC will mean that good is still being over-produced while over-estimating MEC will lead to goods being under-produced or under-consumed. In both such scenarios, the government will too fail to allocate resources efficiently.

**(Please draw/indicate on figure 2 on your own)*

Greater inefficiency due to government intervention will arise if the over/under-allocation of resources via price mechanism is less than that of after government's intervention. Henceforth, before intervening, there is a need for the government to first assess the extensiveness of the MEC and deadweight loss is. If deemed that the inefficiency is not significant, it may be better for the market to be left alone as the government is ultimately unlikely to resolve the market totally due to imperfect information as explained above and hence, these precious resources should be placed in other markets that might be seeing a greater deadweight loss, lest causing greater inefficiency.

Evaluation & stand

Henceforth, in deciding whether or not greater inefficiency due to government intervention may arise in market where externalities exists, the extent to which imperfect information exist in the economy/industry is important. For an undeveloped and/or big country like India where the tool for facts findings and assessment is still relatively primitive, the extent of imperfect information is likely to be much greater than a developed and/or smaller country like Singapore that could gather and get more accurate information. This suggests that the market in India should be left alone while the latter could possibly welcome government intervention in order to achieve greater allocative efficiency.

<u>Explain how free market allocate resources (inefficiently) in an imperfect market</u>

In a free market, where assumption of perfect competition holds true, firms will be able to achieve allocative efficiency where supply (SS) meets demand (DD) at P_p and Q_p as shown in figure 3 below.

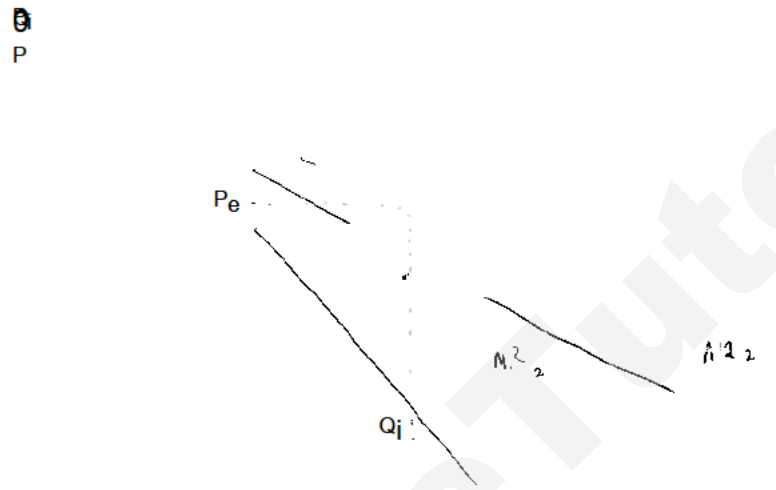


Figure 3: Market equilibrium of a firm under perfect and imperfect market conditions

Nonetheless, with the breakdown of assumption in reality that firms operates under imperfect market conditions, profit motivated producers will produce at profit maximisation point, MR=MC instead of DD=SS (P=MC) which will lead to allocative inefficiency.

This is because, if a firm produces at MR=MC instead, from figure 3, it can be seen that the firm will restricts output to Qi or Qe depending on the price inelasticity of its demand instead of socially optimum point at Qp. The more price inelastic the demand is, the more market power the firm has to raise price above marginal cost to sell the good/service at P>MC and at a lower equilibrium quantity – *if demand is price inelastic, it would produce at Pi and Qi and if demand is more price elastic, it would be producing at Pe and Qe.*

When price is above marginal cost, it means that society values the last unit of the good more than the additional cost the society incurs to produce it. In this sense, social welfare can increase if more resources are allocated to the production of this good. Hence, relying on free market mechanism cause an under-allocation of resources resulting in welfare loss and inefficient allocation of resources. This problem is especially apparent if there is presence of market dominance where firms enjoy larger market power and is able to set higher price and lower output as demand is relatively less price inelastic (as explained above).

<u>Discussion if Government intervention results in greater inefficiency in an imperfect market *(Anti-thesis +Thesis)*</u>

In face of this problem, there too are a few ways that the government could step in to alleviate the problem. One of the ways is through nationalisation.

Nationalisation refers to the situation when the ownership and control of a privately owned firm is taken over by the government. Without the objective to profit maximise, the government takes over the production of the good and produce at the socially optimum level where P=MC, hence results in greater allocative efficiency as compared to profit motivated free market.

Nonetheless, dynamic efficiency could be compromised. This is because, as oppose to the free market where firms such as Apple and Samsung needs to keep up with competition via non-price strategies such as newer versions with higher quality in order to maintain their market share and profits, a nationalised firm/industry lacks competition and with the lack of competition, it is hence not motivated to engage in innovation leading to greater dynamic inefficiency.

Evaluation & stand

Thus, in the case of imperfect market conditions, while government intervention may reduce allocative inefficiency, greater dynamic inefficiency could result. The decision to whether government should intervene then depends on her aims and priority and through the conduct of cost and benefit analysis to assess the importance of achievement of allocative or dynamic efficiency in the given time period. For instance, during the development periods of a country, it may be more important for the government to place more emphasis on achieving allocative efficiency by keeping the pertinent industry such as water and electricity supply nationalised to ensure that the basic welfare of her people being looked after. Following which, with the attainment of a decent level of standard of living, the government may then wish to deregulate and privatised these firms in order to ensure the up-keep of quality of the good/service produced and also to ensure that the firms/industry stay competitive in terms of prices and wastage of resources in order to minimise inefficiency.

Explain how free market allocate resources (inefficiently) in the market of public goods

Another assumption that is made under the working of free market price mechanism is that there are no missing markets. However, in reality, there exist problem of non-provision of public goods which causes a complete market failure that signifies an inefficient allocation of resources.

Public goods like the national defence system, tsunami warning system and flood control system have the characteristics of non-excludability & non-rivalry. In the free market, when a good is non-excludable, non-payers can also enjoy the good. This hence leads to the free-rider problem and no one is willing to pay for the good and demand is being concealed. Without an effective demand, producers have no incentive to produce as there is no revenue to be gained. This means, if good is left for market to produce, there will non-provision of such good signifying an inefficient allocation of resources.

Also, the characteristic of non-rivalrous in consumption means that the consumption of say the tsunami warning system by 1 person will not diminish the amount of this tsunami warning system for additional person to consume it. This means the marginal cost of providing to an additional consumer is zero. Since, to reach socially optimum level of output where there is allocative efficiency, price should be equal to marginal cost, the price of providing tsunami warning system will have to be 0. With a price of 0, profit motivated producers will not be willing to produce. Thus, if left for market to produce, there will non-provision of public good such as the tsunami warning system.

Given the characteristics of public goods allocation of resources through the free market is inefficient because market forces of demand and supply, and hence the price mechanism are non-existent. As a result, market equilibrium quantity for tsunami warning system in this case is equal to zero and the society suffers a welfare loss because the tsunami warning system, are beneficial and desired by society but are not provided for.

Therefore, in this case of complete market failure, there is a strong need for the non-profit motivated government to intervene in order to provide for the 'missing' public good.

Discussion if Government intervention results in greater inefficiency in the market of public goods *(Anti-thesis + Thesis)*

Government commonly employs direct provision of these public goods. In the provision, government do not usually collect a fee from consumers. For example, the government do not require her people to pay for the consumption (listening) of the siren of the tsunami warning system each time the siren is activated. Rather, these provisions of public goods are financed through the tax revenues that the government collects from her people. With direct provision, the desired but 'missing' public good is hence produced; causing lesser allocative inefficiency than if market were to be left on its own.

On the contrary, with the government holding the sole responsibility of producing public goods, this means that there is a lack of competition that may lead to productive inefficiency (X-inefficiency). This is because, under the assumption that market is perfectly competitive, there is a sheer need for firms to stay productive efficient, producing at the lowest cost to ensure survival. However, being the sole producer, which is made worse by the lack of incentive to profit maximise, the government may not have the incentive to use the most cost-efficient method of production which may include employing too many workers at unnecessarily high wages or using/buying of machines may not be utilised.

Figure 4: X-inefficiency occurring when government produces public goods

Henceforth, while government intervention in the case of non-provision of public goods may lead to greater allocative efficiency, productive inefficiency may arise.

Evaluation & stand

Nevertheless, even though the greater allocative efficiency seems to be compromised by the productive inefficiency that is likely to happen with government intervention, the extensiveness of allocative inefficiency due to missing market is possibly much higher than the productive inefficiency that may be reduced through prudent decisions made by the government. Thus, in this case, government intervention is advocated. Moreover, like in the case of Singapore, governments could also engage private auditing companies to assess the finances and operations of government bodies in order to bring about greater productive efficiency. Having said this however, the success of this method may not be seen in all the economies, especially in those that are high in the rate of corruption.

Conclusion

All in all, it is evident that there is almost no certainty to conclude if market mechanism or government intervention would result in greater inefficiency. In all the analysis given, it all boils down to the different contexts, situations, problems, types and the extent to which government intervenes that could either alleviate or worsen the problem of inefficiency.

'The market should be left alone as government intervention results in greater inefficiency.' Discuss.
[25]

Knowledge, Application, Understanding, Analysis		
L3	For a balanced answer that has 3 well-developed markets that addresses the different types of inefficiencies (i.e. AE/PE/DE). Answer analyses how government intervention may results in greater AND lesser inefficiency with clear comparison to the operations in a free market. Answer contains good use of examples.	15 - 21

	Max 18m: If answer only focuses on 1 kind of inefficiency regardless no. of market that is used.	
L2	For a balanced answer that has at least 2 markets that analyse how government intervention may results in greater AND lesser inefficiency. Answer may lack development but has <u>some attempts to compare</u> the level of efficiency (in only 1 kind of inefficiency) to the operations in a free market. Answer may contains some use of examples. Max 12m: If answer has at least 2 underdeveloped analysis on 2 markets that analyse how government intervention may results in greater AND lesser inefficiency (in only 1 kind of inefficiency) with no attempts to compare the level of efficiency to the operations in a free market. Answer may contains some use of examples. Max 12m: If answer has 1 developed analysis on 1 market that analyses how government intervention may results in greater AND lesser inefficiencies of different kinds (i.e. AE/PE/DE) with <u>some attempts to compare</u> the level of efficiency to the operations in a free market. Answer may contains some use of examples. Max 12m: For a **well-developed ONE-SIDED** answer that only discusses if government intervention may results in greater OR lesser inefficiency in the different types of markets when faced with market failure. Answer has no attempts to compare the level of efficiency in the operations in a free market. Answer may contains some use of examples. Max 11m: If answer has 1 developed analysis on 1 market that analyses how government intervention may results in greater AND lesser inefficiency (only 1 kind of efficiency) with <u>some attempts to compare</u> the level of efficiency to the operations in a free market. Answer may contains some use of examples.	10 - 14
L1	For an answer which shows some knowledge of how government intervention may or may not results in greater inefficiency. Answer may contain irrelevant content or unexplained, smattered or listed relevant points that appeared incidental. Max 7m: Answer only discusses how free market allocates resources in 3 different markets. Max 9m: Answer focuses on how free market allocates resources in different markets and merely stated possible ways of how government can intervene.	1 - 9
Evaluation		
E2	For an evaluative judgement based on economic analysis	3 – 4
E1	For an unexplained judgement, or one that is not supported by analysis.	1 - 2

H2 Economics Prelim 2016

Question 4

Chinese consumption decreased from 51% of Gross Domestic Product in 1985 to 43% in 1995, 38% in 2005, and 34% in 2013. By comparison, consumption is around 61% in Japan and 69% in the United States. Regardless of its relative percentage of GDP, China's consumption has been growing faster than any other economy's in absolute terms.

a) Explain whether the size of national income multiplier is the main determinant in influencing the change in national income of an economy. [10]

b) Discuss whether raising domestic consumption as percentage of GDP is the best approach to achieve sustainable economic growth. [15]

Part a

Question Analysis:

Command Word	**Concept Word**	**Context Word**	**Comparative word**
'Explain' Making clear of causal links, supported by economic analysis	**1) 'size of national income multiplier'** **2) 'change in national income'**	**'in an economy'**	**'main determinant'** Need to explain at least 2 determinants

Approach
[Key focus] Explain why & how the size of national income multiplier is the main determinant in influencing the change in national income of an economy.
Explain at least one alternative key determinant in influencing the change in national income of an economy.
Conclude – summarizing technique

Suggested Answer:

by Nguyen Thuy Duong & Lau Li Ying of 1512A

Introduction	The size of the multiplier is the main determinant in influencing the extent of change in real national income of an economy. However, there are also other factors, like the state of the economy and openness of economy that play a role in affecting the change in real national income.
Main Body I (Key focus): Topic sentence Explain how the	The size of the national income multiplier k is the main determinant in influencing the change in national income of an economy due to its multiplied impact on any increase or decrease in the components of AD. The effect of the change in national income can be explained via the multiplier process. The national income multiplier k is a

size of national income multiplier affects national income of an economy	autonomous change in aggregate expenditure. It is defined as the ratio of the change in national income to the initiating change in autonomous expenditure that brings it about.

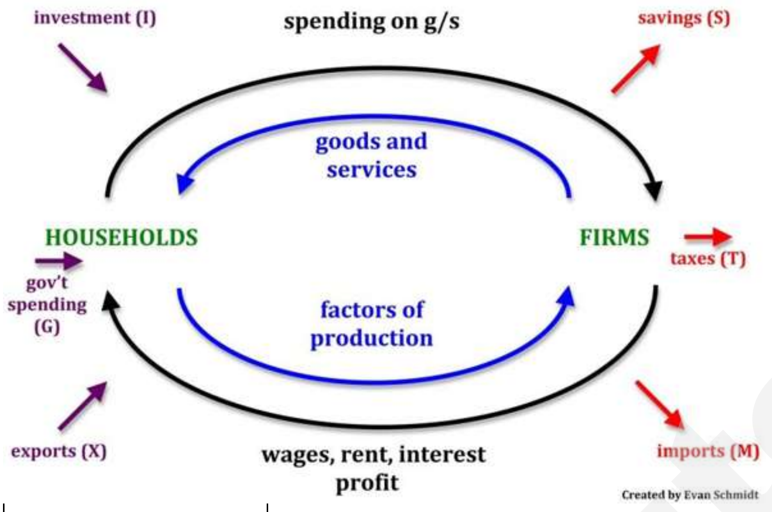


Figure 1:Circular Flow of Income in a 4 sector economy

	Using a 4-sector economy as shown in Figure 1 above, withdrawals are part of the factor payments made by firms to households that leak out from the circular flow while part of the incomes received by households will be spent on the goods and services of domestic firms. The remainder is withdrawn from the inner flow in the form of savings, taxes and import expenditure. Thus not all income received by households are channelled back into the income flow. Consider a 4 sector economy, assuming income is consumed, saved, taxed or spent on imported goods, by definition, $Y= C +S + T + M \Rightarrow \Delta Y= \Delta C +\Delta S +\Delta T + \Delta M$. Divide the expression by Y, $\Delta Y/\Delta Y = \Delta C/\Delta Y + \Delta S/\Delta Y + \Delta T/\Delta Y + \Delta M/\Delta Y \Rightarrow 1=MPC + MPS + MPT + MPM$. Thus, $1= MPC + MPW$. Marginal propensity to save (MPS) refers to the proportion of change in income which is saved. Marginal propensity to tax (MPT) refers to the proportion of change in income which is taxed and marginal propensity to import (MPM) is the inclination for imports to change when income changes. MPS, MPT and MPM are collectively called the marginal propensity to withdraw, MPW. The multiplier, $k = 1/MPW = 1/(MPS + MPT + MPM)= 1/1-MPC$. The smaller the value of MPW, the larger the size of national income multiplier. Hence when MPS, MPT or MPM increases, k decreases in size and vice versa. E.g. if MPC=0.2,

Alternative

Given an economy is initially at equilibrium (Y_0), an increase in injections (government expenditure) of $100 million to set up a factory will create a situation in which the planned spending exceeds planned output at the existing level of national income. There will be unplanned depletion of inventory stock. Assuming there are unemployed resources in the economy, output is then increased and national income increases by $100 million. The need to expand output levels means additional income for those who provide the output. Assuming MPW=0.5, 50% of any additional income received will be spent on domestic output. Since MPC=0.5, $50 million will be spent on food, clothing etc while the remaining $50 million is used on imports, taxes and savings and hence withdrawn from the flow. Another round of planned expenditure exceeding planned output and an unplanned depletion of inventory. The latter will in turn spend $25 million on consumption of domestically produced goods while the rest is withdrawn. The process will continue with each round of spending being half of the previous round. The process stops when the change in leakages is now equal to the original change in injections. The economy returns to equilibrium (Y_e) with withdrawals equal to injections. Rise in national income is $200 million, as k=2.

Aggregate Expenditure

Y = AE

$AE_1 = C + I + \mathbf{G_1} + (X-M)$

$AE_0 = C + I + \mathbf{G_0} + (X-M)$

0.5 x 50m

25m

0.5 x 100m

50m

100m

0

Y_0 Y_0 + 1000m

$Y_e = Y_0$ + 2000m

National Income

Figure 2: Graphical Illustration of the Multiplier Process in 4-sector economy

Thus, the size of the national income multiplier shares an inverse relationship with the marginal propensity to withdraw (MPW), the smaller the leakage in the form of the marginal propensity to tax,

	multiplier and thus the larger the expansionary effect on the national income of the economy. This applies to resource rich economies like the US which is likely to have a large multiplier due to her abundance of raw materials thus MPM is likely to be small. Also with her consumerist culture, her MPS is also likely to be low thus leading to a relatively bigger multiplier. For small and open economies like Singapore with limited natural resources, the size of the national income multiplier would be small due to her high marginal propensity to import & high marginal propensity. Hence an increase in Aggregate Expenditure of the US government would result in a larger increase in real national income than that of Singapore.
Main Body II Explain other key determinant that influences the change in national income of an economy	Due to the size of multiplier, the components of AD namely C, I and G played a smaller role in the promoting continuous growth in a small and open economy. Instead, other determinants like external economic outlook, investors' confidence level & existing capacity of the economy involved, influence changes in national income levels significantly. Another determinant that influences the change in real national income of an economy would be the state in which the economy is in. For an economy such as the US, operating near full employment, an increase in real national income is limited given an increase in Aggregate Demand. Meanwhile, an economy operating below full employment level such as Russia and India, an increase in AD

General Price

AS

P_2

AD

P_1

P_0

0

AD_0

AD_1

Y_0 Y_1 Y_f

R

This can be explained using an AD-AS graph. For the US's economy operating near full employment level, Y_f, every unit production would incur higher opportunity cost due to competition for scarce resources. For example, the building the New York city subway required many engineers to work there, leaving few engineers for private transportation reparation works, leading to resource crowding out due to scarcity of manpower. An increase of AD from AD_1 to AD2 would lead to an upward pressure on general price level from P_1 to P_2, with a less than proportionate increase in real national income from Y_1 to Y_f. For an economy operating way below full employment level, more goods and services can be obtained due to availability of resources. An increase in AD from AD_0 to AD_1 will cause a more than proportionate increase of real national from Y_0 to Y_1. Hence, in the long run, increase in LRAS is insignificant. Hence the state of the economy influences the extent of change in real national income of an economy.

Another determinant in influencing the change in real national income of an economy is the nature of openness of the economy. Depending on the openness of a country, this determinant affects different economies to varying extents. For example, Singapore is a small and open economy that is highly dependent on external trade for sustained economic growth. Her trade to GDP ratio is 326%, indicating the importance of exporting to significantly larger markets such as the US. In this situation, signing of FTAs becomes an

	between Singapore's major trading partners through tariffs and quotas. This allows Singapore to export more to these economies. Through FTAs, Singapore benefit from cheaper raw materials and intermediate products to be used for production. Singapore would be able to import cheaper crude oil for refining upon signing FTA with Gulf state, reducing unit cost of production and enabling refined oil products to be relatively more price competitive. This leads to a more than proportionate rise in quantity demanded than the fall in price, leading to rise in export revenue. Ceteris paribus, net exports increases. This increases AD and real national income of the economy significantly via the multiplier effect. However, when compared to a large economy like China, where domestic market is large and is able boost China's economy, external circumstances play little role in influencing the change in real national income, compared to the size of the multiplier. Thus, external circumstances like world recession and willingness of other countries to trade is a determinant in influencing change in real national income for a trade-dependent economy.
Conclusion	In conclusion, the change in national income of an economy depends largely on the size of the multiplier, besides external circumstances and spare capacity. Since the multiplier is largely fixed for each economy, the government should then take it into consideration when choosing the best approach to achieve sustainable economic growth as seen in (b).

Level	Description	Marks
3	For a well-balanced answer, supported by the explanation of at least 2 key determinants that influence the change in national income of an economy.	7- 10
2	For an accurate but <u>undeveloped explanation</u> of why & how the size of national income multiplier influences the change in national income of an economy.	5- 6
1	For an answer containing a superficial outline of the multiplier process or one that contains conceptual errors.	1- 4

<u>Examiner's Comments:</u>

Most candidates were able to use a range of approaches, including the use of diagram, equations and tables, but many responses would have benefited from giving a detailed theoretical explanation of outcomes rather than stating them. For example, calculation on large/low multiplier value would frequently be presented without an explanation of the underlying theoretical process.

Several candidates explained the Keynesian multiplier using AD and AS curves, but most showed the AD curve shifting along an upward-sloping AS curve. In strict economic analysis this is not the Keynesian multiplier but rather a 'damped' multiplier. (A minority did recognise that the full Keynesian multiplier only occurred on the horizontal part of the AS curve.)

In addition, a significant minority of the candidates misunderstood determinant as components of aggregate demand.

b) Discuss whether raising domestic consumption as percentage of GDP is the best approach to achieve sustainable economic growth. [15]

Question Analysis:

Command Word	**Concept Word**	**Context Word**	**Comparative word**
'Discuss whether' Examine closely taking account of the **benefits and costs for and against**	**1) 'raising domestic consumption as percentage of GOP'** **2) 'sustainable economic growth'**	**'approach'** Refers to rationale & intent of the suggestion	**'best approach'** Need to compare at least 3 approaches

Approach

- Thesis: Raising domestic consumption as percentage of GDP is the best approach to achieve sustainable economic growth
- Anti-Thesis: There are other better approaches to achieve sustainable economic growth
- Judgement – Give reasoned judgement to which is the best approach to achieve sustainable economic growth, given the contextual circumstance

Suggested Answer:

by Nguyen Thuy Duong & Lau Li Ying of 1512A

Introduction: **Define sustainable economic growth**	Sustainable economic growth ensures growth without creating further problems such as BOP imbalances, high inflation rate and environment damage that will otherwise suppress it. Given the increasingly volatile and uncertain world brought about by globalisation, raising domestic consumption as percentage of GDP would be the best approach for big consumer markets in the quest for sustainable growth. However, this is not ideal for economies with small domestic markets and facing an aging population, and hence other approaches such as increasing productivity and investing in Research and Development to look for new areas of comparative advantages would be better approaches.

Thesis 1 **(Internal factors)**	Raising domestic consumption as percentage of GDP allows economies with large domestic market to increase real national income via multiplier effect, leading to actual and sustainable economic growth. The high demand for goods and services from large domestic market induce employment opportunities in the retail and service sectors. Under Korea's Cosmetics Act, foreign cosmetics are subjected to "pre-market approval" (quality checks) and strict regulations and under the Korea Food & Drug Administration (KFDA) and Korea Pharmaceutical Traders Association) (KPTA). This high barrier to entry is created to ensure local cosmetics to be the key player in the industry, accounting for 85% of the growing market demand and raises private consumption level up to 10% annually. As a result, Korea experiences stronger job creation and give a strong fillip to dominant domestic firms such as AmorePacific and LG Household & Healthcare (with 50% market share). Comparing consumption and service - led economies and capital- led industries, consumption and service - led economies like Korea tend to create more jobs per unit of investment, accompanied by higher wages per dollar invested. Hence economies like Korea will benefit the most from this approach. Increase in private consumption causes aggregate demand (AD) to increase from AD_0 to AD_1, leading to increase in real national income via multiplier effect (Fig 1) and actual economic growth, with a positive spillover effects on internal economic health such as induced employment and higher standard of living for consumers (higher quality products in the case of Korean cosmetics). Hence, actual economic growth is sustainable and can be achieved with the approach of rising domestic demand and consumption. In addition, raising private consumption as percentage GDP eliminates the reliance on trade to achieve sustainable economic growth, thus, reducing susceptibility to external shocks for large economies such as China and hence is the best approach. The increase in real national income obtained from raising private consumption contributes to the national official reserves and diminishes the need to build up foreign reserves through reducing import expenditure. This allows China to narrow her trade surplus and reduce conflicts

Thesis 2 (External factors)	partners. Moreover, by turning towards producing consumption goods, China is able to reduce excessive usage of natural resources such as fossil fuels, water and land required to produce capital goods (industrial parks) and mitigate mounting environmental pressures, therefore achieving sustainable economic growth. Being one of the world's greatest producers of greenhouse gases and the world's largest coal consumer, China needs to adopt a more efficient use of resources in order to achieve sustainable economic growth. Hence, a rebalancing of China's growth toward production of goods and services would help boost the country's already – commendable efforts to put the economy on a more environmentally sustainable footing. In addition to a lesser reliance on international trade, consumption spending in general simply tends to be much less volatile than either investment or exports. Investment can be postponed according to the cyclical needs of businesses, but consumers tend to prefer a smoother consumption trend over their lifetimes and at least some portion of consumption spending goes on non-optional basic necessities. Broadly speaking, investment-led economies also tend to be those that are going through a rapid period of industrialisation; economies that are expanding more rapidly may face wider swings during shocks that affect the equilibrium exchange rate. Thus, raising domestic consumption as percentage of GDP is the best approach to achieve sustainable economic growth for economies with big domestic markets like China and the US.
Anti-Thesis 1	However, raising private consumption can be a challenge for developed economies facing aging population in a rapidly changing global economic environment like European economies and Singapore due to the necessary quantity and quality of labour required for potential economic growth, which then leads to cost–push inflation as these economies reach full employment level. Therefore, an approach that anchors on productivity–led growth will deliver sustainable economic growth for these economies.

An increase in labour productivity will lead to lower per unit labour cost and hence lower unit cost of production. This means higher rate of expected returns from investment, which attracts FDI into the economy and improve the economy's capital and financial account. The inflow of FDI also improves employment by creating employment opportunities for the locals. Additionally, advanced technologies, machines, skilled labour and expertise that FDI bring in can expand productive capacity of the economy and contribute to higher potential economic growth. Therefore, scarcity of resources that otherwise hinders sustainable economic growth can now be addressing following this

$LRAS_1$ $LRAS_2$

P_1
P_2

Y_1 Y_2

productivity–led growth approach.

Furthermore, Using AD-AS framework, labour productivity growth can reduce inflationary pressure caused by actual economic growth of economies operating at/near full employment level. An increase in labour productivity leads to rightward shift of LRAS from $LRAS_1$ to $LRAS_2$. Hence, general price level will decrease from P_1 to P_2 in response to an increase in real national income from Y_1 to Y_2 via multiplier effect. Hence, actual economic growth can be achieved without trade–offs with high inflation.

Improving labour productivity also help improve an economy's BOP through price competitiveness and product differentiation. Labour productivity growth lowers unit cost of production and price of exports in foreign currencies, thus boosting international export competitiveness. As demand for exports is price elastic, lower exports price leads to more than proportionate increase in quantity demanded for exports. Total export revenues R = P x Q thus increases and BOP in current account increases. This leads to a significant

	Singapore where exports revenues take up 326% GDP. Moreover, improvement in process and product innovation (as part of labour productivity growth) such as improving users' experiences in connectivity between consumers and electronics, as well as products/services improvement and differentiation through smart phones apps, wearable devices, data and media may lead to the development of consumer preferences to domestic products and form brand loyalty. This makes demand for domestic exports even more inelastic and price competitive with higher BOP surplus, contributing to sustainable economic growth. Also, to mitigate the negative impact of an ageing labour force on labour productivity growth, it is important for the government to continue to focus on lifelong learning and retraining of older and less educated workers, as it will help the workers to remain relevant and productive in the domestic economy. Hence, enhancing labour force's productivity and employability for older workers will be the key to help economies achieve sustainable economic growth and high employment levels.
Anti Thesis 2	Another approach to sustainable economic growth is to seek new areas for comparative advantage and build up sunrise industries to improve attractiveness of investment climate. The economy is able to benefit from potential economic growth and increased spare capacity. In Singapore, the government has identified 4 pillars of growth as they hold significant growth potential, namely the water processing, tourism, biomedical and pharmaceutical industries. The Biopolis and Fusionopolis are examples of such, and they have managed to attract many renowned companies into Singapore. Biopolis, in particular, have made its mark in tropical diseases and stem cell development in Singapore. With capabilities of high and advanced technology, Singapore also have found comparative advantage in water treatment plants(e.g NEWater). As a result of government focus on these industries, productive capacity in the country will rise as technology and expertise can be passed on to Singapore companies. This ensures sustainability as economic growth is supported with increase in workers' skills and knowledge, thereby ensuring vibrant economic environment for investment and provides opportunities for employment.

	However, there are also some adverse effects on citizens of lower income groups and skills. Such rapid industrialization and structural change might bring about increased income inequality and structural unemployment. Then again, the government needs to ensure lifelong learning through training programmes and workshops. One such example would be SkillsFuture, a philosophy led initiative in which the government provides opportunities to maximise one's potential and develop a mastery of skills. This policy encourages Singaporeans, young or old, to achieve success through the growth mindset, charting our own paths and skills mastery. Hence, an approach to sustainable economic growth is to seek new areas for comparative advantage and build up sunrise industries to improve attractiveness of investment climate.
Conclusion	In conclusion, raising domestic consumption as percentage is the most appropriate for countries with large domestic markets and when there are external shocks as countries are able to rely on their factor endowments to achieve sustained economic growth. However, when countries rely on one another to boost economic growth due to small domestic markets, other approaches like boosting productivity and research on comparative advantages to attract investors would be more appropriate in sustaining all aspects of economies.

Level	Knowledge, Comprehension, Application & Analysis	Marks
3	For a well-balanced discussion on the best approach to achieve sustainable economic growth.	9- 11
2	For an accurate but <u>undeveloped discussion</u> on the approach to achieve sustainable economic growth.	6- 8
1	For an answer containing a superficial outline on how economic growth can be achieved or one that contains conceptual errors.	1- 5
	Evaluation Marks	
E2	Evaluative judgement supported by appropriate analysis	3-4
E1	Unexplained judgement	1-2

Examiner's Comments:

The best answers showed a clear understanding of the term 'sustainable economic growth' and 'approach'. To address directly to the question requirements, candidates must explain the rationale/objective of the approach taken.

Most candidates ensured that their points were linked to achievement of higher economic growth. Often, explanations and evaluations presented were rehearsed responses that did not address to the specific question requirements.

Few scripts, however, explained sustainable economic growth accurately. Many confused sustainable economic growth with sustained economic growth. The result of this conceptual error meant that many essays lacked the required underlying analytical basis for both Thesis & Anti-Thesis stance. Some candidates misunderstood this to be a policy description question.

The slow economic recovery from world-wide financial crisis has caused emerging countries which exports commodities to suffer from currency depreciation and unsustainable balance of payment deficit. Growth of advanced economies is affected by the lower growth in commodities exporters and productivity growth remains weak. Amid slowing international trade growth, countries have turned to mega-regional trade agreements like Transpacific Partnership (TPP) and Transatlantic Trade and Investment Partnership (TTIP).

Explain the likely causes of balance of payment deficit and discuss the alternative policy approaches that are appropriate for a country to achieve healthy balance of payment a midst slow economic recovery. **[25]**

Command: Explain and discuss

Content: Balance of payment deficit, Policy (monetary policy, fiscal stimulation policy, exchange rate policy, trade policies)

Context: a midst slow economic recovery

Question Requirement:

1) Causes of BOP Deficit

2) Policies approaches to achieve healthy BOP

3) Appropriateness during slow economic recovery

Adapted from Kinson Tan 1512A

Key Analysis	Explanation
Introduction	As the world's economy is slowly recovering from the recent worldwide financial crisis, it led to some countries suffering from BOP deficit and some government around the world would have unsustainable BOP deficit. The **balance of payments** (BOP) is defined as a systematic record of all economic transactions between residents of an economy and residents in the rest of the world over a period of time, usually one year. The BOP estimate is very useful for assessing the **external performance** of an economy and for formulating policies connected to it. Hence government would adopt appropriate policies to achieve healthy BOP.
Content Analysis: Cause of BOP deficit	UK is recovering from the post worldwide financial crisis, employment rate increases and household income rises and consumers gain greater confidence in the economy. These will increase their consumption and decreases their savings. Consumer demand for more both domestically produced goods and services and also imported ones from other countries. Since demand for imported services such tourism are income elastic, when income rises, demand will increase. Assuming exports remained the same, import expenditure increase in UK will lead to net x fall and thus worsening of trade balance in the current causing BOP deficit in UK. Australia which is a resource rich country is one of the major exporting country of commodities like metalliferous ores and metal scrap is suffering from the global fall in demand for such goods hence the poor economic outlook in Australia led to domestic and foreign firms to lose confidence in its own economy hence domestic firms seek to invest in foreign markets such as US and China which are larger than domestic markets while some foreign firms might withdraw their investment to other countries that have better prospects thus it lead to net outflow of

	suffering from BOP deficit. BOP deficit can also be caused be relatively lower interest rate that resulted in capital and financial account deficit. The US lowered their interest rates relative to those in other countries. This results in short-term capital outflow such as portfolio investment due to lower profitability and may cause deficit in the capital and financial account. BOP deficit can also be caused by a deficit in the capital and financial account due to a net outflow of FDI. When US loss comparative advantage in production of labour intensive products due to higher wages thus causing higher cost of production for firms resulting in higher opportunity cost in production of such goods compared to China. The higher cost of production of labour intensive products will cause FDI to outflow to other countries to take advantage of the lower wages and hence lower production cost so as to increase their profitability. Thus any persistent net outflow of direct investment will cause BOP deficit in capital and financial account.
Content Analysis: Explain policy to achieve healthy BOP via improvement of current account. Appropriateness of the policy.	To achieve a healthy balance of payment, many economies had turned to free trade agreements (FTA) like TPP to facilitate trade and improve their BOP. Other policies that are also employed are expenditure reducing policies and expenditure reducing policies like protectionism. FTA agreements between countries to reduce trade barriers to encourage trade thus will attract foreign direct investment (FDI) to invest in the economy so as to exploit the lower trade barriers that improve price competitiveness of their goods that can be exported. With the net inflow of FDI into countries that signed more extensive FTAs, it will increase long term capital inflow hence reduces the capital and financial account deficit. However FTA agreements takes many years to negotiate for countries to strike mutually beneficial agreement therefore it will not be an immediate solution to reduce capital and financial account deficit. However it is not appropriate to attract FDI to improve the BOP a midst of slow economic recovery as investments are dependent on various factors of considerations such as economic outlook. With the uncertainty in global economic conditions, some firms might put off investment in US or China. Aside from FTAs, a country like UK can use expenditure reducing policies to maintain a healthy BOP. In times of rising real national income due to the recovery, consumers have better confidence in the economy and rising income hence more willing to consume goods and services due to higher purchasing power. A proportion of income may go to increased import expenditure. Contractionary fiscal policies through an increase in taxation and or government expenditure can help to reduce AD by causing a leftward shift of AD. This results in a reverse multiplier effect

	for factor inputs such as labour, thereby further reducing consumption expenditure and imported expenditure as income level falls which in turn improves trade account in the BOP. However in times of slow economic recovery, such a policy is detrimental to the economy as it reduces AD and via the reverse multiplier, there will be a more than proportionate fall in real GDP and higher unemployment which is not appropriate when the economy are just showing signs of recovery from the financial crisis. Protectionism can be used to improve BOP. Protectionism as opposed to FTAs is a policy to increase trade barriers such as tariffs to protect domestic firms from foreign competitors. The imposition of tariffs for example increases prices of imported goods relative higher compared to domestically produced goods as illustrated in Figure 1 where prices increases from Pw to Pw'. This has an expenditure switching effect as imported goods and domestically produced goods are close substitutes hence when price of imported goods increases, quantity demand for imports will decrease more than proportionately as consumers switch to relatively cheaper domestic goods, hence total import expenditure will decrease and improving trade balance in the current account of BOP. This policy might not be appropriate for small economies like Singapore that have limited resources to be able to produce enough domestic goods for their consumers. Furthermore, such actions might lead to retaliation from trading partners which might cause a fall in demand for its exports by trading partner hence overall net exports fall and AD fall leading to fall in economic growth. This might be detrimental to an economy which is just slowly recovering from the worldwide financial crisis.
Conclusion	In conclusion, some of the causes such as large import expenditure of sophiscated machineries for developing the economy of BOP deficit might not need policies to reduce the trade balance deficit. In consideration on the use of policies to reduce BOP deficit, governments have to weigh the outcome achieving BOP and gaining stronger economic recovery as they are conflicting goals.

Level	Descriptor	Marks
L3	For a well-developed answer that analyses the appropriateness of the different types of policies (how policy works & limitations) adopted by the government for both causes of BOP deficit due to current account and capital & financial account that is also well explained. Relevant examples are also well-integrated into the economic analysis. Answers are appropriate with the context of a midst the economic recovery are able to	15 – 21

	access 18-21 marks.	
L2	For an underdeveloped answer that provides underdeveloped answer with brief economic analysis of the different types of policies (how policy works & limitations) adopted by the governments for the different causes of BOP deficit. Max 11marks if only 1 policy is discussed with the relevant causes of BOP deficit (both current and C&F account). Max 10 for well-developed answer that only answer the causes of BOP deficit without the policies being used (they would have listed some polices).	10 – 14
L1	Answer is mostly irrelevant and contains only a few valid points made incidentally in an irrelevant context. OR an unexplained list of stated policies / causes of BOP deficit. OR a largely descriptive answer that shows some knowledge of BOP deficit and some policies but with no/little economic analysis.	1 – 9
	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

Marker's Comment:

Candidates which attempted this question have some misconceptions. Misconception includes unable to differentiate balance of payment deficit and budget deficit, the lenders and borrowers perspective of interest rates and the use of Marshall-Lerner's' condition. Some candidates have problems with questions interpretation as some did not even explain causes of BOP deficit and some went to explain how the policies improve economic growth instead of reducing BOP deficit.

Weaker candidates were unable to explain the causes and policies well with some candidates only explaining either current account deficit or capital and financial account deficit only. Some candidates also did not state how the policies suggested were able to address which aspect of BOP deficit clearly. Most candidate did not use examples and the policies used together with the consideration of economic recovery. Hence candidates were unable to access higher level marks if they did not address the appropriateness of the policies.

6 **(a)** Explain the factors that change Singapore's trade pattern. **[10]**

(b) Discuss the view that globalisation will always improve a country's standard of living. **[15]**

Suggested Answer for part a

Introduction:

- Define trade pattern – refers to the type of export and imports, vol of trade and who the trading partners
- Possible factors: Change in CA (SS factor), change in Income level (DD factor), Change in government policies

Body 1: Change in Techonology level

Due to the opening up of new economies around Singapore such as Vietnam, China, Thailand etc as well as the technological improvement in these developing countries → erosion of CA in term of low-value capital intensive industries in Singapore→ relocate of factories to countries like China, Vietnam and Thailand etc. While Singapore continue to develop an adopt new technology for higher value capital intensive manufacturing goods and knowledge based industries goods/services → change in export towards high-value goods and service while import more low value goods.

Body 2: Change in Income of Singapore

Rising affluent of Singapore due to past 2 decades of E.G → require more high qly and tech-advance goods → increase import of more luxury brand goods and tech gadgets → change Singapore type of import.

Body 3: Change in government policies (signing of FTA)

Signing of more FTA → lower trade barrier such as import and export tariff → make Singapore export more price competitive in other countries → increase ability of Singapore firms to penetrate a new market → increase in no. of trading partners and increase trade vol.

(Other factors acceptable: change in T&P, Change in endowment level, change in other countries policies)

Levels	Description	Marks
3	Well-developed answer that explains a variety of different factors that cause Singapore trade pattern to change with good and appropriate use of examples. Max 7m: Well-developed answers that provides only 2 factors of cause with good and appropriate use of examples	7- 10
2	Under-developed answer that explains a variety of different factors that cause Singapore trade pattern to change with no or little use of examples Max 5m: Well explained answers that provides only 1 factor with good and appropriate use of examples.	5- 6
1	Answer that has conceptually wrong and/or briefly describes the different factors that cause Singapore trade pattern to change.	1- 4

Examiner's comment:

Most students presented that their factors of change as a "current situational factor" rather than a "changing factor". Some merely stated that the factors or list the example without explanation. Students who score better are those who gave a changing factor and explain explicitly to the which aspect of trade pattern that is affected.

Sample answer for part b

Intro:

Define Globalisation: the increased interconnectedness between countries

Define SOL: Standard of living refers to the economic and social aspect of quality of life. It comprises of the material and non-material aspect of life. Material aspect of life refers to the quantity of goods and service that an average individual can enjoy while the non-material aspect refers to the level of socio-emotional, environment and culture and heritage of an individual.

Link Globalisation to SOL: Globalisation will affect the the SOL via the flow of trade, capital and labour.

Thesis: Globalisation improve SOL (select any 2 points)

Point 1: Globalisation → increase export due to improvement in transport technology (explain) → increase NY → material SOL. In addition govt tax rev increase → more funds for public and merit good

EV: depends on govt objective when allocating their funds

Point 2: Globalisation → more foreign competition due to the increase in imported goods and FDI due to the improvement in communication technology (explain)→

a) increase incentive for R&D by domestic producers → better qly and more variety of goods and svr
b) lower ability of domestic firm to set high price → tend to adopt more cost-efficient method → lower price → increase qty of goods and svr

EV: depends on the ability of foreign firms to penetrate the domestic market

Point 3: Globalisation → more imports → wider choice of goods. In addition, gloablisation allow countries to better to tap of each other CA by facilitating the slicing up of the production chain **(explain with use of example)** → relocate the production of some parts of the final product to countries that have CA in producing them → lower COP → price of domestic goods and service to fall → higher PP → more qty enjoyed

EV: Depend on the extent the country is dependent in imported FOP.

Anti-thesis: Globalisation worsen SOL

Point 1: Globalisation → increase export dd & FDI → increase production level and construction activities → increase level of pollution and environmental damage

Ev: Depends on level of green technology in the country

Point 2: Globalisation → increase in foreign labour and greater exposure to foreign movies/news/drama/music etc → intro to foreign culture and values → erode tradition cultures and heritage

Point 3: Globalisation → increase FDI → technology improvement → increase need for higher skill or knowledge → mismatch of skill → increase rate of structural unemployment in the LR → lower H/H income → lower ability to enjoy goods and svr in LR

Conclusion:

Globalisation → will mostly to increase the material of SOL but might reduce non-material SOL in some countries depends on level of govt intervention

Levels	Description	Marks
3	Well-developed and clear answer that explain how globalization will positively and negatively affect the standard of living as well as analyse how the extent of the impact will varies within/across countries. Good and appropriate use of examples Max 9m: Well-developed and clear answer that explain how globalization will positively and negatively affect the standard of living with good and appropriate use of examples	9- 11
2	Underdeveloped answer that explain how globalization will positively and negatively affect the standard of living. Little or no use of examples Max 8m: Well-developed one-sided answer that explain how globalization will positively or negatively affect the standard of living as well as analyse how the extent of the impact will varies within/across countries. Good and appropriate use of examples Max 6m: Well-developed one-sided answer that explain how globalization will positively or negatively affect the standard of living. (or only material or non-material SOL)	6- 8
1	Answer that are descriptive and/or mostly conceptually faulted in analysis.	1- 5

Levels	Description	Marks
2	Well explained Judgement with clear supporting evidence and	3- 4

	reasoning.	
1	Judgement with a lack of supporting argument.	1- 2

Examiner's comment:

Most answer failed to give a clear explanation from globalization, but merely state the effect of globalization. Most answers are only limited in scope whereby SOL increased because of either due to trade increase only or SOL is affected due to economic growth or employment level changing. Some answers did not answer to question because they analysis on individual SOL rather country's SOL. Many made the conceptual error that globalization brings about/build comparative advantage of a country rather than globalization allow countries to better tap on each other comparative advantage.

Jurong Junior College
2016 JC2 Preliminary Examination

ECONOMICS

Higher 2 **9732/01**

Paper 1

25 August 2016

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.

Begin each case study question on a fresh sheet of writing paper.
Attempt case study questions in ascending order of question sequence and indicate questions attempted clearly on answer sheet.

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.

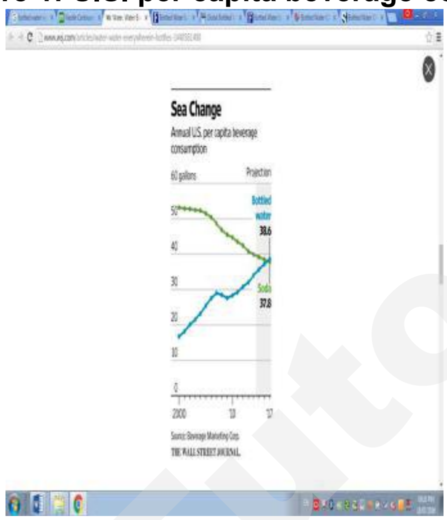
This document consists of **7** printed pages.

Answer **all** questions.

Question 1

Bottled Water and Clean Water

Figure 1: U.S. per capita beverage consumption



Actual: 2000-2014
Projected: 2015-2017

Source: Wall Street Journal

Extract 1: Bottled water sales volume to increase in the U.S.

Building on last year's growth of 4.7 percent, bottled water that includes sparkling, mineral, distilled and pure water, will again post large increases in both sales and consumption for 2014, according to preliminary data from the Beverage Marketing Corporation. Sales volume of bottled water in 2014 is expected to grow to $13 billion, an increase of 6.1 percent from 2013.

The liquid refreshment beverage market in the U.S. consists of soda, energy drinks, sports drinks, bottled water, and other non-carbonated beverages. The rise in the consumption of bottled water has been driven by the shift in consumer preference for healthier beverages. Soda has often been criticised for its high sugar content and caffeine. The alleged health impacts include high blood pressure, diabetes, and obesity. Many consumers know that convenient and refreshing bottled water has zero calories and is the healthiest option on the shelf, as compared to soda. Nevertheless, the overall rise in obesity rates in the U.S. shows that consumers may be less willing to give up on soda and other sugary beverages. Positive growth rate in the U.S. has also played an imperative role in the growth of the bottled water industry.

The bottled water industry is appealing with an increasing number of players every year, primarily due to positive sales revenue. The main type of plastic used for plastic bottles, polyethylene terephthalate, as well as the main type of mineral used for glass bottles, silica sand have been experiencing fall in prices. These plastic and mineral made up a relatively large proportion of the production of bottled water, and U.S. being the one of leading producers has sufficient stocks available. The other costs of making bottled water such as fuel, electricity and labour are also obtained easily with ease.

Source: *The Economist*, 15 November 2014

Extract 2: Competition in the U.S. bottled water industry

Nestle Waters North America is the market leader of the U.S. bottled water industry. Aside from the other major market players PepsiCo's Aquafina and Coca-Cola's Dasani, Nestle also competes with the bottled water brands of private players. The firms in the bottled water industry are interdependent as they consider their rivals' reactions when setting prices, output, advertising budgets and other business models.

Coca-Cola's Dasani broadcasted a new ad campaign featuring actress Jennifer Aniston touting its vapor-distilled, electrolyte-enhanced Smartwater and launched an unsweetened, zero-calorie sparkling water beverage in lime, lemon, apple, and berry flavors in early 2014, whereas PepsiCo this summer ran its first ad campaign for Aquafina since 2008. Dozens of smaller, high-end specialty-water brands with names like Real Water, People Water and Happy Water have also came up with new bottle designs and exotic minerals to attract consumers. Firms also continue to invest in the exploration of technologies and recovery systems that enable more energy-efficient and cost-effective production of bottled water.

Source: *Wall Street Journal*, 19 August 2015

Extract 3: Consumption of clean water

Water is a basic necessity for life and drinking clean water reduces the number of episodes of diarrhea for an individual, making him healthier and more productive. Apart from the benefits to the individual, consuming clean water also leads to healthier populations as the spread of water-borne diseases is lowered, increased productivity and growing economies. Despite this overwhelmingly clear evidence, millions of people still struggle to access clean drinking water, and more than 840,000 people die each year from consuming unclean water and sanitation.

The most commonly used definition of "access" is defined as having a source of safe water within 1 kilometer of the dwelling. It is estimated that in 2015, 663 million people still lacked access to "improved" drinking water sources. Improved sources are those deemed to be relatively protected from contamination and, therefore likely to provide clean water for human consumption and household use, such as piped water supplies into the house or protected wells or springs. For the high number of poor households living in urban slums and in rural areas, there is insufficient access to clean water or sanitation, highlighting the inequality issue in most developing countries.

Poverty and local power inequalities can exacerbate inequalities of access to water. For example, in areas where informal providers are the only source of water delivery to poor households, without regulation to ensure fair pricing, extortion and bribery can inflate the cost of this essential service, such that the poorest households can in fact be paying the most for their water.

Source: Global Water Partnership and World Health Organisation

Extract 4: Towards a way to improve the situation

Water should be recognised as a great priority. One of the main objectives of the World Water Council is to increase awareness of the water issue, and decision-makers at all levels must be implicated. One of the Millennium Development Goals is to halve, by 2015, the proportion of poor people without sustainable access to clean water and increase its consumption. To achieve that aim, several measures should be taken.

Firstly, the subsidising of production of clean water that requires the use of sophisticated technology. This makes clean water affordable for the poor, yet may be costly for countries with weak fiscal position as spending on welfare programmes has to be cut. Secondly, the deregulation of the control of water supplies to private companies creates a more efficient system and allows more people access to clean water, and hence consume them. Yet, while water companies are able to update water systems, making them more efficient and more accountable to consumers, they can also make water more costly to the poor once market power is consolidated. Thirdly, educating citizens on the responsible use and benefits of consuming clean water, which may be difficult to implement and monitor. Lastly, the signing of water treaties to import clean water supplies provides a structure for nations to address their differences in managing and monitoring shared resources, as well as increases the access to clean water especially for third-world countries. However, these countries may not have sufficient capital and/or resources available for exchange.

Source: World Water Council

Questions

(a) Using Figure 1, compare the trend between U.S. per capita soda consumption and U.S. per capita bottled water consumption. [2]

(b) With reference to the likely market structure of the U.S. bottled water industry, comment on how a firm like Coca-Cola's Dasani may compete to maximise its profits. [6]

(c) Discuss the view that supply factors are likely to be more important than demand factors in explaining the extent of the change in sales volume of bottled water in the U.S. [8]

(d) **(i)** Explain why governments intervene in the market for clean water. [4]

(ii) With reference to the data, assess whether subsidies would be the most appropriate policy option for the government to achieve its microeconomic objectives. [10]

[Total: 30]

Question 2

Economic Slowdown

Extract 5: Trade dispute

China is sitting atop a glut of gluts. The massive amounts of industrial capacity built to enable the speedy development of the Chinese economy is increasingly idle in the face of a slowdown and transition to services within the maturing behemoth. Prices for products from coal and steel to industrial chemicals have fallen as markets work to clear the glut. Faced with an onslaught of cheap goods from China, some governments are reaching for anti-dumping tariffs like America, which placed punitive tariffs on steel imports from some countries in March.

Cheap exports from China reflect overcapacity that has developed as the Chinese economy has slowed. The resulting cheap Chinese goods may not be proof that China is on the verge of vanquishing all rivals, but rather a reflection of its manufacturers' weakness. That weakness is now being exported. Cheap exports depress prices in foreign markets, most of which are already experiencing worryingly low inflation. While central banks have little room to respond using conventional tools as interest rates are already at historic lows, governments are feeling the pressure to resort to anti-dumping duties.

Source: *The Economist*, 8 April 2016

Extract 6: Low or negative inflation

Falling prices sound like something to cheer. The emergence of the sharing economy is driving down the price of a taxi ride and a bed for the night. More recently tumbling prices for natural resources, especially oil, have boosted the spending power of consumers from Detroit to Delhi. Mark Carney, the governor of the Bank of England, reckons that falling energy prices are "unambiguously good" for the British economy. Mr Carney is not wrong. Nonetheless, the world is grievously underestimating the danger of deflation. The problem is that aggregate prices are dipping in so many places at once. Deflationary pressures are visible far beyond food and energy, and in countries that cannot claim to be leading the charge towards the new economy. Weak demand, driven by austerity, debt and a lack of economic growth is dragging down prices. In the euro zone, where deflation grips tightest, consumer prices fell by 0.6% in the year to January; Germany, Italy and Spain all saw falls. Prices in Greece have been declining for 23 months. Ultra-low inflation is also widespread. America, Britain and China each have inflation rates of less than 1%. This looks less like a welcome fall in prices than a sign of entrenched weak demand.

Deflation poses several risks. One familiar danger is that consumers will put off spending in the expectation that things will get even cheaper, further muting demand. Likewise, if prices fall across an economy but wages do not, then firms' margins will be squeezed and employment will stagnate or decline. Neither of these dangers is yet visible; indeed, America and Britain are seeing strong employment growth. A third, well-known risk is debt deflation: debts become more onerous because the amount that is owed does not fall, even as earnings do. This is a big worry in the euro zone, where many banks are already stuffed with non-performing loans.

The least-understood danger is also the most serious, because it is already here. Deflation makes it harder to loosen monetary policy. When inflation is at 4%, the central bank can take real (i.e., inflation-adjusted) rates well below zero, to -4%, by keeping headline rates at zero. But as inflation falls and turns negative, low real rates get harder and harder to achieve, just when you need them most. Most rich-world central banks have already cut their main policy rates near to zero in order to pep up demand. A growing number of European economies are using negative interest rates to encourage spending, although charging people to put money in the bank will eventually prompt them to keep their money under the mattress instead.

All of which means that policymakers risk having precious little room for manoeuvre when the next recession hits. And sooner or later it will—because of a sharp slowdown in China, say, or the effect of a rising greenback on dollar-denominated corporate debt, or from some shock that comes out of the blue. The Federal Reserve has cut its policy rate by an average of 3.9 percentage points in the six recessions since 1971. That would not be possible today. The break-glass-in-case-of-emergency option of depreciating the currency massively against a fast-growing trading partner is of limited use when so few big economies are growing rapidly and prices are falling, or close to it, in so many places. Policymakers should be more worried than they appear to be, and their actions to avert deflation should be bolder. Governments need to boost demand by spending more on infrastructure; central banks should err on the side of looseness. Next month the European Central Bank will start quantitative easing, and about time too, by buying assets and pumping money into the economy.

Source: *The Economist*, 21 February 2015

Extract 7: Inflation down in Singapore

The economy could witness a longer stretch of negative inflation this year. The recent falls in the consumer price index were largely due to policy-driven drops in housing rents and car prices and these coincided with sharp declines in global oil prices.

The Monetary Authority of Singapore's core inflation measure, which strips out accommodation and private transport costs, came in at one per cent, mainly reflecting lower but positive food inflation and services inflation. The labour market remains tight and the economy continues to expand.

Source: *The Business Times*, 24 April 2015

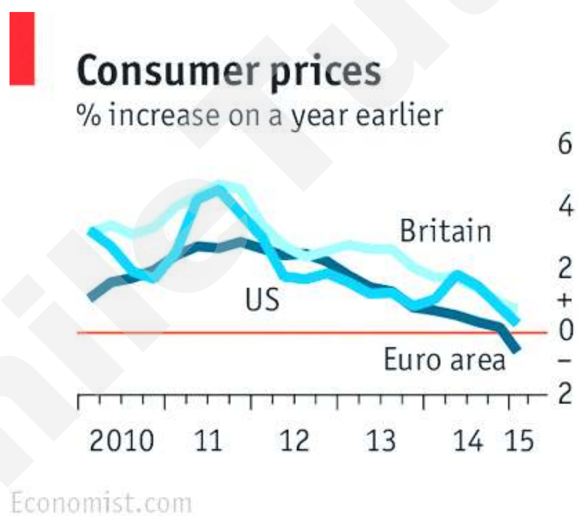
Extract 8: Negative interest rates

Negative interest rates have arrived in several countries, in response to the growing threat of deflation. In June the European Central Bank (ECB) announced that it would pay -0.1% on the money banks deposited with it; in September the rate went even lower, to -0.2%. Denmark, Sweden and Switzerland also have negative rates. Banks, in effect, must pay for the privilege of depositing their cash with the central bank. Central banks' intention of having negative interest rates is to spur banks to lend any reserves that are above the minimum regulatory requirement to willing borrowers, as well as to weaken the local currency by making it unattractive to hold. Both effects, they hope, will raise growth and inflation. In fact, the downward march of nominal rates may actually impede lending. It is difficult to reduce deposit rates below zero while lending rates are falling. Weakened financial institutions, in turn, are not good at stoking economic growth.

Negative rates do not seem to have achieved much on loans. The charges central banks levy on reserves are still relatively modest: by one estimate, Denmark's negative rates, which were first imposed in 2012, have cost banks just 0.005% of their assets. Indeed, the biggest effect of negative interest rates may be on currencies. Since the ECB introduced negative deposit rates the euro has fallen against the dollar by nearly 20%. After Sweden adopted negative rates, the krona fell to a six-year low against the dollar. It is no coincidence that the central bank with the greatest enthusiasm for negative rates is Denmark's: its sole objective is maintaining a fixed exchange rate with the euro.

Source: BBC News, 15 February 2015

Figure 2: Change in consumer prices 2010 – January 2015



Source: *The Economist*

Questions

(a) With reference to Figure 2, compare the change in consumer prices of the Euro area with that of Britain between mid-2011 and January 2015. [2]

(b) From Extract 5, explain how you would decide whether governments are justified in imposing anti-dumping duties on the cheap Chinese goods. [4]

(c) State **two** possible reasons why wages do not fall when prices are falling in an economy. [2]

(d) With the help of a diagram, explain the causes of deflation in various economies. [4]

(e) Assess whether negative inflation is undesirable to an economy. [8]

(f) With reference to the data where appropriate, discuss whether governments should use negative interest rates or another policy measure during a recession with deflation. [10]

[Total: 30]

JURONG JUNIOR COLLEGE
PRELIMINARY EXAMINATION 2016

ECONOMICS

Higher 2 **9732/02**

Paper 2

13 September 2016

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 essay answer on a fresh sheet of writing paper and indicate questions attempted clearly on answer sheet.

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.

Answer **three** questions in total.

Section A

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

1 Globalisation has resulted in rising income but the influx of cheaper imported steel forced some inefficient domestic steel producers to close down.

Assess the impact of the above effects of globalisation on the domestic steel market and the domestic car market. [25]

2 **(a)** Explain how barriers to entry affect price and output determination of firms. [10]

(b) Assess the extent to which market dominance reduces the negative impact of a recession on firms. [15]

3 Some governments provide healthcare for free, while others only subsidise it partially.

(a) Explain the factors that a government should consider in deciding whether healthcare is under-consumed. [10]

(b) Assess the view that government provision of national defence and free healthcare is both necessary, and results in an efficient allocation of resources. [15]

Section B

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

4 In 2014, Singapore's GDP grew 2.9% to $390.1 billion and long-term capital inflows grew 18% to $156.5 billion. However, growing pessimism about global economic performance has led to fears that export demand could decline in the years ahead.

(a) Explain how a fall in export demand could affect the circular flow of income in an economy. [10]

(b) Assess whether these economic indicators of GDP data and long-term capital inflows are the best measures of standard of living in Singapore. [15]

5 Over the past few years, Singapore's economic restructuring journey to achieve growth has focused on raising productivity through promoting innovation, investing in human capital and tightening the inflow of foreign workers.

(a) Explain why governments are concerned with failing to achieve sustained economic growth. [10]

(b) With reference to Singapore, discuss whether raising productivity alone can be effective in achieving sustained economic growth and low unemployment. [15]

6 Discuss the view that opening an economy to free trade and migration flows mitigates the economic problem of scarcity and achieves a country's macroeconomic goals. [25]

JURONG JUNIOR COLLEGE

2016 JC2 ECONOMICS 9732 (H2)

PRELIMINARY EXAMINATION

ANSWER BOOKLET

Suggested Answers for 2016 J2 H2 (9732) Economics Prelim Paper 1 Case Study

Question 1

(a) Using Figure 1, compare the trend between U.S. per capita soda consumption and U.S. per capita bottled water consumption. [2]

- U.S. per capita soda consumption has a general falling trend whereas U.S. per capita bottled water consumption has a general rising trend. [1m]
- U.S. per capita bottled water consumption is projected to continue to have a rising trend, and U.S. per capita soda consumption is projected to continue to have a falling trend. [1m]

OR

- U.S. per capita soda consumption has a continuously falling trend whereas the general rising trend of U.S. per capita water consumption has a falling trend between 2007 and 2009.[1m]
- The rate of increase in U.S. per capita bottled water consumption is faster than the rate of decrease in U.S. per capita soda consumption. [1m]

(b) With reference to the likely market structure of the U.S. bottled water industry, comment on how a firm like Coca-Cola's Dasani may compete to maximise its profits. [6]

<u>Explain the market structure of U.S. bottled water industry</u>

- Firms in the U.S. bottled water industry operate in an oligopolistic market. There are a few large firms that are Nestle Waters North America, PepsiCo's Aquafina and Coca-Cola's Dasani, dominating the market with other smaller private players (Extract 2).
- The increasingly competitive market implies mutual interdependence among the firms where each firm considers others' reactions when setting prices, output, advertising budgets and other business models (Extract 2).
- Profit is the difference between total revenue and total cost. Profit is maximised when revenue is maximised and cost is minimised.

<u>Explain price competition is not the main strategy to maximise revenue</u>

- Price rigidity is a result of mutual interdependence of bottled water firms in a competitive oligopoly. Their behaviours depend on the actions of their competitors to a large extent.
- As shown in Figure 1 below, if the current price is OP0 and Coca-Cola's Dasani is to raise its price, its rivals will not follow suit. The firm will experience a fall in its revenue as quantity demanded falls more than proportionately. This results in a more price elastic demand curve D1 above OP0.
- On the other hand, if Coca-Cola's Dasani lowers its price below OPo, its rivals will be threatened and is likely to follow suit. The firm will experience a fall in its revenue as quantity demanded rises less than proportionately. This results in a more price inelastic demand curve D2 below OP0. Such mutual interdependence results in a kinked demand curve.
- In this case, the firm is in equilibrium when it maximises profits when MC=MR along the discontinuous vertical portion, at E1, giving rise to the equilibrium output OQ0 and price OP0.
- Any change in price leads to lower revenue for the firm, and price competition is not preferred.

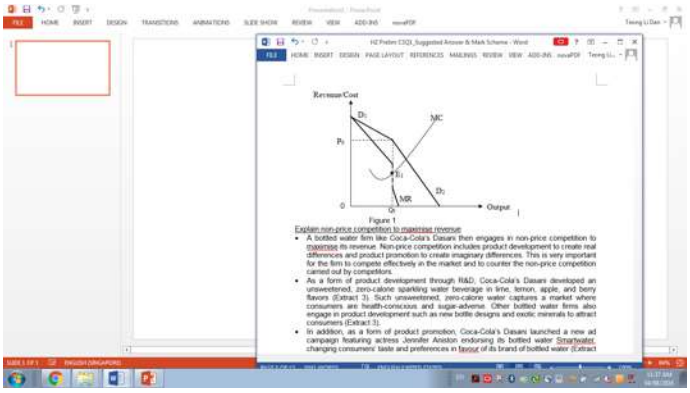


Figure 1

Explain non-price competition to maximise revenue

- A bottled water firm like Coca-Cola's Dasani then engages in non-price competition to maximise its revenue. Non-price competition includes product development to create real differences and product promotion to create imaginary differences. This is very important for the firm to compete effectively in the market and to counter the non-price competition carried out by competitors.
- As a form of product development through R&D, Coca-Cola's Dasani developed an unsweetened, zero-calorie sparkling water beverage in lime, lemon, apple, and berry flavors (Extract 2). Such unsweetened, zero-calorie water captures a market where consumers are health-conscious and sugar-adverse. Other bottled water firms also engage in product development such as new bottle designs and exotic minerals to attract consumers (Extract 2).
- In addition, as a form of product promotion, Coca-Cola's Dasani launched a new ad campaign featuring actress Jennifer Aniston endorsing its bottled water Smartwater, changing consumers' taste and preferences in favour of its bottled water brand. (Extract 2).
- As a result of such non-price competition, the demand for Coca-Cola's Dasani's bottled water will increase, hence maximising revenue.

Explain cost-cutting measures to minimise cost

- Possible cost-cutting measures include exploration of technologies and recovery systems (Extract 2). Such innovation helps to improve productivity, producing the same output using less factor inputs or using the same amount of factor inputs to produce a higher output, hence lowering the cost of producing bottled water.

Conclusion

- In conclusion, both revenue maximisation and cost minimisation are needed for a firm to maximise profits. To maximise revenue, a bottled water firm like Coca-Cola's Dasani operating in a competitive oligopolistic industry mainly focuses on non-price competition due to price rigidity that renders price competition ineffective. Such non-price competition is usually in response to rivals' actions due to mutual interdependence. It is important that the firm be the first to come up with new products, advertising campaigns or promotions before the other firms follow suit.

Marking Scheme		
L2	Well-developed explanation of price and non-price competition, as well as cost-cutting measures, with strong use of case study evidence with a reasoned comment. Max 5 marks for an answer that lacks explanation of kinked demand curve model diagram.	5-6
	Under-developed explanation of price and non-price competition, as well as cost-cutting measures, with some use of case study evidence. Max 4 marks for an answer without comment on price competition and	3-4

	explanation of price rigidity. Max 3 marks for an answer without case study evidence.	
L1	Smattering of valid points.	1-2

(c) Discuss the view that supply factors are likely to be more important than demand factors in explaining the extent of the change in sales volume of bottled water in the U.S. [8]

- According to Extract 1, there is a large increase in the sales volume of bottled water in the U.S. by about 4.7% from 2012 to 2013, and an expected 6.1% from 2013 to 2014.

Explain change in supply of bottled water

- The bottled water industry has become increasingly profitable for potential entrants over the years as shown by its positive sales revenue (Extract 1), holding cost constant. This results in an increase in the number of sellers, hence increasing the supply of bottled water.
- There is also a fall in prices of factor inputs, such as polyethylene terephthalate used to make plastics bottles as well as silica used to make glass bottles. These lead to a fall in cost of production and rise in profits. Profit-maximising producers then have more incentives to produce, increasing the supply of bottled water.

Explain change in demand for bottled water

- The positive growth rate in the U.S. (Extract 1) implies that national income is increasing. Holding price and population constant, real GDP per capita increases and the purchasing power of an average consumer increases. Hence demand for normal goods such as bottled water increases.
- Tastes and preferences of health-conscious consumers change in favour of healthier bottled water compared to unhealthy soda that causes high blood pressure, diabetes and obesity (Extract 1). This increases demand for bottled water.

Explain supply factors are more important than demand factors

- Supply factors are more important than demand factors in explaining the large increase in sales volume of bottled water in the U.S. The increase in supply is likely to be more significant than the increase in demand. The overall rising obesity rate in the U.S. (Extract 1) implies that it takes time to change the mindsets, hence the taste and preferences of consumers to consume the healthier bottled water as there is still a large group of consumers who are inclined to consume soda and other sugary beverages.
- The increase in supply is likely to be more significant because the fall in prices of major factor inputs (plastic and mineral) used in bottled water production contribute to a substantial fall in cost of production. This is coupled with the increasingly profitable sunrise industry that results in the increased number of smaller private players to enter and increase the supply of bottled water (Extract 1).
- Overall, as shown in Figure 2, both the less significant increase in demand for bottled water from D_0 to D_1 and the more significant increase in supply of bottled water from S_0 to S_1 have a mutually reinforcing effect in the increase in equilibrium quantity from OQ_0 to OQ_1. This explains the large rise in sales volume of bottled water in the U.S.

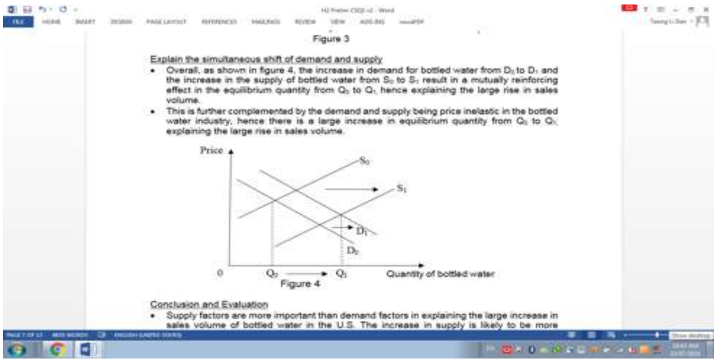


Figure 2

<u>Explain extent of change in sales volume using PES and how PES is more important than demand</u>

- The supply of bottled water is likely to be price elastic in the U.S. This is because the main factor inputs, of polyethylene terephthalate and silica sand in producing plastic and glass bottles that are largely produced in the U.S., have sufficient stocks available (Extract 1), indicating existence of spare capacity. Also the other factor inputs such as fuel, electricity can also be obtained with ease (Extract 1). Hence quantity supplied of bottled water is likely to be sensitive to price changes.
- As shown in Figure 3, the increase in demand for bottled water from D_0 to D_1 leads to a more significant increase in equilibrium quantity from OQ_0 to OQ_e with supply of bottled water being price elastic (S_e), as compared to a less significant increase from OQ_0 to OQ_i if the supply is price inelastic (S_i). This explains the large increase in sales volume of bottled water in the U.S.
- Given a highly price elastic supply (considered as a supply factor), the relatively small increase in demand is sufficient to result in a large increase in sales volume, hence the elasticity of supply is more important to explain the increase in sales volume.

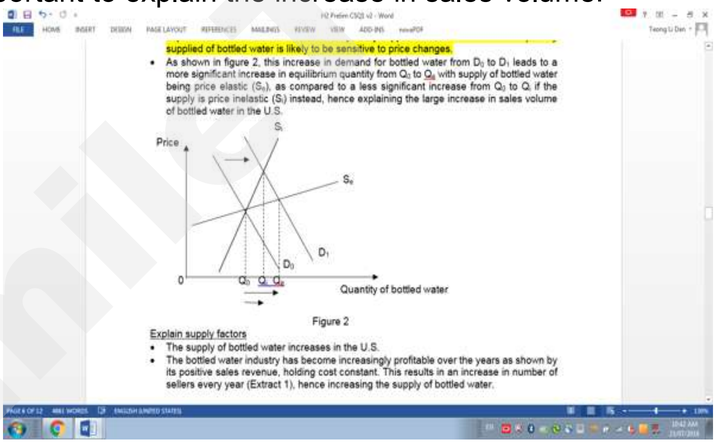


Figure 3

<u>Explain extent of change in sales volume using PED and how supply is less important than PED</u>

- The demand for bottled water is likely to be price elastic in the U.S. due to the availability of substitutes as a liquid refreshment beverage, such as energy drinks, sports drinks and other non-carbonated beverages (Extract 1). As the obesity rate in U.S. has been increasing (Extract 1), it can be implied that bottled water and the other sugary beverages are considered to be close substitutes for the majority of U.S. consumers. Hence quantity demanded for bottled water is likely to be sensitive to price changes.
- As shown in Figure 4, the increase in supply of bottled water from S_1 to S_2 leads to a more significant increase in equilibrium quantity from OQ_0 to OQ_e with demand for bottled water being price elastic (D_e), as compared to a less significant increase from OQ_0 to OQ_i if the demand is price inelastic (D_i). This explains the large increase in sales volume of bottled water in the U.S.

- Hence the price elastic demand is relatively more important than the increase in supply to explain the large increase in sales volume.

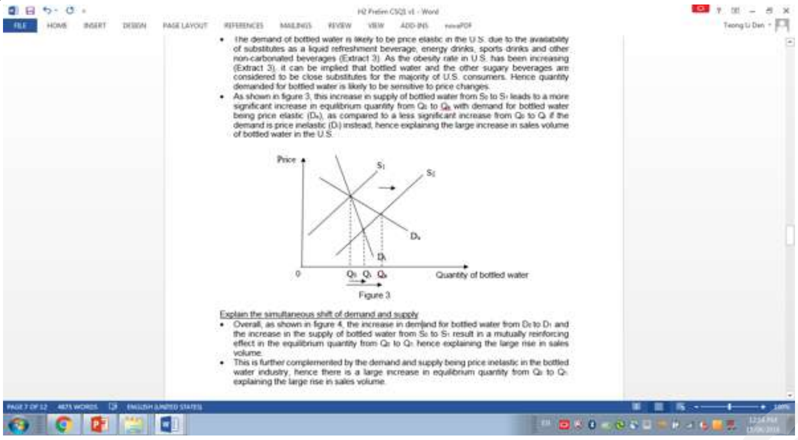


Figure 4

Conclusion

- Hence overall, the supply factors are more important than demand factors the U.S. bottled water industry. In addition, the price elastic supply of bottled water is more important than the increase in demand to explain the large increase in sales volume. Comparatively, the price elastic demand for bottled water is more important than the increase in supply to explain the large increase in sales volume.

Marking Scheme		
L2	Well-developed explanation of the relative importance of both demand and supply factors in accounting for the large increase in sales volume, with strong use of case study evidence. 7 and 8 marks for discussion that includes application of elasticity concepts, and how important these factors are in explaining the extent of change in sales volume. Max 6 marks for discussion of demand and supply factors with synthesis of which effect dominates, without application of elasticity concepts. Max 4 marks for well-developed explanation of either demand or supply factors.	4-8
L1	Under-developed explanation of the relative importance of both demand and supply factors in accounting for the increase in sales volume, with little use of case study evidence. OR Well-developed explanation of the relative importance of either demand or supply factors in accounting for the increase in sales volume, with little use of case study evidence.	1-3

(d) **(i)** Explain why governments intervene in the market for clean water. [4]

Under-consumption of clean water due to the presence of positive externalities

- Governments intervene in the market for clean water as consumption of clean water generates positive externalities.

- The private costs of consuming clean water refer to the price paid for the clean water and the time spent to access the sources of clean water by an individual. The private benefits refer to the healthier well-being due to reduced episodes of diarrhea for an individual (Extract 3).
- The consumption of clean water generates positive externalities and external benefits are spilled over to the third-parties. For example, its consumption leads to healthier populations as the spread of water-borne diseases is lowered, hence increasing productivity of the workforce and contributing to economic growth positively (Extract 3).

Costs / Benefits
a
b
MPC=MSC
c
MSB = MPB + MEB
MPB
Quantity of clean water
0
Q_p Q_s

Figure 5

- As shown in Figure 5, the presence of external benefits leads to the divergence between social benefits and private benefits, so marginal social benefit (MSB) is higher than marginal private benefit (MPB) for each unit of output.
- Assume no negative externalities, the marginal private cost (MPC) is equal to marginal social cost (MSC).
- Utility-maximising consumers only consider their private costs and private benefits, ignoring the external benefits spilled over to the third-parties. Left to the free market, individuals will consume at OQ_p level where MPB=MPC.
- However, the socially optimum level of consumption should be at OQ_s where MSB=MSC.
- Since Qp is more than Qs, there is under-consumption of clean water, resulting in welfare loss as shown by the area abc, as the social benefit of an additional unit of clean water consumed is higher than its social cost.
- Hence governments intervene in the market for clean water to achieve an efficient allocation of resources.

Under-consumption of clean water due to imperfect information

- Clean water is a merit good that generates positive externalities, and whose consumption is deemed intrinsically desirable by the government. Consumers, especially those living in developing countries that lack access to clean water, have imperfect information on the actual private benefit of clean water. They do not have perfect knowledge of the health and non-health benefits from the consumption of clean water (Extract 3). This results in under-consumption and inefficient allocation of resources, thus governments intervene to correct the market failure in the clean water market.

Under-consumption of clean water due to income Inequity

- The poor consisting of the high number of poor households living in urban slums and in rural areas do not have the ability to pay for clean water, hence exacerbating inequalities of access and consumption of clean water (Extract 3). Such poverty issues result in the poor to consume at a level that is below the socially optimum level of consumption.

1m- explaining private benefits and costs, as well as positive externalities in the consumption of clean water, resulting in divergence 2m- explaining diagram (unregulated vs socially optimum level of consumption, and DWL) 1m- diagram Students can also explain imperfect information and inequity as sources of market failure.

(ii) With reference to the data, assess whether subsidies would be the most appropriate policy option for the government to achieve its microeconomic objectives. [10]

- The microeconomic objectives of the government are achieving efficient allocation of resources and equity.
- As mentioned in Extract 4, subsidising production of clean water that requires the use of sophisticated technology is part of World Water Council's efforts to increase water consumption.

<u>Thesis: Subsidies is the most appropriate policy to achieve microeconomic objectives</u>

- The production of clean water is not cheap given the use of sophisticated technology (Extract 4). Hence the government can subsidise private firms to lower their cost of production hence pass on the cost-savings to consumers in terms of lower prices.
- The government can give subsidies per unit, equivalent to the MEB at Qs. This will lower the cost of consuming clean water, hence shifting MPC to the right to MPC' as shown in Figure 6 below. Consumption of clean water increases from Qp to Qs, which is the socially optimal level of output, and the deadweight loss is eliminated. Hence efficient allocation of resources is achieved.
- In addition, the lowering cost of consuming clean water will make such a basic necessity more affordable for the poor (Extract 4), hence narrowing the income gap and achieving equity.

Figure 6

<u>Anti-thesis: Subsidies is not the most appropriate policy</u>

<u>Limitation of subsidies</u>

- It is difficult to measure the monetary value of external benefits accurately and hence the amount of subsidy given may not be able to attain an efficient allocation of resources. This is because external benefits are difficult to define in monetary terms due to the existence of both tangible and intangible benefits – for example, the benefits of increased in workforce productivity from the consumption of clean water on the economy are difficult to quantify. If MEB is underestimated, the government is only moving the equilibrium nearer to the socially optimum level, but not fully eliminating the market failure. If MEB is overestimated, there would be over-correction in the market and resource allocation would still not be efficient. In reality, it is not easy to measure the value of external benefits that are spilled over to the third parties.
- Moreover, subsidies are not appropriate for countries that have weak fiscal positions (Extract 4). For example, such a policy will worsen the budget deficit a country already has, and incur huge opportunity costs in terms of forgone spending on other welfare programmes such as redistribution of income policies, hence unable to narrow the income gap and achieve equity.

Explain that other policies are more appropriate

<u>Deregulation of the control of water supplies to private companies</u>

- Deregulation of the control of water supplies to private companies (Extract 4) means that the government opens up the market to greater competition that spurs private firms to increase cost efficiency and productivity. This creates a more efficient system and allows more people access to clean water (Extract 4).
- Such deregulation aims to increase market supply, hence the access to clean water especially for high number of poor households living in urban slums and in rural areas (Extract 3) and drive down prices of clean water. As the cost of consuming clean water is lowered, MPC shifts to the right to MPC' as shown in Figure 6. Consumption of clean water increases from Qp to

Qs, which is the socially optimal level of output, and the deadweight loss is eliminated. Hence efficient allocation of resources is achieved.

- Hence the increased competition through deregulation also ensures that poverty and local power inequalities will not exacerbate inequalities of access to water (Extract 3), whereby poor households are exploited with high prices of clean water. The lowering cost of consuming clean water through the deregulation will make such a basic necessity more affordable for the poor (Extract 4), hence narrowing the income gap and achieving equity.
- Limitation: However, this policy may not be appropriate as such a deregulation consolidates market players once cost-inefficient firms are driven out of the industry (Extract 4). As a result of the reduced number of market players, profit-maximising firms with higher market share will exploit consumers by charging higher prices for clean water, earning supernormal profits that are concentrated in the hands of the few dominant firms and aggravating inequity.

<u>Public education</u>

- Public education through campaigns aims to raise awareness on the responsible use and benefits of consuming clean water (Extract 4) such as being a more productive individual. Also, educating the people about the positive spillover effects to third parties will help the individuals internalise the external benefits. This increases the private benefits of consumers, shifting MPB to the right to MSB as shown in Figure 6, and consumers increase the consumption of clean water from Qp to Qs, which is the socially optimal level of output, eliminating the deadweight loss. Hence achieving efficient allocation of resources.
- Limitation: However, this policy may not be appropriate as it incurs high cost in implementation. It is also difficult to monitor whether consumers have changed their consumption pattern (Extract 4). Even if the campaign is successful in persuading consumers to consume more, the increase may not be very significant. Also, public education does not have a direct impact on achieving equity.

<u>Signing water treaties</u>

- Trade policy such as signing water treaties with neighbouring trading partners to import clean water supplies is another policy option. This allows countries to manage and monitor shared resources effectively, and is especially appropriate for countries that lack access to clean water (Extract 4). The import of clean water supplies into the country drives than price of consuming clean water. MPC shifts to the right to MPC' and consumption of clean water increases to Qs, the socially optimal level of output, hence achieving a more efficient allocation of resources.
- Limitation: However, this policy may not be appropriate as it takes time for treaties to be negotiated. Moreover, third-world developing countries need money to purchase clean water and may not have sufficient capital and/or resources available for exchange (Extract 4). In addition, signing water treaties does not directly achieve equity unless the agreement involves a fall in clean water prices for the importing country.

<u>Conclusion and Evaluation</u>

- Subsidies is the most appropriate policy option in achieving the microeconomic objectives of the government to a small extent as it allocates resources closer to the socially optimal level of output and make clean water more affordable for the lower-income households, but it has its limitations. The use of subsidies needs to be complemented by other policy options to increase access to clean water at a lower price, and a combination of policies is hence more appropriate to achieve the microeconomic objectives.
- In addition, the appropriateness of policy depends on the budget position of the government. For example, subsidies is a less appropriate policy option for countries facing budget deficits as their weak fiscal positions will be aggravated (Extract 4).
- The appropriateness of policy also depends on the root cause of the problem. In third-world developing countries in which the root cause of under-consumption of clean water is due to

lack of access to it by the high number of people living in urban slums and rural areas (Extract 3), a more appropriate policy option is perhaps deregulation or the signing of water treaties such that there is distribution of clean water to regions that are less accessible to clean water. However, in countries in which the root cause of problem is imperfect information regarding the private and external benefits of consuming clean water, a more appropriate policy option is definitely public education to change the mindset and consumption pattern of the people (Extract 4).

Marking Scheme		
L2	Well-developed explanation of how subsidies bring about efficient resource allocation and equity, with strong use of case study evidence, and explanation of two alternative policies. <u>Max 4 marks</u> for answers without reference to case study evidence. <u>Max 4 marks</u> for well-developed explanation of subsidies and one other policy, targeting same microeconomic objective.	4 – 6
L1	Under-developed explanation of how subsidies and alternative policy/policies bring about efficient resource allocation and equity, with some use of case study evidence. OR Well-developed explanation of subsidies only, with use of case study evidence.	1 – 3
E1	Underdeveloped analysis of the effectiveness of subsidies and the limitations of the other measures.	1 – 2
E2	Overall judgement that is well supported by case study evidence and application of relevant economic concepts based upon a combination of measures, root causes of problems and measures required etc.	3 – 4

<u>Question 2</u>

(a) With reference to Figure 2, compare the change in consumer prices of the Euro area with that of Britain between mid-2011 and January 2015. [2]

Consumer prices of the Euro area increased at a decreasing rate and fell in January 2015 whereas the consumer prices of Britain increased at a decreasing rate throughout the stated period [2].

(b) From Extract 5, explain how you would decide whether governments are justified in imposing anti-dumping duties on the cheap Chinese goods. [4]

If the cheap Chinese goods are sold below its marginal cost of production in other countries, dumping occurs and governments are justified to impose anti-dumping duties [2]. On the other hand, if the cheap Chinese goods are due to overproduction as the Chinese economy slows down, and the low prices are not below the marginal cost of production, it is not dumping and governments are not justified in imposing anti-dumping duties [2].

(c) State **two** possible reasons why wages do not fall when prices are falling in an economy. [2]

- Demand for workers are still increasing in the labour market as firms continue to employ workers.
- Supply of workers falls due to tighter immigration control.
- Wages are on contractual agreement over a period of time.
- Minimum wage legislation is in place.

Any 2 of the above or other valid reasons.

(d) With the help of a diagram, explain the causes of deflation in various economies. [4]

- As indicated in Extract 6, the reduction in the price of crude oil reduces the cost of production as crude oil is a main source of energy. This will increase the profit margin of firms and increase the aggregate supply in the short run. Given aggregate demand curve AD_1, the AS curve shifts downwards from AS_1 to AS_2 as shown in figure 1 below, leading to a fall in the general price level from OP_1 to OP_2 .

General Price Level

P
AS
AS
P
AD AD
Real GDP
O Y Y Y

Figure 1

- On the other hand, the debt problem in the euro zone and austerity measures implemented (Extract 6) reduce government spending. In addition, the increase in tax rates and the lack of confidence reduce consumption and investment. Aggregate demand decreases, shifting AD curve to the left from AD_1 to AD_2, leading to a further fall in the general price level from OP_2 to OP_3.

  3 M for explanation and 1 M for appropriate diagram.

(e) Assess whether negative inflation is undesirable to an economy. [8]

Negative inflation may be caused by a reduction in the cost of production or a decrease in aggregate demand. Falling aggregate demand that leads to negative inflation and deflation is undesirable to an economy.

<u>Negative inflation is undesirable to an economy</u>
Reduced employment and output
Extract 6 indicates that during deflation, i.e., a sustained fall in the general price level, consumers tend to postpone any purchases as they expect further price decreases. Aggregate demand decreases, pushing the general price level even lower. As prices and output fall, profit margins of firms are squeezed, forcing them to reduce costs such as wages and retrench workers. If the situation worsens, it can lead to firms' closure which worsens unemployment and further dampens aggregate demand, causing a downward spiral of the general price level. This will be undesirable to an economy.

High real interest rate
With general price level falling, real interest rate rises even if nominal interest rate remains the same. In addition, households and firms will find the real burden of financing mortgage payments increasing as they face falling prices of assets such as houses and commercial property. They also find that their bank loans now become higher than the prevailing value of their property, making it impossible to clear their debts even if they sell off their property.

Defaulting of bank loans
Negative inflation that leads further to a deflation would also cause property prices to fall. Since the real value of outstanding debt increases, some households and firms cannot service their loans, resulting in non-performing loans (Extract 6). If many households and firms default on their banking loans, this can lead to a banking crisis and will affect economic growth adversely.

Negative inflation may not be undesirable to an economy

Effect on BOP
Negative inflation caused by a slowdown in the Chinese economy resulted in falling prices of commodities as shown by Extract 6. Price of exports would decrease and this will lead to a more than proportionate in the quantity demanded for exports since demand for exports is price elastic, resulting in an increase in export earnings. On the other hand, import expenditure will decrease as domestic goods are relatively cheaper. Hence, the current account balance would improve. BOP will also improve, ceteris paribus. However, this may invite protectionism from the trading partners.

Effect on Singapore
Although Singapore registered negative inflation as indicated in Extract 7, it was mainly due to the fall in housing rents and car prices, and the lower costs of petrol and electricity tariffs because of the falling global oil prices. Core inflation remains positive and the economy continues to enjoy economic growth. Thus, the negative inflation may not necessarily be undesirable so long consumption and investment still increase.

Conclusion and Evaluation
The desirability of negative inflation on an economy depends on the cause, extent and duration. If the negative inflation is due to a fall in aggregate demand and a deflation results like what happen in the euro zone, the economies are likely to be in recession and is undesirable. If inflation falls due to lower cost, the extent of negative inflation is minimal and does not lead to a deflation, it may not necessarily be undesirable if the economy is able to attain low unemployment rate and economic growth. A prolonged negative inflation tends to be undesirable to an economy as the extent of economic growth is affected.

L2	7 – 8 M for a developed explanation of whether negative inflation is undesirable with relevant analysis and due reference to the data, including evaluation. Max 6 M for a developed two-sided explanation with some reference to the data. Max 4 M for a developed one-sided explanation. Max 4 M for an answer without relevant reference to the data.	4 – 8
L1	Will show understanding of the desirability with limited economic concepts or no relevant reference to the data.	1 – 3

(f) With reference to the data where appropriate, discuss whether governments should use negative interest rates or another policy measure during a recession with deflation.[10]

During a recession, an economy registers negative growth for at least two consecutive quarters and unemployment rate rises. Deflation will lead to further fall in aggregate demand if consumers and firms postpone their consumption and investment.

<u>Negative interest rates should be used</u>

- During a recession with deflation, it is difficult for a central bank to use expansionary monetary policy. Even if nominal interest rates are kept close to zero per cent, deflation implies that the real interest rates are positive. As the cost of borrowing is higher in real terms after taking into account of the price effects, consumer and firms will be deterred from spending. The increase in consumption and investment after a cut in interest rates will not be significant. Therefore, negative nominal interest rates are used by central banks to keep a low real interest rates. As indicated in Extract 8. European Central Bank (ECB), central banks in Denmark, Sweden and Switzerland have negative interest rates on any reserves above the minimum regulatory requirement deposited by the commercial banks with them, thus encouraging lending. An increase in lending implies a rise in C and I, and AD increases. National income will then increase by a multiple via the multiplier process, attaining actual economic growth. Production will rise and demand for labour will increase, thus reducing unemployment. The increase in AD will also help to raise general price level and address the deflation problem.
- Negative interest rates will reduce the net inflow of short-term capital. A decrease in the inflow of short-term capital reduces the demand for local currency while an increase in the outflow of short-term capital increases the supply of local currency in the foreign exchange market. Thus, the local currency depreciates against the foreign currency. As shown by Extract 8, the euro depreciated against the dollar by nearly 20% after the ECB introduced negative interest rates. Assuming the sum of the price elasticity of demand for exports (PED_x) and the price elasticity of demand for imports (PED_m) is greater than one, i.e., $| PED_x + PED_m | > 1$, Marshall-Lerner condition is satisfied. Therefore, a depreciation of the exchange rate suggests that the net exports tend to increase, improving the current account balance.
- **Limitation:** However, loans may be limited during a recession as not many individuals or firms are willing to borrow as suggested by Extract 8. Moreover, the profit margins of commercial banks will reduce as lending rates fall but deposit rates are not able to be reduced much so as to get funds from savers. In addition, although negative interest rates will weaken the exchange rate and improve the price competitiveness of exports, the large economies are not enjoying rapid growth and their purchasing power remains weak. The prices of products by other countries tend to be low too as they may also experience deflation or very low inflation.

<u>Another Policy Measure should be used</u>

<u>Expansionary Fiscal Policy</u>

- As suggested by Extract 6, in order to address a recession with deflation, governments should also use fiscal stimulus to spend on infrastructure such as transportation network, sewerage facilities, power stations, schools and hospitals. A reduction in personal income tax will increase disposable income of consumers and raise their purchasing power. This increases their ability to spend on more expensive items and consumption increases. A reduction in corporate income tax rate will increase the after-tax profits of firms, and increase their incentive to spend on capital goods as their expected return on investment is higher. Investment will then increase. The increase in G, C and I will lead to an increase in AD, and national income will then increase by a multiple via the multiplier process, attaining actual economic growth and creating jobs.
- **Limitation:** However, the Greek government may find it difficult to adopt fiscal stimulus due to the government debt. The level of consumer and business confidence will also affect the extent of increase in C and I respectively after the tax cut.

Or

<u>Quantitative Easing</u>

- As suggested by Extract 6, ECB will start quantitative easing by buying government bonds from banks and injecting funds into the economy. This will encourage lending and stimulate the economy through the increase in C and I.
- **Limitation:** However, a lack of confidence in the economy will limit the amount of borrowing and spending.

Conclusion and Evaluation

- The use of negative interest rates is a new approach and has its limitations. The interest rates charged by central banks on reserves are still minimal thus far so the effectiveness tends to be limited. Another conventional policy measure such as fiscal stimulus is to be used too. A combination of policy measures is required to address the root causes of the recession and deflation.
- Besides short-term measures, the governments should adopt long-term measures to ensure the economic fundamentals of their economies are sound instead of resorting to short-term measures. Supply-side policies should be adopted to restructure the economy, develop comparative advantage for the economy and embrace free trade to promote economic growth.

L2	Will provide a balanced argument and include the use of negative interest rates and another policy measure. There are relevant economic concepts and due reference to the data. Max 4 M for an answer that explains the use of negative interest rates and comments on the limitations.	4 – 6
L1	Will be one-sided argument with limited economic concepts.	1 – 3

E2	Will apply relevant economic concepts to make a judgement based upon a combination of policy measures, root causes of the problem and long-term measures required etc.	3 - 4
E1	Will make a judgement but the application of economic concepts will be superficial.	1 – 2

Suggested Answers for 2016 J2 H2 (9732) Economics Prelim Paper 2 Essay

1. Globalisation has resulted in rising incomes but the influx of cheaper imported steel forced some inefficient domestic steel producers to close down.

Assess the impact of the above effects of globalisation on the domestic steel market and the domestic car market. [25]

Mark Scheme		
L3	Well-developed analysis of combined effects of globalization (different extents of shifts in demand and supply) on the domestic steel and car markets, using YED, PED & PES concepts. Analysis is supported with examples.	**15 - 21**
L2	Under-developed explanation of combined effects of globalization (different extents of shifts in demand and supply) on the domestic steel and car markets, using YED, PED & PES concepts. Analysis is supported with some	**9 - 14**

	examples. For developed answers, with limited elasticity concepts. Max 14m: – D change with PES / S change with PED – Without PED/PES. Max 12m: – Only address either domestic steel or car market with some elasticity concepts.	
L1	For a descriptive knowledge of effects of globalisation on the domestic steel and car markets.	**1 - 8**
Evaluation		
E2	For an evaluative assessment based on economic analysis	**3 - 4**
E1	For an unexplained assessment or one that is not supported by economic analysis.	**1 - 2**

Introduction

Globalisation is the increased integration of national economies into the global economy which results in both benefits and costs to the economy. The combination of the above effects of globalisation will affect the demand and supply of the domestic steel market and the domestic car market, and hence its equilibrium price and quantity.

Body 1a
Explain how effects of globalisation affect the domestic steel market

The influx of cheaper imported steel which are substitutes to domestic steel will cause a fall in demand of domestic steel. However, with rising income, it will lead to an increase in derived demand for steel due to an increase in demand for car (normal good) which uses steel as a factor input. The net effect on demand for domestic steel is likely to be fall due to the influx (by large amounts) of imported steel. Taking USA as an example, its steel imports from China has surged sharply since 2011 and is projected to double by 2020.

The other effect of globalisation mentioned in the pre-amble is how foreign competition forced inefficient steel producers to close down which lead to a fall in supply of domestic steel.

Hence, when demand falls and supply falls, the demand curve will shift leftwards from D_0 to D_1 and the supply curve will shift leftwards from S_0 to S_1. It will result in a fall in quantity of domestic steel from Q_0 to Q_1. However, the outcome on price is indeterminable. If the fall in demand is larger than the fall in supply, there will be a net fall in the price of domestic steel from P_0 to P_1.

This is likely the case for US steel markets which is reported to face its worst import crisis in more than a decade putting up to half a million US jobs in the domestic steel industries at risk. This due to significant global excess steel capacity from steel producing countries like China, South Korea and India which results in exports of these surplus at below-market rates.

Body 1bi
Explain how effects of globalisation affect the domestic car market

Rising income will increase consumers' purchasing power and their ability to spend, thus increasing the demand for cars which is a normal good. The imports of cheaper imported steel allows domestic car market to enjoy a lower cost of production should they switch from using domestic steel to cheaper foreign imported steel.

Hence, when demand and supply increase, the demand curve will shift rightwards from D_0 to D_1 and the supply curve will shift rightwards from S_0 to S_1. It will result in an increase in quantity of domestic car from Q_0 to Q_1. However, the outcome on price is indeterminable. If the increase in supply is greater than the increase in demand, there will be a net fall in the price of domestic car from P_0 to P_1.

This is likely the case for the domestic car market as steel is a major factor input for the production of car, car producers can greatly benefit from the lower cost of production, resulting in higher profits and greater incentive to supply.

Body 1bii
Using YED Concepts

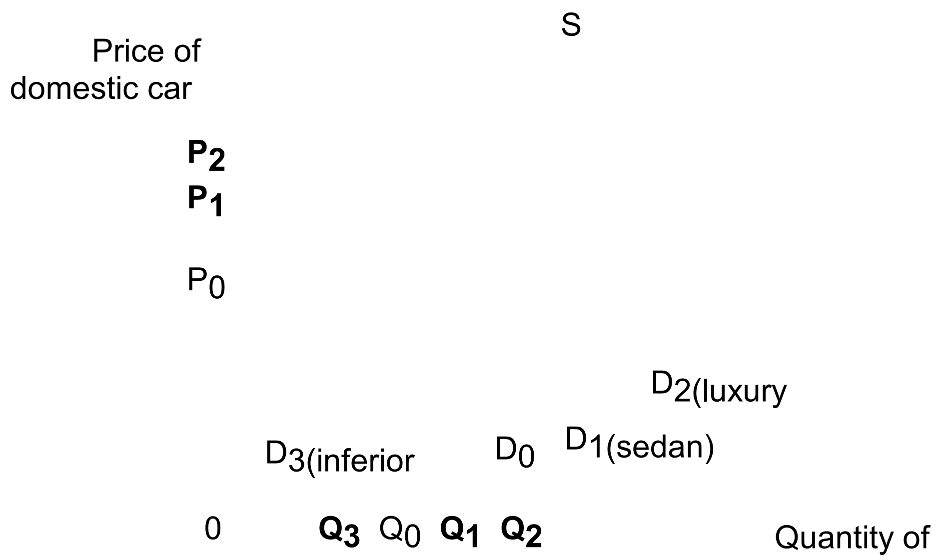
As explained earlier, when income increases, the demand for normal goods will increase.

However, the extent of this increase in demand depends on the income elasticity of demand (YED) of the good. The YED for a good measures the responsiveness of the demand for a good to a given change in the level of income, ceteris paribus. Considering different car models as examples such as the luxury edition, regular sedan and inferior make. When level of income changes, YED is relevant in explaining the extent of its impact on its equilibrium price and quantity.

For luxury editions, the demand is income elastic (YED>1). The increase in demand due to the increase in level of income will likely be more than proportionate. The demand curve will shift rightwards by a large extent from D_0 to D_2. This leads to a more significant increase in price from P_0 to P_2 and increase in quantity from Q_0 to Q_2.

For a regular sedan, which is a necessity for motorist to use it as a basic mode of transportation, the demand is income inelastic (0<YED<1) and the increase in demand due to the increase in level of income is less than proportionate. As such, the increase in demand would be to a lesser extent compared to a luxury good. The demand curve shifts rightwards from D_0 to D_1. This leads to a less significant increase in price from P_0 to P_1 and increase in quantity from Q_0 to Q_1.

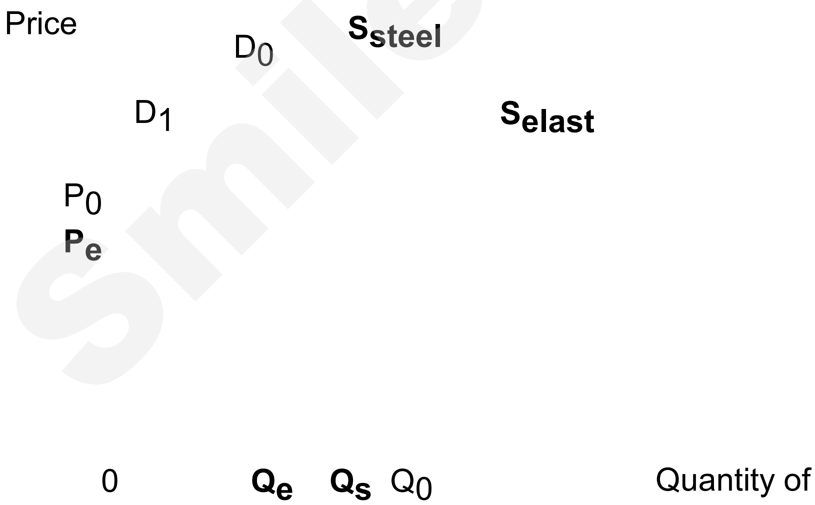
For an inferior make with negative income elasticity (YED<0), the increase in level of income will cause demand to decrease. The demand curve shifts leftwards from D_0 to D_3. This leads to a decrease in price from P_0 to P_3 and fall in quantity from Q_0 to Q_3.



Body 2a
Explain how effects of globalisation affect the domestic steel market, using PES concept

The price elasticity of supply (PES) measures the responsiveness of a change in the quantity supplied of a good to a given change in the price of the good itself, ceteris paribus. When demand shifts, PES is relevant in explaining the extent of its impact on its equilibrium price and quantity.

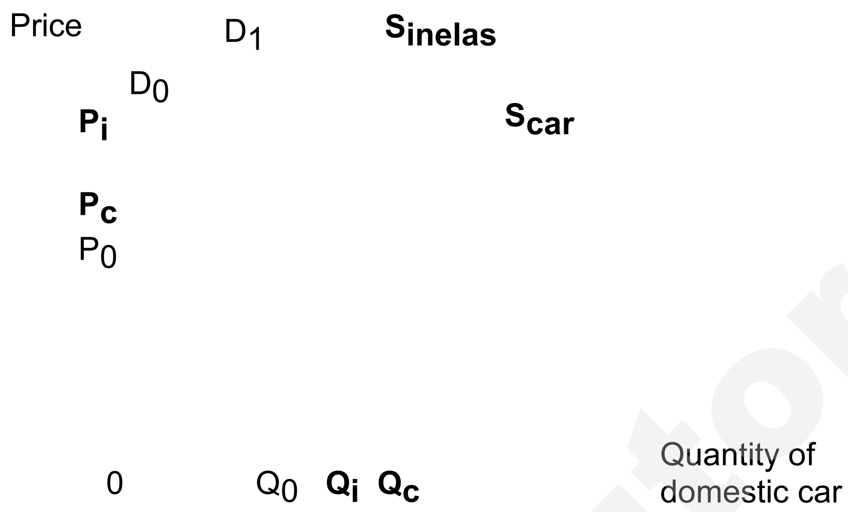
As explained earlier, there is a net fall in demand for domestic steel. The supply for domestic steel tends to be price inelastic because the steelmaking process takes a substantial amount of time and effort - from mining raw iron ore to the steelmaking process which converts liquid iron into steel.



Hence, when demand falls, shifting the demand curve leftwards from D_0 to D_1, for the domestic steel market which has an inelastic supply curve, it will result in a more significant fall in the price of steel from P_0 to P_s and a less significant fall in the quantity of steel from Q_0 to Q_s, as compared to a good that has an elastic supply.

Body 2b
Explain how effects of globalisation affect the domestic car markets, using PES concept

As explained earlier, there is an increase in demand for domestic car. The supply of domestic car tends to be price elastic because car being a manufactured good has a relatively greater ease in factor input mobility compared to the steel market.



Hence, when demand increase, shifting the demand curve rightwards from D_0 to D_1, for the domestic car market which has an elastic supply curve, it will result in a less significant increase in the price of car from P_0 to P_c and a more significant increase in the quantity of car from Q_0 to Q_c, as compared to a good that has an inelastic supply.

Body 3a
Explain how effects of globalisation affect the domestic steel market, using PED concept

The price elasticity of demand (PED) measures the responsiveness of a change in the quantity demanded of a good to a given change in the price of the good itself, ceteris paribus. When supply shifts, PED is relevant in explaining the extent of its impact on its equilibrium price and quantity.
As explained earlier, there is a fall in supply of domestic steel. Due to the lack of available substitutes for steel as a raw material, the demand for domestic steel is likely to be price inelastic.

Price of domestic

S_1

S_0

P_s

P_e

P_0

D_{elast}

D_{steel}

0 Q_e **Q_s** Q_0 Quantity of domestic steel

Hence, when supply falls, shifting the supply curve leftwards from S_0 to S_1, for the domestic steel market which has an inelastic demand curve, it will result in a more significant rise in the price of steel from P_0 to P_s and a less significant fall in the quantity of steel from Q_0 to Q_s, as compared to a good that has an elastic demand.

Body 3b

Explain how net effects of globalisation affect the domestic car market, using PED concept

As explained earlier, there is an increase in supply of cars. The demand of domestic car tends to be price elastic as the expenditure on car takes up a high proportion of an individual's income.

Price of domestic

S_0

S_1

P

0

P

D_{car}

D_{inela}

0 Q_0 Q_i **Q_c** Quantity of domestic car

Hence, when supply increases, shifting the supply curve rightwards from S_0 to S_1, for the domestic car market which has an elastic demand curve, it will result in a less significant fall in the price of car from P_0 to P_c and a more significant rise in the quantity of car from Q_0 to Q_c, as compared to a good that has an inelastic demand.

Evaluative Conclusion

Nonetheless, the discussion of the effects of globalisation on the domestic steel and domestic car markets can only be done based on the assumption of ceteris paribus. However, the ceteris paribus assumption does not hold true in real life. In reality, there are various factors that take place simultaneously that may also have affected the price and quantity of these markets. For example, the market outcomes of the domestic steel and domestic car markets can be largely influenced by the objectives of government policies and strategies adopted by producers. In response to the call for protectionism, governments may impose protectionism measures against imported steel such as tariffs which will increase the domestic price of imported steel so as to protect domestic industries and local jobs. Car producers may also adopt various pricing, non-pricing and cost management strategies to maximise their sale revenue or profits.

Further, YED, PED and PES values are difficult to collect and as such these data may not be accurate. These data may be outdated and unreliable overtime due to changes in the degree of substitutability between foreign and domestic markets or the discovery of alternative raw materials to replace steel. In addition, different car models may also have different PED values which will lead to a different outcome as discussed earlier.

2 (a) Explain how barriers to entry affect price and output determination of firms. [10]

(b) Assess the extent to which market dominance reduces the negative impact of a recession on firms. [15]

Marking Scheme (a)

Knowledge, Application, Understanding and Analysis		
L3	Well-developed explanation of how barriers to entry affect price and output determination of firms.	**7 – 10**
L2	Under-developed explanation of how barriers to entry affect price and output determination of firms.	**4 – 6**
L1	For an answer that shows a descriptive knowledge of barriers to entry and of price and output behaviour of firms.	**1 – 3**

Marking Scheme (b)

Knowledge, Application, Understanding and Analysis		
L3	For a developed answer showing how market dominance and other factors might both be relevant in reducing the negative impact of a recession on firms from different market structures.	**9 –**

L2	For an undeveloped answer showing how market dominance and other factors might both be relevant in reducing the negative impact of a recession on firms from different market structures. OR For a developed answer that showing how market dominance OR other factors might both be relevant in reducing the negative impact of a recession on firms from different market structures.	**6 – 8**
L1	For an answer that shows a descriptive knowledge of how characteristics of market structures influence the effects of recession on firms.	**1 – 5**
	Evaluation	
E2	For an evaluative assessment based on economic analysis.	**3 – 4**
E1	For an unexplained assessment or one that is not supported by economic analysis.	**1 – 2**

2(a) Explain how barriers to entry affect price and output determination of firms.

Introduction

- Barriers to entry (BTE) are obstacles that hinder the entry of new firms into an industry and limit the amount of competition faced by existing firms.
- BTE can be artificially created (e.g. government licenses) or natural (e.g. high capital outlay required). There are high barriers to entry in the market structures of monopoly and oligopoly.
- On the other hand, low barriers to entry exist in monopolistic competition and there are no barriers to entry or freedom of entry and exit in perfect competition. The degree of BTE is an important determinant in firms' pricing decision because it affects the number of firms in the industry. In turn, this plays a part in determining how much market power a firm has in terms of setting its prices or output.

Market structure with high BTE: Monopoly/Oligopoly

- The existence of high BTE gives rise to monopoly power.
- Monopoly is a market structure in which a single firm dominates the market and produces a product which has no close substitutes. For a firm to maintain this monopoly position, there must be high barriers to entry e.g. legislation by government, patent rights and copyrights, secrecy, economies of scale, high transport costs or tariffs, control of essential resources, network effects etc.
- The degree of monopoly power depends on the ability of these BTE in preventing new firms from entering the industry. Monopoly power implies that the demand curve of the firm is downward sloping and relatively price inelastic due to a lack of close substitutes, and the **firm has the ability to set a relatively higher price** to increase revenue and thus profits.

- Referring to figure 1, equilibrium output of a monopolist is attained at profit-maximising output OQ_1 where MR = MC. The monopolist is able to restrict output at OQ_1 and charge price OP_1 above marginal costs.
- With prices charged being above average costs, the monopolist earns supernormal profit of area CP_1AB (total revenue of O P_1AQ_1 and total cost of $OCBQ_1$). The monopolist can restrict output at OQ1 to maintain the relatively high price of its goods at OP_1 above average costs to earn supernormal profits in both the short and long run – this is because it does not fear the entry of new firms to compete away these supernormal profits in the long run given the high BTE.

Q_1

Market structure with low BTE: Monopolistic Competition

- Monopolistic competitive (MPC) firms represent firms facing low BTE.
- Monopolistic competition is a market structure in which many small firms sell slightly differentiated products that are close substitutes of each other. As a result, a firm that raises its price will not lose all its sales and firms have some market power. Thus, each firm has some control over price and faces a downward sloping demand curve. However the firm's demand curve is relatively price elastic as each firm faces competition from a large number of close substitutes. A relatively small increase in the price of that product will lead many consumers to switch to one of the many close substitutes.
- Referring to figure 2, the MPC firm faces a demand curve $D_{1,}$ and is maximising profit by producing at output OQ_1 where MR_1 = MC, and uses its market power to set price at OP_1 above marginal costs. The price OP_1 is higher than average costs OA and thus, the firm earns supernormal profits represented by the area E_1P_1AB.
- In the long run, new firms will be attracted to enter the industry with low barriers to entry. As more firms enter, the existing firm will have more competitors, so demand for its products decreases and becomes more price elastic due to the greater availability of substitute products. This process continues until the demand falls to D_2 and the firm maximises profit by producing at Q_e where MC = MR_2 and the lower price OP_e is just

sufficient to cover average cost. Consequently, the MPC firm earns only normal profits in the long run.

- Hence, although MPC firms can set prices, lower market power compared to a monopolist due to the presence of substitutes ensures that the extent to which prices are above marginal costs is smaller. Also, low BTE ensures that **price charged is equal to the firm's average costs in the long run** – short run demand that is consistent with higher prices will lead to other firms entering the industry and the firm's demand to fall, leading to a fall in price (from P_1 to P_e here) and a fall in output (from Q_1 to Q_e here).

Figure 2

Market structure with no BTE: Perfect Competition

- Perfectly competitive (PC) firms represent firms in industries with no BTE.
- With the absence of BTE is likely to lead to a situation where there are many firms in the industry. In addition, PC markets have homogeneous products, existence of perfect knowledge and perfect factor mobility. As a result, each seller produces a very insignificant amount of the entire market supply and thus **act as price takers** in the market.
- Referring to figure 3b, the market demand and market supply curve in a PC market determine the market price OP_1 initially. Each profit-maximising PC firm will take this market price as given, producing output at MR=MC e.g. at Oq_1 and earn supernormal profit as shown by area CP_1AB in the short run, illustrated by figure 3a.
- In the long run, due to the absence of BTE, new firms will be attracted to join the industry as the supernormal profit indicates that the returns from this industry are higher than other industries. Existing firms will also expand output but they can use bigger plants in the long run.
- As long as PC firms make supernormal profits, more firms will enter the industry and the market supply curve will keep increasing, shifting to the right. This causes market price to keep falling, reducing the supernormal profits earned by firms. Eventually, when the market supply curve shifts from S_1 to S_2, reducing the market price to OP_2, all existing firms earn only normal profits and produce at minimum efficient scale of production (figures 3a & 3b). Thus, each profit maximizing PC firm will price its goods such that price equals marginal costs and average costs, earning only normal profits in the long run due to the absence of BTE. At this price, they can choose to sell the quantity they desire, e.g. Oq_2 as determined by MC=MR in figure 3a.

Revenue/Cost MC LRAC A B P_1 C $AR_2=MR_2$ $AR_1=MR_1$ O q_2 q_1 Output

Figure 3a

Revenue/Cost S_1 S_2 P_1 D_1 O Output

Figure 3b

(contrast between two market structures expected e.g. monopoly/oligopoly vs MPC or monopoly/oligopoly vs PC)

Conclusion

- Thus BTE is an important factor affecting a firm's pricing and output decision in different market structures.
- For industries with high and low BTE, firms have the ability to set prices above marginal costs (though the extent of this varies with the level of BTE, e.g. MPC only being able to set prices equal AC in the long run). For industries with no BTE, firms are price takers and are unable to set prices above marginal and average costs in the long run.

2(b) Assess the extent to which market dominance reduces the negative impact of a recession on firms.

Introduction

- A recession, i.e. two consecutive quarters of gross domestic product (GDP) contractions, imply a fall in national income, output and employment.

- Average consumers face a fall in incomes, and this has a significant bearing on firms' profitability, depending not only on the degree of market dominance but also on the types of good they produce and possible responses by firms in response to the recession.

Body

Thesis: Degree of market dominance reduces negative impact of recession

Market dominance affects firm's ability to withstand decreases in demand and price and avoid closure

- Less dominant firms in competitive industries are more susceptible to closure. The greater the degree of market power and market dominance with higher BTE, the greater the ability of the firm to maintain prices above average total costs (ATC) and preserve short run supernormal profits into the long run, which could mean that firms are more resilient to closure with a fall in demand and prices given a recession.
- For example, given the low BTE, monopolistically competitive (MPC) firms at long run equilibrium only earn normal profits. Any supernormal profit attracts rival firms to enter the industry, which reduces the demand for the products of incumbent firms and makes the demand more price elastic due to the greater availability of substitutes.
- With reference to Figure 2 in part (a), the profit-maximising price at OP_e will be where P= ATC in the long run.
- Given a recession, and assuming that the MPC firms produce normal goods, demand for goods sold by the firm falls and equilibrium prices fall as well. Since prices fall below ATC, firms then incur subnormal profit. In addition, if the price falls below average variable costs (AVC), then the MPC firm shuts down in the short run.
- Continued subnormal profit in the long run will lead to the MPC firms exiting the industry until the subsequent increase in demand for each of the other firms left in the industry causes the price of the good to rise back to equal ATC and restoring normal profits to firms again.
- On the other hand, monopolies and firms operating in oligopolistic industries may not face the prospect of subnormal profits and firm exit given a recession. For example, given the high BTE, monopolies can set prices above ATC and earn supernormal profits in the long run. When demand for the (normal) good falls in a recession, the price of the good will fall. However, this fall in demand and prices must be large enough to cause prices to fall from a level above ATC (P>ATC) to one below ATC (P<ATC) for firms to exit in the long run – if the fall in price is minimal or if the monopoly is pricing far above ATC (P>>ATC) to earn large supernormal profits, the monopolist only incurs a decrease in supernormal profits and does not have to exit the industry in the long run.
- Thus, firms that are less dominant e.g. MPC firms are more vulnerable to closure in a recession than firms that are more dominant e.g. monopolies, given differences in their ability to maintain prices above ATC and earn supernormal profit in the long run. Greater market dominance can thus reduce the negative impact of a recession.

Market dominance affects firm's ability to conduct R&D

- In addition, the long run supernormal profits earned by oligopolistic and monopolistic firms that are more dominant can be drawn upon to conduct research and development (R&D) during a recession.
- These could be to diversify their range of products or to increase the quality of the product and better cater to the tastes and preferences of consumers so that demand for the product can be increased to increase total revenue, or to increase the efficiency of the production process so that average costs are reduced. Such R&D to increase the profits of these firms would mean that they are less affected by the fall in demand caused by the recession.
- On the other hand, less dominant firms such as MPC firms only earn normal profits in the long run and thus lack the funds to conduct R&D. They thus lack the ability to improve their products or find innovate methods of production in order to boost profits and weather the recession.

Anti-thesis: Degree of market dominance does not reduce the negative impact of recession

- However, market dominance may give rise to productive inefficiency resulting from X-inefficiency. Being sheltered by high BTE, oligopolistic and monopolistic firms can still make supernormal profits in the long run even if they are not using the most cost efficient method of production. As a result of this lack of competitive pressure, X-inefficiency sets in. Complacency and organisational slack lead to overstaffing, spending on prestige buildings, lack of effort in scrapping old production plants etc. Higher average and marginal costs are incurred as a result of this productive inefficiency.
- In such a situation, market dominance might actually lead to these inefficient firms still being more vulnerable to closure resulting from the fall in demand and price given a recession, since ATC is higher than they should be and it is more likely that prices fall below ATC to lead to firm exit of the industry in the long run.

Anti-thesis: Other factors reduce negative impact of recession

Nature of good produced by firm – Income elasticity of demand

- However, firms only face a fall in the demand for their goods and a subsequent fall in price only if the goods they are producing are normal goods, i.e. those with positive income elasticity of demand (YED>0). If firms are producing inferior goods instead, i.e. those with negative income elasticity of demand (YED<0), then a recession would mean that they face an increase in demand, prices and total revenue.
- Furthermore, amongst firms producing normal goods, firms producing necessities (goods with income inelastic demand i.e. 0<YED<1) would be less vulnerable to recession than firms producing luxuries (goods with income elastic demand i.e. YED>1) since they experience a less than proportionate fall in demand for their goods in a recession.
- Hence, what is more relevant for the impact of a recession on firms might be the nature of the good produced rather than the market dominance enjoyed by the firms producing it. For example, if MPC firms produced inferior goods (such as lower quality home-brand products of supermarkets), they would benefit from the recession as demand for their goods increased – the lack of market dominance and ability to price above ATC in the long run is less relevant given this scenario.
- Similarly, if monopolies sold luxury goods such as designer wear, then a fall in demand would be more than proportionate to the fall in income – this might imply a greater vulnerability of these firms, despite their market dominance, since the fall in demand and prices is likely to be significant.

Small firms more nimble and able to adapt to changing demand conditions

- In addition, less dominant firms e.g. MPC firms tend to be smaller and hence might be more nimble and responsive to changes in market conditions e.g. the recession in this case. With closer contact to their customers, MPC firms might be better able to detect changes in demand conditions, and might hence possess the flexibility to quickly adjust resource inputs to minimise costs and maximise revenue e.g. by diversifying their product range to include inferior goods or switch to inferior goods entirely during the period of recession.
- In contrast, market dominant firms such as those in oligopolies and monopolies tend to be large, and might need a longer time to detect and respond to the fall in demand caused by the recession, making them more vulnerable to its negative effects.

(Other plausible factors that reduce the impact of a recession accepted here: Fall in factor input costs accompanying recession reduces negative impact of recession for firms, Government intervention in recession especially for industries deemed essential e.g. banking sector, Effects of demand management policies by the government in response to a recession etc.)

Conclusion and Evaluation

- Overall, likely that market dominant firms that face less competition are much less vulnerable to closure than firms in more competitive industries as due to their ability to price above ATC and preserve supernormal profits into the long run, which then provides necessary resources to counter the recession e.g. with R&D.
- However, it is also important to look at the type of products sold by the firms to determine the impact on demand when a recession hits.
- Often, the behaviour and performance of firms under recession conditions do not rely only on their market dominance, but instead the impact depends significantly on firms' adaptability and actions undertaken in response to the negative shock.

Duration and magnitude of recession

- The duration and magnitude of the recession also matters in determining the extent to which firms experience a negative impact.
- If recession is mild and short-term, impact would be less damaging on firms operating in both competitive and less competitive industries.
- If recession is serious and prolonged, even the impact on firms with market dominance might also be detrimental and severe.

Government intervention

- The different possible responses of the government to the recession could also imply differences in the impact of the recession on firms.
- Industries deemed essential to the workings of the economy may be more likely to receive such government intervention.
- For example, government intervention to bail out the banking sector during the 2008 financial crisis meant that many of these market dominant banks that faced closure due to the large negative shock survived instead.

3. Some governments provide healthcare for free, while others only subsidize it partially.

a) Explain the factors that a government should consider in deciding whether healthcare is under-consumed. [10]

b) Assess the view that government provision of national defence and free healthcare is both necessary, and results in an efficient allocation of resources. [15]

Marking Scheme (a)

Knowledge, Application, Understanding and Analysis		
L3	Well-developed explanation of at least two factors that a government considers in deciding whether healthcare is under-consumed, including the explanation of positive externalities, and with application to specific healthcare examples.	**7 – 10**
L2	Under-developed explanation of factors considered by the government. Max 5m: for well-developed explanation of market failure due to positive externalities.	**4 – 6**
L1	For a smattering of valid points.	**1 – 3**

Marking Scheme (b)

Knowledge, Application, Understanding and Analysis		
L3	For a well-developed explanation of both sides of the argument on whether government provision of national defence and free healthcare is necessary, and whether this would result in allocative efficiency.	**9 – 11**
L2	For an undeveloped answer on the necessity of government provision of the two goods, and on whether this results in allocative efficiency. Max 7m: for a one-sided answer that explains why government provision of both goods is necessary and results in allocative efficiency, or the opposing view. OR For a well-developed answer on the degree of necessity of government provision, and whether this results in allocative efficiency, for only one of the goods.	**6 – 8**
L1	For an answer that shows a descriptive knowledge of merit goods and public goods.	**1 – 5**

Evaluation		
E2	For an evaluative assessment based on economic analysis.	**3 – 4**
E1	For an unexplained assessment or one that is not supported by economic analysis	**~~1~~ 2**

3a) Explain the factors that a government should consider in deciding whether healthcare is under-consumed. [10]

Introduction

- Healthcare is considered to be a **merit good** as it is deemed desirable by the government and it generates positive externalities.
- Factors influencing a government's decision on whether healthcare is under-consumed include the existence of positive externalities, the existence of imperfect information, concerns regarding equity issues and market dominance.

Body

Existence of positive externalities

- The government may consider healthcare to be under-consumed if there are significant positive externalities. Positive externalities are benefits to third parties not directly involved in the production or consumption of the good. It is not reflected in the price of the good.
- Positive externalities from the consumption of healthcare include reducing the chances of spreading illnesses to others such as co-workers, and the external benefit to firms of an increase in productivity of the workforce leading to higher revenue and profits.

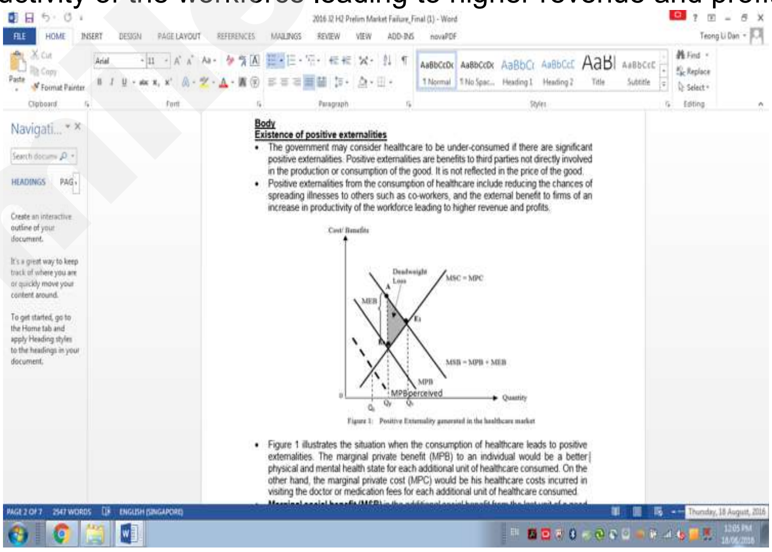


Figure 1: Positive Externality generated in the healthcare market

- Figure 1 illustrates the situation when the consumption of healthcare leads to positive externalities. The marginal private benefit (MPB) to an individual would be a better physical and mental health state for each additional unit of healthcare consumed. On the other hand, the marginal private cost (MPC) would be his healthcare costs incurred in visiting the doctor or medication fees for each additional unit of healthcare consumed.
- **Marginal social benefit (MSB)** is the additional social benefit from the last unit of a good produced and consumed. MSB = MPB + MEB where MEB is the marginal external benefits.
- Due to the presence of positive externality, which is shown by the **marginal external benefit**

(MEB) at a particular level of output, marginal social benefit (MSB) will be **greater** than marginal private benefit (MPB), i.e. **MSB>MPB**. There is a **divergence of MPB and MSB**. This means that the benefits of consumption to society include not just the benefits to the consumer but also the benefits to others enjoying the positive spillover effects, shown as MEB.

- Assuming that MPC = MSC. Since consumers will only consider their private benefit and cost while ignoring the benefits to third parties, they will consume at the level **OQp** where **MPB=MPC.** However, the **socially optimal level** of output occurs at **OQs** where **MSC = MSB.**
- Since Qp is **less** than Qs, it means that the price mechanism on its own cannot achieve an optimal allocation of resources. The government will consider that there is **<u>under-consumption</u>** of the good. Between Qp and Qs, the social benefit of an additional unit of healthcare consumed is higher than the social cost, resulting in **welfare loss** equivalent to the shaded area.

<u>Imperfect information</u>

- Besides positive externalities, governments will also consider whether consumers have **<u>imperfect information</u>**. Individuals may not be able to value their private benefits and costs correctly. In particular, individuals may not be fully aware of the long term private benefits of consuming healthcare. For instance, they might be unaware of the importance of regular health screenings in detecting early signs of illness.
- If this is the case, MPB would be even lower at MPBperceived, and the level of consumption would only be at Q_1. Hence, the government would consider the extent of under-consumption to be even more serious.

<u>Market dominance</u>

- There might also be market dominance in the healthcare market. For instance, due to the existence of patent protection, only one firm might be allowed to produce a pharmaceutical product. As such, the firm enjoys very high market power.
- **A profit-maximising firm, operating under the conditions of monopoly or oligopoly for example, produces at the output where marginal cost and marginal revenue are equal. At this equilibrium output, P is greater than MC, which implies allocative inefficiency.**

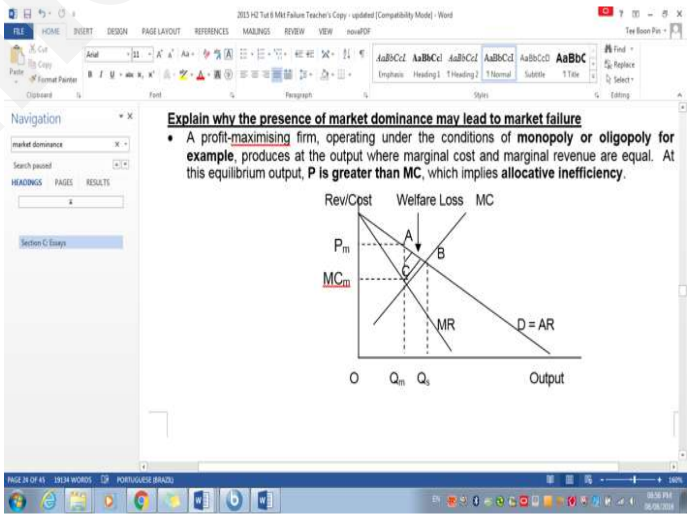


Figure 2: Welfare Loss under Imperfect Competition

- Referring to Figure 2, the profit-maximising level of output is at **OQ_m, where MR =MC**. At Q_m, P_m is greater than MC. This means that **society's valuation of the last unit of the good is higher than the opportunity cost of producing that unit of the good.** Hence welfare to society is not maximised. The **welfare loss** is represented by the shaded area.
- As such, the government will consider that consumers are under-consuming healthcare due to the firm restricting its output.

Equity concerns

- The government might also be concerned about under-consumption of healthcare if there is income inequity. If there is high income inequality in the country, the poor might not have the ability to pay for healthcare, thereby consuming at a level that is below the social optimum.

Conclusion

- In conclusion, there are many considerations that a government would take when deciding whether healthcare is under-consumed, and whether intervention is needed to achieve a more efficient allocation of resources.

3b) Assess the view that government provision of national defence and free healthcare is both necessary, and results in an efficient allocation of resources. [15]

Introduction

- Government intervention in goods such as national defence and healthcare is common as the first is a public good while the second is a merit good. However, whether government provision of national defence and free healthcare is necessary and results in an allocative efficient outcome depends on multiple factors such as the extent of market failure, the extent of government failure, and other issues such as equity concerns.

Thesis: Government provision of national defence and free healthcare is both necessary, and results in an efficient allocation of resources.

National defence

- Government provision of national defence is necessary as it is a public good. A public good is one that has the characteristics of non-rivalry and non-excludability.
- National defence is non-rival in consumption as the consumption by one person does not diminish the quantity consumed by others, i.e. the same amount of protection is accorded to the next citizen by the defence force even as one more citizen is protected. Since national defence is non-rival, the **marginal cost of providing national defence to an additional user is zero**. By the allocative efficiency condition, P=MC, this means that the price of national defence should be zero. As such, there is no incentive for profit-maximising producers to produce national defence.
- In addition, national defence is non-excludable as it is **impossible, or prohibitively costly to exclude non-payers** from being protected from external threats by the defence force. As such, there will be a **problem of free riders**, and **demand will be concealed** as there is no incentive for consumers to indicate their preference for the good with their dollar votes.
- As such, there is complete market failure, and the free market does not provide national defence. Government provision of national defence, financed by taxes, is hence necessary.
- In addition, government provision of national defence results in allocative efficiency if the government is able to correctly estimate the socially optimum amount of national defence to provide.

Free Healthcare

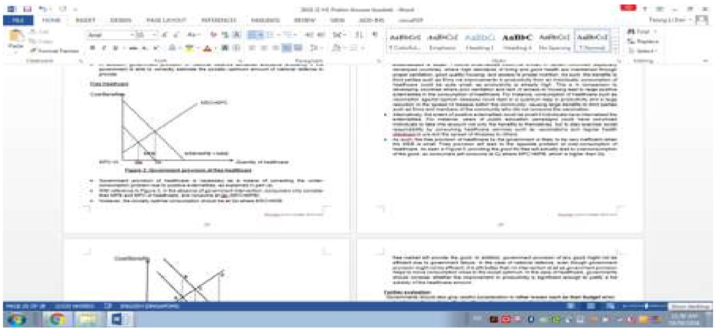


Figure 3: Government provision of free healthcare

- Government provision of healthcare is necessary as a means of correcting the under-consumption problem due to positive externalities, as explained in part (a).
- With reference to Figure 3, in the absence of government intervention, consumers only consider their MPB and MPC of healthcare, and consume at Qp (MPC=MPB).
- However, the socially optimal consumption should be at Qs where MSC=MSB.
- In this case, when the government provides healthcare for free, the MPC to consumers is reduced to zero, as the price that they pay for healthcare is zero. MPC shifts to MPC'=0.
- Intervention is necessary and results in allocative efficiency as consumers will thus consume at Qs, where MPC'=MPB, thus achieving an efficient allocation of resources.
- In addition, government provision of free healthcare is necessary as it could help to resolve equity issues, as the poor would be able to have access to healthcare regardless of their ability to pay.

Anti-thesis: Government provision of national defence and free healthcare is NOT necessary and/or it might not result in allocative efficiency.

National defence

- The provision of national defence **might not result in allocative efficiency** if there is **government failure** – the government might over or under-estimate the amount of national defence to provide, thereby not achieving the social optimum. Over-estimation of the amount leads to an opportunity cost of government spending that could have been spent in other areas such as education, which is an inefficient allocation of resources.

Free Healthcare

- Government provision of free healthcare is **not necessary** as there are **other means of achieving the social optimum**. For example, cash grants, such as government top-ups to the Central Provident Fund account of citizens, serve to increase the marginal private benefit of consuming healthcare without affecting the price actually paid for it. When the cash grant is equivalent to MEB at Qs, the MPB shifts to MSB, and Qp increases to Qs, hence achieving the social optimum level of consumption without making healthcare free.
- In addition, government provision of free healthcare **might not be efficient due to government failure**. A government might not be as cost effective as a profit-maximizing producer in producing healthcare, and bureaucracy and red tape could lead to a wastage of resources due to long waiting times and miscommunication regarding medical interventions required.
- Government provision of free healthcare might also not be efficient if the **extent of positive externalities is small**. Positive externalities could be limited in certain countries, especially developed countries, where high standards of living and good health are maintained through proper sanitation, good quality housing, and access to proper nutrition. As such, the benefits to third parties such as firms via improvements in productivity from an individuals' consumption of healthcare could be quite small, as productivity is already high. This is in comparison to developing countries where poor sanitation and lack of access to housing lead to large positive externalities in the consumption of healthcare. For instance, consumption of healthcare such as vaccination against typhoid diseases could lead to a quantum leap in productivity and a large reduction in the spread of disease within the community, causing large benefits to third parties such as firms and members of the community who did not consume or produce the vaccination.

- Alternatively, the extent of positive externalities could be **small if individuals have internalized the externalities**. For instance, years of public education campaigns could have convinced individuals to take into account not only the benefits to themselves, but to also exercise social responsibility by consuming healthcare services such as vaccinations and regular health checkups to prevent the spread of illnesses to others.
- As such, the free provision of healthcare by the government is likely to be very inefficient when the MEB is small. Free provision will lead to the opposite problem of over-consumption of healthcare. As seen in Figure 5, providing the good for free will actually lead to overconsumption of the good, as consumers will consume at Q_2 where MPC'=MPB, which is higher than Qs.

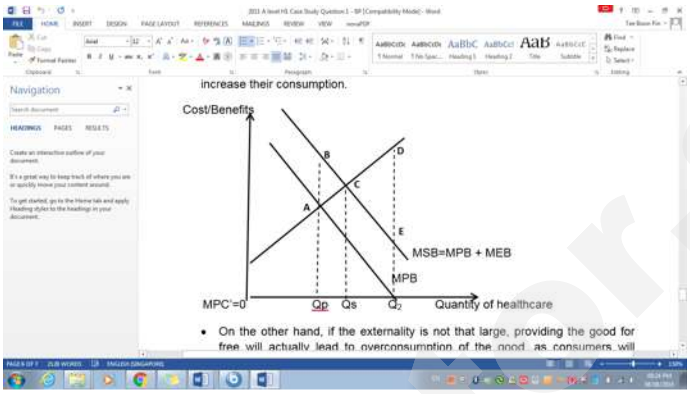


Figure 5: Overconsumption of healthcare when provided for free

- Between Qs and Q_2, the additional cost to society of another unit of healthcare is higher than the additional benefit to society, leading to welfare loss area of CDE, compared to the original welfare loss area of ABC when consumption was as Qp.
- This causes **greater inefficient allocation of an economy's resources**, resulting in a worse outcome than before.
- Moreover, government provision of free healthcare will be inefficient if it does not target the **root cause of the problem**. For instance, in developing countries, the root cause of under-consumption might be due to ignorance about the benefits of consuming healthcare. The perceived MPB could actually be very low. In this instance, referring to Figure 6, providing healthcare for free only increases their consumption to Q_1 where MPC'=MPB.

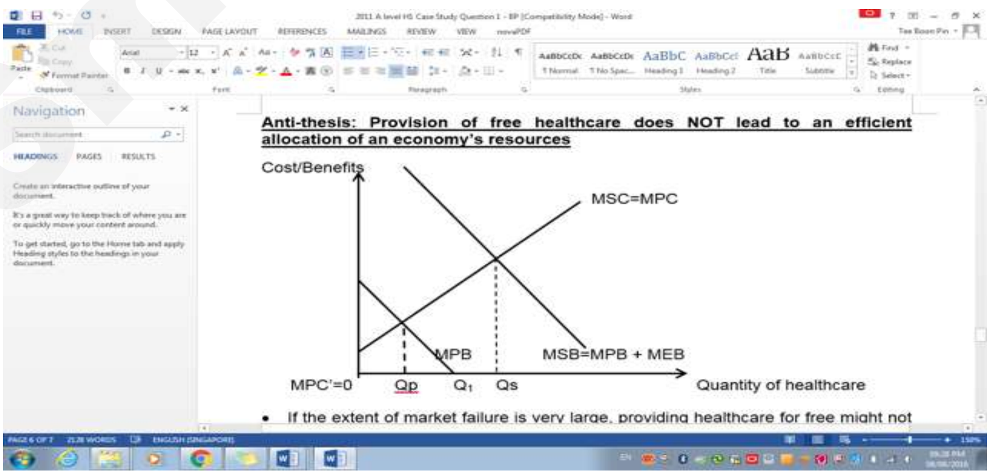


Figure 6: Under-consumption even when healthcare is free

- However, the socially optional level of consumption is at Qs where MSC=MSB. Hence, providing healthcare for free only moves Qp closer to Qs. There is still underconsumption of healthcare. In such a case, the government needs to increase the MPB of the consumer through policies like public education to convince consumers of the benefits of healthcare services, in order to further increase their consumption.

Conclusion and evaluation
Stand and justification

- Governments should give careful consideration to the **extent of market failure** when deciding whether to provide it for free. The provision of public goods such as national defence is necessary due to complete market failure, but it is not necessary for merit goods such as healthcare as the free market will provide the good. In addition, government provision of any good might not be efficient due to government failure. In the case of national defence, even though government provision might not be efficient, it is still better than no intervention at all as government provision helps to move consumption close to the social optimum. In the case of healthcare, governments should consider whether the improvement in productivity is significant enough to justify a full subsidy of the healthcare amount.

Further evaluation

- Governments should also give careful consideration to **other issues such as their budget** when deciding on their policies. For healthcare, free provision is likely to lead to severe wastage of resources as the government would be spending on healthcare for the rich, who could actually afford to pay. In addition, there are possible abuses of the system by unscrupulous medical professionals who can over-prescribe medical treatments and bill the government for them. As such, other policies like cash grants to the poor should be used instead in order to increase the consumption of healthcare in a more targeted manner, without burdening the government budget.

4 In 2014, Singapore's GDP grew 2.9% to $390.1 billion and long-term capital inflows grew 18% to $156.5 billion. However, growing pessimism about global economic performance has led to fears that export demand could decline in the years ahead.

(a) Explain how a fall in export demand could affect the circular flow of income in an economy. [10]

(b) Assess whether these economic indicators of GDP data and long-term capital inflows are the best measures of standard of living in Singapore. [15]

Marking Scheme (a)

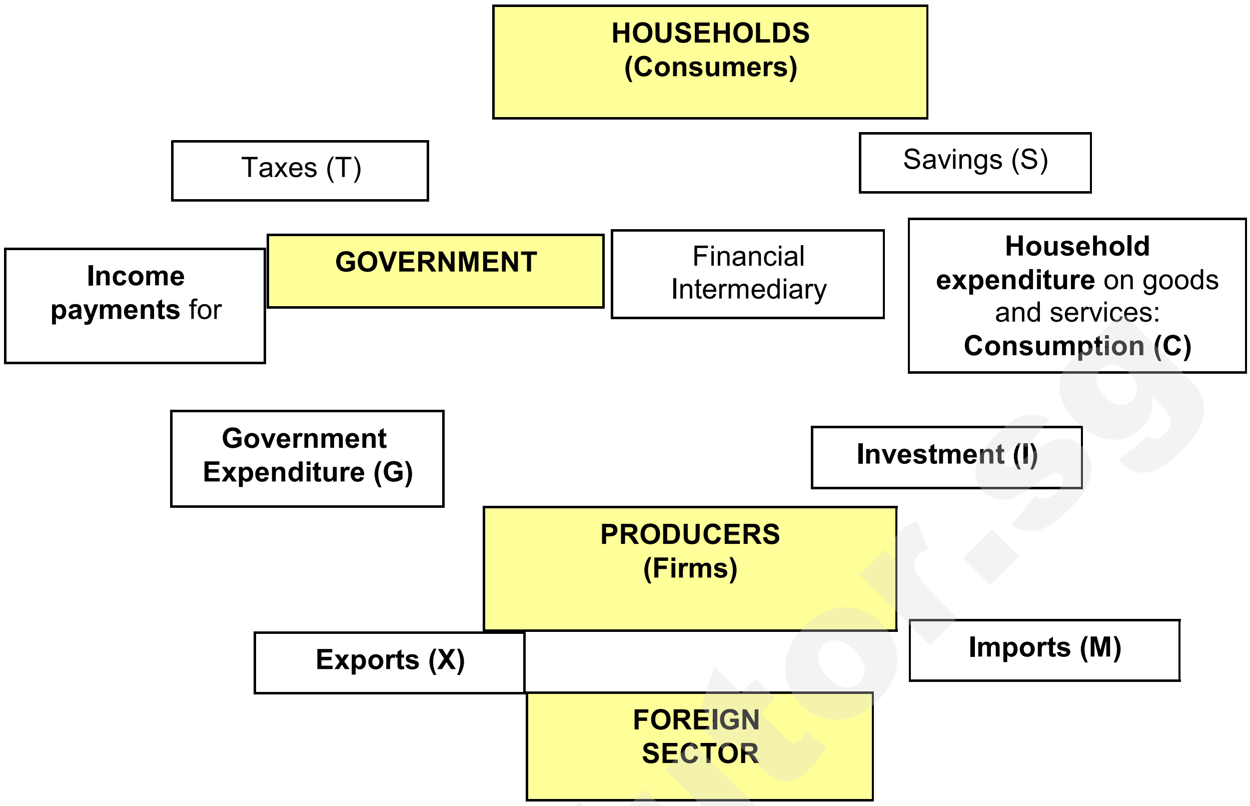
Knowledge, Application, Understanding and Analysis		
L3	Well-developed explanation of how a fall in export demand could affect the circular flow of income in an economy.	**7 – 10**
L2	Under-developed explanation of how a fall in export demand could affect the circular flow of income in an economy.	**4 – 6**
L1	For an answer that shows a descriptive knowledge of the circular flow of income.	**1 – 3**

Marking Scheme (b)

Knowledge, Application, Understanding and Analysis		
L3	For a developed assessment of the uses and limitations of GDP and the capital account of the balance of payments as indicators of standard of living, with reference made to the Singapore economy.	**9 – 11**
L2	For an undeveloped assessment of the uses and limitations of GDP and the capital account of the balance of payments as indicators of standard of living, with some reference made to the Singapore economy. Maximum of 8m if only one indicator used i.e. only GDP data or only long-term capital inflow data.	**6 – 8**
L1	For an answer that shows a descriptive knowledge of GDP and the capital account of the balance of payments as indicators of standard of living in a country.	**1 – 5**
Evaluation		
E2	For an evaluative assessment based on economic analysis.	**3 – 4**
E1	For an unexplained assessment or one that is not supported by economic analysis.	**1 – 2**

4 (a) Explain how a fall in export demand could affect the circular flow of income in an economy. [10]

- A fall in export demand represents a fall in injections into the circular flow of income. This will cause equilibrium level of national income to fall by a multiplied amount.



<u>Equilibrium in the circular flow</u>

- The 4-sector model of the circular flow of income consists of (1) domestic households and firms, (2) financial intermediaries e.g. banks, (3) government and (4) foreign sector for which the country engages in both the import and export of goods and services.
- To produce goods and services, firms hire factors of production from households and these factor services by households generate their respective income payments. Households in turn spend their factor income on the consumption of consumption of the output of goods and services produced by firms.
- Thus, factor payments to households (firm output or household income) i.e. income expenditure stream, must be equal to the payment for final goods and services received by firms (household expenditure) i.e. income spending stream. **Expenditure must equal income in a circular flow.**
- Withdrawals in the form of savings (S), taxes (T) and import spending (M) reduces the income expenditure stream. On the other hand, injections (J) in the form of investment (I), government spending (G) and export earnings (X) increases the income spending stream. **As a result, equilibrium national income in the circular flow is where injections equal withdrawals (J=W).**
- Changes to J and W will lead to a multiplied change in national income via the multiplier (k) process. To illustrate this, we assume a four-sector economy that is below full employment, with marginal propensity to withdraw (mpw) from the circular flow equal 0.4, where mpw is made up of the marginal propensity to save (mps), tax (mpt) and import (mpm) i.e. mpw=mps+mpt+mpm.

Adjustment process to new equilibrium level of NY with fall in export demand

- A fall in export demand of say \$100m would lead to an initial decrease in J of \$100m as X falls. As a result J<W. Since stocks increases and firms producing exports thus reduce output by \$100m, causing incomes to decrease by \$100m as less is paid out in terms of factor incomes since less factors of production (FOP) are hired. When households face this reduction in income in the form of wages, rent, interest and profits (WRIP) of \$100m, \$40m less in withdrawals will be leaked out of the circular flow as savings, taxes paid and import spending since mpw=0.4.
- Households thus reduce their consumption of domestic goods and services by \$60m, which then further reduces income for firms producing consumer goods of \$60m. These firms thus reduce production to meet this further reduction in demand and hence hire less FOP. Owners of FOP are again face this reduction in income of \$60m in the form of WRIP, and further reduce withdrawals by \$24m and reduce spending on domestically produced goods by \$36m.
- This process of alternating spending and output decreases accompanying income reductions continues until decreases in income and consumption become insignificant due to the existence of withdrawals. The multiplier process then stops when multiple rounds of decrease in income and spending causes **W to decrease as Y decreases until J=W again**. The result is a multiplied decrease in the equilibrium level of national income Y.

4 (b) Assess whether these economic indicators are the best measures of standard of living in Singapore. [15]

Introduction

- Gross domestic product (GDP) shows the total value, before deduction of depreciation, of goods and services produced by all residing within the geographical boundary of a country during a specific period of time.
- Long term capital flows are recorded on the capital account of the balance of payments, and includes foreign direct investment (FDI) as well as portfolio investment.
- GDP and capital account balance as economic indicators allow for a measure of the standard of living in Singapore to a certain extent. However to get a fuller picture of both the qualitative and quantitative aspects of the standard of living (SOL) in Singapore, they need to be complemented by other indicators.

Use of Nominal GDP as a measure of SOL

- Given Singapore's economic growth and increase in national incomes with GDP growing 2.9%, the purchasing power of citizens and amount of goods and services available for consumption could have increased, leading to a higher material SOL.

Measurement problems of GDP

- However, measurement problems of GDP figures may arise when they are computed. Measurement problems due to inaccurate and unreliable information is unlikely to be large in Singapore, given the sophistication of the sampling techniques, data processing, compilation, presentation and interpretation used. On the other hand, the non-monetised sector in Singapore could be substantial and this could lead to GDP figures being an underestimation of the material standard of living of Singaporeans.
- Examples of the presence of an underground economy include the provision of private tuition services by many individuals who do not fully declare their incomes to the tax authorities, housewives who provide unpaid duties etc.
- As a result, GDP figures may not be a good indicator of changes in standard of living over time e.g. due to changes in accuracy of information gathered as survey techniques improve, changes in the size of the underground economy etc.

Conceptual problems of GDP as a measure of SOL

- Even if GDP data is accurate, there are conceptual limitations to the use of GDP data as a measure of standard of living.
- Nominal GDP may not provide an accurate measure of material SOL i.e. of the amount of goods and services available to an average Singapore resident. This is because it does not take into account the effects of inflation which reduce the internal purchasing power of the currency, and it also does not take into account changes in population size. Increases in nominal GDP but with a greater rise in general price levels could actually mean a net fall in purchasing power of the average consumer, and hence material SOL may not have increased.
- Similarly, increases in nominal GDP accompanied by greater increases in population size would mean that the average consumer may not be enjoying a greater quantity of goods and services and thus does not indicate a rise in material SOL. Overall, real GDP per capita should be used instead of nominal GDP.
- Nevertheless, real GDP per capita does not take composition of output produced into account. An increase in the Singapore's real GDP per capita may be due to an increase in defence spending. Similarly, an increase in Singapore's real GDP per capita may be due to an increase in investment. This means that any rise in consumption and hence living standards will only be forthcoming in the future. The current standard of living does not improve since the amount consumed by the average Singapore resident has not increased,

and material SOL is overestimated by the rise in nominal GDP or even in real GDP per capita. Thus, additional information on the real consumption per capita would be more useful.

- Also, a higher GDP figure could also be due to a higher level of income earned and a greater level of consumption by only a small minority of people in society, while the majority of Singapore residents may not see an improvement in their material SOL. Thus, indicators such as the Gini coefficient measuring income disparities is also needed in order to assess if the material standard of living for the average Singaporean resident has improved. In this case, the Gini coefficient after accounting for redistributions and transfers would be appropriate.
- In addition, SOL includes both quantitative and qualitative aspects – nominal GDP, or even real consumption per capita, does not fully account for changes in non-material SOL. For one, the increase in GDP does not take account of the working hours of the people. The Singapore workforce may have worked longer hours to produce the higher level of output. This reduction in leisure time and a more stressful working environment to produce the higher output could have had adverse effects on the non-material SOL of Singapore residents.
- Furthermore, GDP does not take into account the external costs imposed onto third parties generated by negative externalities in production that are uncompensated for and not reflected in the prices of goods and services e.g. pollution (air, water, waste) and congestion incurred in the process of increasing output and GDP in the country.
- Hence, to the extent that the higher levels of national income are achieved at the expense of greater amounts of negative externalities generated, non-material SOL could have been reduced even as material SOL seems to be rising with a higher GDP. Hence, it is also important to look at the level of pollution in a country, e.g. use of the Pollutant Standards Index (PSI) in Singapore.
- To make a better assessment of living standards over time, some alternative indicators can be used that enhance nominal GDP figures to better measure both material and non-material SOL of a country's citizens. For instance, Human Development Index (HDI) is a composite index of measures of life expectancy at birth, educational attainment and GDP per capita in PPP US$. Another alternative indicator of living standards is Measure of Economic Welfare (MEW) in which the value of Net National Product (NNP) is adjusted by adding allowance for leisure and other non-marketed goods and services that improve welfare, and deducting 'regrettables' such as expenditure on defence and 'bads' like pollution.

Use of long-term capital inflow as a measure of SOL

- The increase in long term capital inflows by 18% indicates an improvement in the capital account and hence the balance of payments position of Singapore, assuming that there are no changes to the current account balance.
- With a greater inflow of foreign direct investment, aggregate demand increases and this gives a multiplied increase in national income via the multiplier effect. With an increase in output, the demand for labour increases and cyclical unemployment falls. This means that the purchasing power of citizens is likely to have increased as real GDP increased, indicating a rise in material SOL.
- In addition, the increased demand for Singapore dollar is likely to have increased with this net inflow of long-term capital, and an appreciation of the currency would also reduce the price of imported goods. This further gives a rise in material SOL as external value of the currency is increased and consumers can buy a greater quantity of imports.
- Non-material SOL may also be increased as a result. Crime rates may decrease as average citizens grow wealthier, reducing poverty and unemployment rates. With growth and increases in government tax revenues, the government has greater capacity to carry out income redistribution and reduce income inequalities that are the source of social discontent/unrest. Greater environment protection may be carried out to limit the external costs imposed onto third parties from production e.g. health costs arising from pollution etc. In addition, the government may be in a better position to implement policies that improve

the provision of merit goods e.g. healthcare and education to increase life expectancy and literacy rates, and this could increase the non-material SOL of citizens as well.

- In the long run, with capital accumulation and transfer of foreign expertise and technology accompanying FDI, potential growth is achieved. Material SOL may be raised even further, which could then provide the basis for further increases in non-material SOL as highlighted above e.g. reduction in crime rates, generation of negative externalities, better healthcare provision and sanitation standards etc.

Conceptual problems of long-term capital inflows as a measure of SOL

- However, overall the usefulness of long-term capital flow is limited in measuring SOL, especially given the presence of indicators such as GDP – any increases in material SOL through increased FDI will be captured as increases in GDP.
- Moreover, an improvement of the balance of payments for Singapore as a result of the long term capital inflow does not provide sufficient information of the material well-being of the Singapore residents. The nature of the long-term capital inflow matters as well. For example, if the long-term capital inflow mainly consists of portfolio investment i.e. net purchase of long term securities (more than a year) such as bonds or in minority holdings of company shares, then increases in capital accumulation explained previously may not materialise since these do not represent net investment.
- On the other hand, if the long-term capital inflow were mainly FDI representing net purchase of real assets, then while current material SOL may not be raised substantially (since investment goods and not consumption goods form the bulk of the increase in output), future material SOL may be higher. Non-material SOL may also be higher in this case as a result of the higher material SOL as highlighted above e.g. improved literacy standards, reduced income inequality with government policy conducted as a result of greater resources being available with future growth etc.

Conclusion

Combination of measures

- In conclusion, both GDP and long-term capital inflows are useful but not sufficient to best measure the standard of living in Singapore.
- There are many quantitative and qualitative aspects of living standards to consider in measuring SOL in Singapore and even when improved, e.g. adjusting nominal GDP to real consumption per capita, they still need to be complemented by other measures, especially those on the non-material aspects of SOL such as income inequality, leisure time and pollution.

Relevance of measures for Singapore

- While composite measures such as HDI and MEW thus tend to give a good overall measure of SOL, the “best” measure really depends on which particular aspects of SOL one are most pertinent for the policymaker.
- Given that Singapore has maintained a strong balance of payments surplus position for many years as well as steady nominal GDP growth rates of around 2-3%, these figures in 2014 represent a continuation of Singapore’s good economic performance over the years.
- Wider income disparities and other non-material aspects of SOL have however become the focus of policy in recent years, and thus measures that account for these could serve as “better” measures.

5. Over the past few years, Singapore's economic restructuring journey to achieve growth has focused on raising productivity through promoting innovation, investing in human capital and tightening the inflow of foreign workers.

(a) Explain why governments are concerned with failing to achieve sustained economic growth.[10]

(b) With reference to Singapore, discuss whether raising productivity alone can be effective in achieving sustained economic growth and low unemployment. [15]

Marking Scheme (a)

Knowledge, Application, Understanding and Analysis		
L3	Well-developed analysis of both the internal and external consequences of failing to achieve sustained economic growth.	**7 – 10**
L2	Under-developed explanation of the consequences of failing to achieve sustained economic growth.	**4 – 6**
L1	For an answer that shows descriptive knowledge of the consequences of failing to achieve sustained economic growth.	**1 – 3**

Marking Scheme (b)

Knowledge, Application, Understanding and Analysis		
L3	Well-developed explanation of the effectiveness of raising productivity and at least 1 other policy to achieve sustained economic growth and low unemployment, with strong reference made to the Singapore economy.	**9 – 11**
L2	Under-developed explanation of the effectiveness of raising productivity and other relevant policies to achieve sustained economic growth and low unemployment, with some reference made to the Singapore economy. Max 6 marks for a well-developed explanation of how raising productivity achieves sustained economic growth and low unemployment, without limitations.	**6 – 8**
L1	For an answer that shows descriptive knowledge of the policies to achieve sustained economic growth and low unemployment.	**1 – 5**
Evaluation		
E2	For an evaluative assessment based on economic analysis. E.g.: root cause of problem, nature of economy etc	**3 – 4**
E1	For an unexplained assessment or one that is not supported by economic analysis.	**1 – 2**

5 (a) Explain why governments are concerned with failing to achieve sustained economic growth.[10]

Introduction: Define sustained economic growth

- Economic growth is the increase in real output in an economy.
- The economy experiences actual growth in the short run when there is a percentage annual increase in output actually produced.
- Potential growth is achieved when there is a percentage annual increase in the productive capacity of the economy.
- There must be a combination of actual growth (led by increase in AD) and potential growth (led by increase in LRAS) for sustained economic growth to be achieved.
- Governments are concerned with failing to achieve sustained economic growth due to the internal and external consequences of falling real GDP (negative growth) and/or unsustained growth.

Explain internal consequences

1. Lower standard of living

- With falling real GDP, holding population constant, real GDP per capita decreases, implying that there is decrease in purchasing power for an average citizen living in the economy. This leads to a decrease in amount of goods and services available for consumption, hence a decrease in quantitative standard of living in the economy.
- With falling real GDP, people are more concerned about being able to afford the material necessities of life. This means less and poorer quality housing; less easily available, less efficient and less comfortable transport; less educational opportunities and poorer quality education; less overseas holidays; less and poorer quality recreational and entertainment facilities; and lesser of other social amenities for the general population. All these decrease the qualitative standard of living in the economy.

2. Further decrease in C and I, negative impact on growth and employment

- With falling real GDP, firms' and consumers' confidence decrease. Businesses expect lower profits and this discourages them to invest. Households are less confident of future job security as well as expect lower incomes, hence they will decrease their consumption.
- Decrease in investments and consumption would lead to decrease in AD, hence further decrease in real GDP and further aggravating negative actual growth. As firms reduce production and decrease derived demand for labour, cyclical unemployment increases in the economy.
- The fall in investment also leads to fall in quantity of capital, further reducing productive capacity and hindering potential growth in the economy.

3. Less equitable income distribution

- Falling real GDP makes it more difficult for governments to alleviate poverty and bring about a more equitable distribution of income.
- With falling real GDP, the government collects a smaller amount of direct tax such as corporate tax (due to decreased profits of firms) and personal income tax (due to decreased incomes of consumers) as well as a smaller amount of indirect tax as people spend less on goods and services. With lower tax revenue, the government is unable to channel more resources to help the poor to reduce income inequality.

Explain external consequences

1. BOP worsens

- With unsustained growth, due to rise in LRAS not able to keep up with rise in AD, general price level in the economy is higher. The rise in GPL results in less price competitive exports. Assuming demand for exports is price elastic, there will be a more than proportionate fall in quantity demand, hence a fall in export revenue. Also, as consumers switch to consume the comparatively cheaper imported goods, demand for imports increases, hence a rise in import expenditure. Net exports decreases, worsening the current account of the economy.
- Due to fall in business confidence and an expectation of future fall in profits, there will be long term FDI outflow and capital account of the economy will also worsen.
- With both CA and KA worsening, BOP worsens.

2. Weaker and less stable exchange rate

- In the foreign exchange market, with the fall in export revenue and fall in long term capital inflow, the demand for domestic currency decreases. With the rise in import expenditure and the rise in long term capital outflow, the supply of domestic currency increases. Hence the domestic currency depreciates.
- This reduces expected rate of return for speculators, further worsening capital account through more short term capital outflow and less short term capital inflow. The weaker exchange rate can also lead to imported inflation as prices of imports increase in terms of domestic currency, resulting in price instability.

Conclusion

- Hence governments are concerned with failing to achieve sustained economic growth due to the various internal and external consequences it results in, hence aim to make sustained economic growth a key macroeconomic objective in the economy.

5 (b) With reference to Singapore, discuss whether raising productivity alone can be effective in achieving sustained economic growth and low unemployment. [15]

Introduction - Definition

- Productivity refers to quantity of output produced for each hour of work of the working population. Raising productivity means that workers become more productive, and the quantity of output produced in an hour of work increases.
- To achieve sustained economic growth, there must be both actual and potential growth. To achieve low unemployment, there must be a fall in cyclical and structural unemployment.

Body - Thesis: Raising productivity is effective in achieving sustained economic growth and low unemployment

Sustained economic growth

- The Singapore government aims to raise productivity through promoting innovation, investing in human capital and tightening the inflow of foreign workers.
- To promote innovation, the Productivity and Innovation Credit (PIC) Scheme is implemented for businesses to invest in a broad range of activities along the innovation value chain, in which firms can claim up to 400% tax deductions/allowances and/or 60% cash payout in their efforts of R&D to adopt more innovative and cost-efficient methods of production. These will improve the quality of capital and increase use of better and more labour-efficient technology and machines, hence raising productivity in Singapore.
- The Singapore government also invests heavily in human capital through schemes such as Skills Future Credit, Workfare Training Support and Continuing Education & Training (CET). Skills Future Credit aims to encourage individual ownership of skills development and lifelong learning, in which Singaporeans aged 25 and above will receive an opening credit of S$500. Workfare Training Support encourages those 35 years old and above Singaporean and earn not more than $1,900 per month, to attend training to upgrade their skills and improve their chances of being employed. The CET Masterplan is a comprehensive plan to prepare the Singapore workforce for the future and to maintain a competitive advantage by equipping Singaporeans with the skills for job opportunities in new growth industries. These improve the quality of labour, hence raising productivity in Singapore.
- In addition, the Singapore government has tightened the inflow of foreign workers. Foreign worker levy has been raised in the construction, manufacturing, marine, process and service sectors over the years. Such a raise of levy will increase the cost of hiring foreign workers, hence encouraging firms to reduce their reliance on cheap foreign workers and instead find ways to innovate and improve their produce processes. Firms will then send their workers for retraining and/or introduce other more productive ways of producing their output. These improve the quality of capital and labour, hence raising productivity in Singapore.
- With raising productivity, productive capacity of Singapore increases, hence increasing LRAS, achieving potential growth.
- Assuming the wage growth lags behind productivity growth, the lower unit cost due to raising productivity also makes Singapore more attractive to foreign investors as there is expectation of future increase in profits, thereby attracting more FDI.
- In addition, if average productivity in Singapore increases faster than its trading partners, Singapore's exports will be relatively more price competitive compared to its trading partners' products. Assume demand for exports is price elastic due to availability and closeness of substitutes, quantity demand for exports will increase more than proportionately, hence increase export revenue. Also, as consumers switch to consume the comparatively cheaper domestically-produced goods, demand for imports falls, hence a fall in import expenditure. Net exports thus increases. Also through more innovative production processes, quality of exports may increase, increasing the demand for them. Hence increasing export revenue and net exports, ceteris paribus.
- The increase in I and X-M increase AD and thus NY via the multiplier process, achieving actual growth.

- FDI also increases productive capacity in the long run as foreign MNCs bring along their better technology and management practices. Production can become more efficient and together with the rise in the quality of the labor force induces potential growth.
- As shown in Figure 1, a persistent increase in AD from AD_0 to AD_2 without a corresponding increase in LRAS will only lead to demand-pull inflation as the general price level rises from P_0 to P_2 with no further rise in real national income after Yf.
- As potential growth takes place and LRAS shifts rightwards from $LRAS_0$ to $LRAS_1$, the general price level decreases from P_2 to P_1 and real national income increases from Y_f to Y_2.
- With both actual growth and potential growth, non-inflationary sustained economic growth is achieved.

General Price Level
P
AD $LRAS_0$ $LRAS_1$
P_2
Real National Income
O Y_0 Y_f Y_2

Figure 1

Low unemployment

- The increase in AD results in a multiple increase in NY via the multiplier process. Firms will expand production and increase derived demand for labour, hence reducing cyclical unemployment.
- As explained above, the Singapore government implementing retraining schemes such as Skills Future and CET will help equip workers with the relevant skills required in the labour market. This reduces the mismatch of skills between the demand and supply of labour, hence reducing structural unemployment.
- With the fall in cyclical and structural unemployment, low unemployment is achieved.

Anti-Thesis: Raising productivity may not lead to sustained economic growth and low unemployment

Limitations of raising productivity

- The measures to raise productivity in Singapore are long-term, costly and have uncertain effects as they are dependent on a few factors.
- The mindset of workers and their receptiveness and also the quality of training will affect the success of the training. The less educated or older workers may not have the ability to learn new skills and the more educated ones may not be receptive towards the need for re-training. Some may just be resistant to the idea of a job change.
- If the improvement in labour productivity is focusing on low-skilled jobs, then the extent to which FDI inflow may not be substantial as Singapore, as a knowledge-based economy mainly attracts high-value added FDIs.
- If the increase in productivity to increase LRAS is slower than the increase in AD, it will lead to demand-pull inflationary pressures which will not be desirable for the Singapore economy.
- Increased automation due to promotion of innovation will lead to higher structural unemployment due to the mismatch of skills between the demand and supply of labour.
- It is also more difficult to raise labour productivity in some sectors such as the retail and construction sectors where it is harder to replace labour with machinery. As such, firms in these sectors have been very dependent on labour-intensive method of production encouraged by the cheap foreign labour due to the liberal foreign labour policy in the past. Now, with the introduction of foreign workers levy, firms are forced to cut down on the use of labour and use more capital-intensive method of production to cut down the cost of production. However, in the short run, it may not be possible to substitute machines for labour and hence the use of more costly foreign workers will lead to higher cost of production resulting in higher cost-push inflation in Singapore. Higher inflation reduces Singapore's export competitiveness and may affect Singapore's growth and employment.

Other policies need to be implemented

Expansionary fiscal policy

- In order to achieve sustained growth, it requires AD to be sufficiently high to absorb the potential output produced. However a policy focusing on productivity is a long-term supply-side policy aimed primarily at shifting the LRAS and not at increasing AD. If the growth of AD does not keep pace with potential growth due to weak external demand for example, unemployment rate will rise.
- Therefore, expansionary fiscal policy should be used to increase AD. This might be more important especially in periods of recession.
- For example, the Singapore government increases its spending on infrastructure development, including building of more general hospitals such as Sengkang General Hospital and Ng Teng Fong General Hospital, and building of Changi Terminal 5, and expanding the MRT network with the Downtown Line and Thomson-East Coast Line.
- Reduction in personal income tax would stimulate consumer spending through an increase in disposable income and purchasing power. Reduction in corporate tax from 20% to 17% increase the after-tax profits and thus encourage investment.
- The increase in C, I and G will increase AD which in turn causes NY to increase by multiple times through the multiplier process, achieving positive actual growth. Firms expand production and increase demand for labour, reducing cyclical unemployment and achieving low unemployment.
- This expansionary fiscal policy also as supply-side effect due to capital accumulation from the infrastructure development. Hence increasing the productive capacity and LRAS, achieving potential growth. With both increase in AD and LRAS, sustained economic growth is achieved.

Limitations of EFP

- However, the effectiveness of EFP in promoting growth depends on the size of the multiplier k. Singapore's multiplier effect tends to be small due to a high marginal propensity to withdraw (MPW) as a result of a high mps and mpm. Her compulsory savings scheme, the Central Provident Fund (CPF), results in a high mps. Due to Singapore's limited resources and her consequent import-dependence for both finished goods and raw materials, she has a high mpm. The final increase in NY and hence the increase in production and employment is limited.
- In addition, there may be resource crowding-out. As government spends on building infrastructure projects and engages scarce resources, resources such as labour will be drawn away from the private sector. The shortage of labour will drive up wages hence increase cost of production, leading to lower profits earned. Firms in the private sector will cut down on their investment, and the fall in I may offset the rise in G, hence the increase in production and employment is limited.

Exchange rate policy

- The modest and gradual appreciation of SGD makes exports more expensive in terms of foreign currency and imports cheaper in terms of SGD. Assuming Marshall-Lerner condition $|PEDx+PEDm|>1$, net exports will fall, resulting in fall in AD and GPL, curbing demand-pull inflation. It also makes imported raw materials cheaper in terms of SGD, reducing cost of production and curbing cost-push inflation.
- The modest and gradual appreciation of SGD also reflects strong economic fundamentals of the Singapore economy due to strong export growth and stable economy, hence boosting business confidence. With the strong business confidence, together with the fall in inflation, Singapore attracts FDI due to the rise in expected profits, resulting in increase in I. This increases AD and NY multiple times via the multiplier process, achieving positive actual growth. As firms expand production and increase derived demand for labour, cyclical unemployment is also reduced.
- In the long run, a rise in FDI leads to capital accumulation in the economy. In addition, FDIs may bring in better quality machinery, technology, skills and expertise which will enhance quality of capital and labour. Productive capacity is thus expanded, increasing LRAS and achieving potential growth. With both increase in AD and LRAS, sustained economic growth is achieved.

- Also, in times of higher unemployment (e.g. during the 2009 Global Financial Crisis), MAS adopted a one-time off depreciation of SGD through the 0% appreciation stance, resulting in a fall in price of exports in terms of foreign currencies and a rise in price of imports in terms of SGD. Assuming Marshall-Lerner condition |PEDx+PEDm|>1, X-M increases, resulting in AD increase and multiple increase in NY via the multiplier process. This induces firms to increase production and increase derived demand for labour, lowering cyclical unemployment and achieving low unemployment.

Limitation of ERP

- Managing the ER has some challenges as the government needs to know when to intervene, what ER they should aim to maintain, and how persistently they should try to maintain that rate. However, they may not have up-to-the-minute and reliable information about the state of the global economy and the various interactions in the foreign exchange market. If the SGD is too strong, it will erode its export competitiveness and worsen the BOP.
- As explained above, modest and gradual appreciation of SGD results in a fall in X-M. hence a multiple fall in NY via the multiplier process assuming Singapore economy is operating near/at full employment level.

Conclusion and Evaluation

State stand and justify

- Due to its limitations, raising productivity alone is ineffective in achieving sustained economic growth and low unemployment.

Combination of policies

- The Singapore government needs to ensure that there is sufficient AD to support productivity growth. Thus it is necessary to complement the long term policy of raising productivity with concurrent implementation of demand-management policies such as expansionary fiscal policy and exchange rate policy to manage short-term macroeconomic fluctuations.

Nature of economy

- As labour is scarce and exports take up a large proportion of Singapore's national income, raising productivity is to a large extent effective for Singapore achieve sustained economic growth and low unemployment especially in the long run.
- A high quality labour force is also one of our main selling points to foreign investors, and as a small and open economy, Singapore relies heavily on FDI for capital and job creation.
- Since our productivity growth has been lagging behind our neighbouring countries, it is imperative that the Singapore government continuously fine-tune the supply-side policy to make Singapore more productive and competitive.

Root cause of problem

- It is important to examine the root cause of the problems so that the effective policy can be implemented. If there are external factors, such as a rise in food and oil prices, that affected Singapore growth and employment negatively, the more effective policy is to maintain a modest and gradual appreciation to ward off imported inflation.
- If the root cause of problem is the structural issues, which is the most likely reason, as Singapore restructures towards a knowledge-based economy, then raising productivity will be the more effective policy to achieve sustained economic growth and low unemployment through improving quality of labour and reducing structural unemployment.

6. Discuss the view that opening an economy to free trade and migration flows mitigates the economic problem of scarcity and achieves a country's macroeconomic goals. [25]

Knowledge, Application, Understanding and Analysis		
L3	For a well-developed explanation of how free trade and migration flows could mitigate the problem of scarcity and achieve macroeconomic goals, as well as how they could be	**15-21**

	limited or even harmful towards these aims.	
L2	For an under-developed explanation. Max 14m for a well-developed one-sided answer that covers how free trade and migration flows mitigates the problem of scarcity and achieves macroeconomic goals OR how they are limited in achieving/harmful towards these aims. Max 14m for a well-developed answer that addresses either free trade OR migration flows but not both. Max 9m for an answer that only has a well-developed explanation of the theory of CA, linking to mitigating scarcity due to consumption beyond PPC.	**9-14**
L1	For a descriptive explanation regarding free trade and migration flows.	**1-8**
	Evaluation	
E2	For an evaluative assessment based on economic analysis	**3-4**
E1	For an unexplained assessment or one that is not supported by economic analysis	**1-2**

Introduction

- Free trade refers to the free movement of goods and services across country borders. It involves specialization according to the Theory of Comparative Advantage (CA). Migration flows refers to the free movement of labour across country borders. This could include both skilled and unskilled labour.
- The economic problem of **scarcity** arises from **limited resources and unlimited wants**. Trade could limit the problem of scarcity as it would be possible for countries to consume beyond their production possibility curve (PPC). In addition, scarcity could be mitigated by an

increase in quality or quantity of resources, or an improvement in technology, that enables an economy to expand its PPC and thereby **satisfy more wants**. Macroeconomic goals refer to both internal and external objectives such as economic growth, full employment, low and stable inflation, healthy balance of payments, and stable exchange rate.

Thesis: Opening an economy to free trade and migration flows mitigates the economic problem of scarcity and achieves a country's macroeconomic goals.

Explain how opening an economy to free trade mitigates scarcity and achieves macroeconomic goals

(i) Theory of CA: consume beyond PPC

- According to the Theory of CA, when countries specialize and trade according to their comparative advantage, they can consume beyond their PPC – thereby mitigating the problem of scarcity.
- The Theory of CA states that trade between nations is beneficial to both if there is a **difference in relative opportunity cost** and **each specializes according to their comparative advantage**. The opportunity cost of producing good X is the amount of the other good which has to be sacrificed in order to produce an additional unit of X.
- The gains due to specialisation and trading according to comparative advantage can be illustrated through a numerical example. To explain the theory, assume that both countries have the **same amount of resources** and each devotes half of its resources to the production of each of two goods, textile and computers. There is **no transport cost, no trade barriers, perfect factor mobility and constant costs**.

Table 1: Before Specialisation and Before Trade

Country	Amount of resources	1 unit of resource can produce	
		Computers	Textile
Singapore	2	30	20
China	2	10	15
Total	4	**40**	**35**

- From Table 1, we can see that using 1 unit of resource, Singapore can produce 30 units of computer and 20 units of textile. Hence the opportunity cost of producing 1 unit of computer is **2/3 unit of textile**. China can produce 10 units of computer and 15 units of textile. Hence the opportunity cost of producing 1 unit of computer is **3/2 unit of textile**.

Singapore: 30C = 20T

1C = 2/3T or 1T = 3/2C

China: 10C = 15T

1C = 3/2T or 1T = 2/3C

- The **opportunity cost** of producing **1 unit of computer** is **lower for Singapore** than China. Singapore needs to give up only 2/3 units of textile compared to 3/2 units of textile if China were to produce computers.
- This could be because China has an **abundance of labour**, thus the **labour-intensive production of textiles is less costly for China than Singapore**. Similarly, due to the **skilled labour and advanced technology** in Singapore, the **production of electronics like computers would be less costly**. Hence, Singapore should specialise in the production of computers. Similarly, China should specialise in textiles.

Table 2: After Specialisation and Before Trade

Country	Computers	Textile
Singapore	1.5 x 30 = 45	0.5 x 20 = 10
China	0	2 x 15 = 30
Total	**45**	**40**

- Table 2 shows that Singapore partially specialises. She uses 1.5 units of resources to produce computers and 0.5 unit of resources to produce textiles. China uses all its resources for textile production.
- After specialization, it will benefit both countries to trade with each other as long as the **terms of trade lies between the 2 countries' opportunity costs**. In this case, the terms of trade for 1 computer can lie between **2/3T < 1C < 3/2T**.
- **Assume** that the terms of trade is **1C = 1T**, and Singapore exchanges 12 units of computer for 12 units of textile with China.

Table 3: <u>After</u> Specialisation and <u>After</u> Trade

Country	Gun	Textile
Singapore	45 - 12 = 33	10 + 12 = 22
China	0 + 12 = 12	30 – 12 = 18
Total	**45**	**40**

- A comparison between Tables 1 and 3 shows that there is **increase in world production of both goods**. Also, Singapore has gained 3 units of computers and 2 units of textiles. China gains 2 units of computers and 3 units of textile after trade.
- It can be seen that with <u>specialisation and trade</u>, both Singapore and China are now better off with an increase in consumption that is beyond what both countries can initially produce. In fact, they both ***consume beyond their PPC – mitigating the problem of scarcity***.

(ii) Achieve macroeconomic goals: EG, full employment, healthy BOP

- Opening an economy to free trade leads to an increase in access to the world market, which can **increase the demand for a country's exports and hence a country's export revenue**. This is especially pertinent for countries like Singapore with a small domestic economy that relies on exports to drive its growth. The resultant increase in net exports (X-M) will increase **aggregate demand (AD),** hence increasing **national income by a multiple** and achieving **actual growth**.
- In addition, as production increases, there is increased demand for labour, which helps the economy to achieve **full employment**. Moreover, the increase in X-M results in an **improvement of the current account** of the balance of payments.

Explain how opening an economy to migration flows mitigates scarcity and achieves macroeconomic objectives

(i) Increase in quantity and quality of labour resources

- Opening an economy to migration flows could mitigate scarcity from an increase in labour resources, for instance the **increase in quantity of foreign workers** entering the Singapore economy. In addition, desirable factors such as low personal income tax could also attract skilled labour, which improves the quality of labour.
- The improvement in quality and quantity of labour will lead to an increase in productive capacity of an economy, thereby **shifting the PPC to the right from PPC_1 to PPC_2**. This mitigates the problem of scarcity as point A, which was not previously attainable given the country's resources, will now be attainable, hence satisfying more wants.

Capital
Goods

A

PPC_2

PPC_1

Consumer Goods

(ii) Achieves macroeconomic objectives - EG, price stability, improve BOP

- The increase in quantity and quality of labour as previously mentioned helps an economy to achieve potential growth as the **productive capacity of the economy increases**. In addition, as LRAS increases, the general price level of a country falls, curbing demand-pull inflation.
- In addition, the fall in general price level helps to reduce the price of exports. Assuming the demand for exports is price elastic, the quantity demanded of exports will increase more than proportionately, thereby increasing export revenue and net exports. This **improves the current account** and balance of payments.

<u>Anti-thesis: Opening an economy to free trade and migration flows DOES NOT mitigate the economic problem of scarcity and achieves a country's macroeconomic goals.</u>

Explain why opening an economy to *<u>free trade</u>* does NOT mitigate scarcity or achieve macroeconomic goals

(i) Limitations of Theory of CA: trade might not occur

- Opening an economy to free trade might not actually allow a country to consume beyond PPC as the **assumptions behind the Theory of CA might not hold**. For instance, if transport costs between two countries are too high, opening both economies to free trade does not actually result in specialization and trade, as the transport costs prohibit the exchange of goods and services. Hence, both countries would still produce and consume within their respective PPC, and this would not mitigate the problem of scarcity.

(ii) Unfavorable terms of trade: might not consume beyond PPC

- In addition, even if the assumptions behind the Theory of CA hold, **the terms of trade might not be favorable** to both countries. From the earlier example, the acceptable terms of trade is 2/3T < 1C < 3/2T. If the terms of trade was set at 1C=3/2T, this would be exactly the same as China's own opportunity cost of production. China would not experience any difference in their ability to consume – in fact the maximum they could consume would be along their PPC, even with trade, hence not mitigating the problem of scarcity.

(iii) Vulnerability to external shocks: recession, cyclical Ue, imported inflation

- In addition, opening an economy to free trade exposes the economy to certain risks such as being **vulnerable to external shocks**. For instance, Singapore was greatly affected by the recent Global Financial Crisis in 2008. The fall in income and purchasing power of her major trading partner US caused a fall in demand for Singapore's exports, thereby leading to a **fall in her net exports and AD**. Singapore's **national income fell by a multiple**. This led to a recession in the Singapore economy. Moreover, it also led to c**yclical unemployment** as the fall in production led to a fall in demand for labour. The fall in X-M also **worsens BOP**.
- In addition, if **prices of traded commodities such as oil rises** due to instability in oil producing countries like Iraq, this can lead to an increase in cost of production in importing countries like Singapore, leading to **imported inflation**.

(iv) Loss of CA: structural Ue

- Countries that are open to free trade may also experience a **loss of comparative advantage**. For instance, Singapore lost its comparative advantage in low-skilled manufacturing (e.g.

textiles and consumer electronics) to countries such as Vietnam and China which have a much larger pool of unskilled workers. As such, Singapore experienced an **outflow of FDI towards these countries** in terms of a **relocation of such industries** to Vietnam and China, thereby causing unskilled workers in Singapore to experience unemployment. Since these workers do not possess the required skills to work in high value-added industries such as biotechnology, they may become **structurally unemployed**.

Explain why opening an economy to *migration flows* does NOT mitigate the economic problem of scarcity or achieve macroeconomic aims

(i) Brain drain: PPC might not shift outwards

- Opening an economy to migration flows could lead to the **opposite problem of brain drain** as skilled workers leave in search of better opportunities elsewhere. This has especially been the case in African countries, where doctors and engineers are leaving for better-paying jobs in the USA. As such, the quantity and quality of the labour force could deteriorate, thus **hindering potential growth**. This would not mitigate the problem of scarcity.

(ii) Aims not achieved: PG, healthy BOP

- Macroeconomic aims might not be achieved as the fall in productive capacity leads to a **stagnation of potential growth**. In addition, the deterioration of the quality of the labour force could lead to a **fall in FDI inflow** as firms expect higher costs of production and lower profits, thereby **worsening the BOP**.

Conclusion and Evaluation

Stand and Justification

- In general, opening an economy to free trade and migration flows is **not guaranteed** to mitigate the problem of scarcity or achieve macroeconomic objectives. Countries that are more likely to experience positive outcomes are countries like Singapore – which use **policies** to **amplify the potential benefits and reduce potential costs** from trade and migration.
- For instance, Singapore uses supply side policies to encourage R&D (e.g. via the Productivity and Innovation Credit Scheme), which helps to develop new sources of comparative advantage and improve the quality of exports, so as to ensure continued demand for our exports to achieve objectives like growth. In addition, the maintenance of low personal income tax rates and continued government spending on improving healthcare and education helps to ensure that we attract skilled workers – helping to mitigate scarcity and achieve our macroeconomic goals.

Further Evaluation

- Whether opening an economy to free trade and migration flows will help also depends largely on the **state of the global economy**. If the world economy is in a recession, being open to trade could actually lead to severe negative consequences on a country's growth and balance of payments as export demand falls.
- In addition, **advancements in technology** also matter – while transport costs might have been prohibitively high in the past, restricting the volume of trade among countries, transport costs have now fallen to an extent where trade can now occur even with countries that are far away. This **enhances the probability of reaping benefits** such as expansion of world production and consumption beyond PPC. In addition, improvements in transportation technology has led to a large increase in migration flows, amplifying the positive effects of migration if a country can attract labour inflows.

MERIDIAN JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATION 2016

H2 Economics **9732/01**

Case Study Questions **15 September 2016**

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 an HB pencil for any diagrams or graphs.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Section A
Answer **all** questions.

Begin each question on a fresh sheet of 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 question.

[Turn Over]

This document consists of **7** printed pages and **2** cover sheets.

Question 1 Who is winning the chocolate war?

Extract 1 Higher costs bite chocolate makers

Hershey Co.'s rebuff of a $23 billion bid by Mondelez International Inc. this month comes as rising commodity prices are making it more expensive to produce a chocolate bar. Cocoa-butter prices are at multiyear highs as cocoa-bean processors struggle with unusually small cocoa beans in West Africa, where about 70% of the world's cocoa is grown. Still, the bulk of the costs of making chocolate are in transportation and marketing costs.

The cocoa crop in Ghana, the world's second-largest producer, experienced an unusually high drop in 2015, after farmers applied key pesticides late in the crop's development. Moreover, it takes a cacao tree five years before it produces its first beans. Hershey reported that price increases had hurt demand and was in part to blame for a 3.6% drop in sales volume in the second quarter of 2016.

Retail prices are expected to rise 2.2% this year in the U.S., the lowest year-over-year percentage increase in a decade. That modest price increase is because chocolate makers feel they have to absorb rising costs because they can't pass them on to consumers, analysts say.

Source: *Wall Street Journal*, 11 July 2016

Extract 2 Retailers appeal anti-trust call

Buyers accused the three confectionery giants, Nestle, Hershey and Mars, of conspiring to raise chocolate prices in US between 2002 and 2007 during discussions at trade shows and association events. However, the case was dismissed because they failed to provide evidence that the firms' actions were concerted and collusive. In light of the court's ruling, over 20 pharmacies and food retail chains filed appeals against the judgment.

Jeff Beckham, spokesperson for Hershey, said that the company had expected the appeal but it was pleased the court recognised that there is no basis for the case and misconduct. The chocolate firms said that any pricing increases were due to rising ingredient, manufacturing cost and denied price fixing.

Source: *William Reed Business Media, 22 May 2014*

Table 1: Confectionery market share in the United States, 2015 (by value of total sales)

Company	Share of confectionery sector (%)
Hershey's	31.3
Mars	29.1
Mondelez	5.4
Lindt	5.4
Nestle	5.0
Others	24.0

Source: Statista, 2015

Extract 3 Sales pressure could bolster case for merger of Mondelez and Hershey

Rival snack makers Mondelez International Inc. and Hershey Co. are both expected to show sales pressure when they report quarterly earnings this week, bolstering some arguments that the two giants could benefit from joining forces. Both Mondelez and Hershey are grappling with changing consumer tastes toward healthier and more natural foods, and in some cases the trend has sent a few companies in search of deals that help them reduce overall costs. Revenue is expected to be $6.34 billion, down 17% from the same period last year, according to consensus estimates from Thomson Reuters.

Last year's megamerger of Kraft Foods Group Inc. and H.J. Heinz Co. helped the packaged food conglomerates save on overhead expenses and distribution costs. The combined company, Kraft Heinz Co., has posted double-digit increases in profits in recent quarters, despite continued sales decline. Analysts said the appeal for Mondelez to buy Hershey lies in the money the combined company could save by pooling resources and ingredient purchasing. Mondelez could also profit from expanding the Hershey brands overseas, which include Reese's peanut butter cups and Twizzlers, as they are heavily concentrated in the U.S. In fact, many of Hershey's brands have global brand recognition and distribution upside.

However, Bernstein analyst Alexia Howard feels that an acquisition of Hershey would be "strategically unsound" for Mondelez. "Our strongly held view that health and wellness trends will play a key part in the U.S. food industry's future makes us naturally skeptical of this transaction," she said. Hershey has said its sales and profit for the year will be lower than expected as its chocolate bars struggle to compete with newer snacks like fruit-and-nut bars considered by many consumers to be healthier.

Source: *Wall Street Journal,* 26 July 2016

Extract 4 Not so sweet if Mondelez buys Hershey

While Hershey has a strong U.S. presence, Mondelez has a global network. A marriage of the two would create the world's largest confectionery company with an estimated 18 percent of the market share, said market research firm Euromonitor International Ltd. In addition, because almost 75% of Mondelez's business is concentrated outside of U.S., a potential Hershey takeover may not raise many antitrust concerns within the U.S.

However, while Mondelez has vowed to keep Hershey's name and preserve jobs, some said such promises would ring empty. U.S. food giant Kraft drew controversy in 2010 after it shut a factory in southwest England following its takeover of Cadbury, now owned by Mondelez, going back on an earlier promise to keep the factory open.

Mondelez's bid for Hershey to create the world's largest cocoa buyer, could also hand the bargaining chips in the volatile niche market back to the candy makers. With more buying power, candy makers could demand lower prices from traders already operating on thin margins. The consolidation among chocolate makers creates larger buyers of commodities including cocoa and sugar, worrying middlemen who have already seen their margins squeezed. Mondelez is already the world's largest cocoa consumer, and after a tie-up with Hershey it would consume 650,000 tonnes per year, 50 percent more than the No. 2 consumer, Nestle.

Adapted from: *Reuters 2016* and *Fortune 2016*

Figure 1: Cocoa Prices from 2000-2014

Source: CNBC, 13 Feb 2015

Questions

(a) **(i)** With reference to Figure 1, describe the trend in cocoa prices. [2]

(ii) With reference to Extract 1, use a diagram to explain how an increase in demand for chocolate affects the market for cocoa. [3]

(b) **(i)** Identify and justify the type of market structure operating in the confectionery sector. [2]

(ii) Explain how the firms in this market structure compete against one another. [2]

(c) Explain why food retail chains are concerned with price fixing by the three confectionery giants mentioned in Extract 2. [3]

(d) With reference to Extract 3 and 4, discuss the impacts of Mondelez and Hershey "joining forces". [8]

(e) Assess the options open to the government to manage the possible detrimental effects that could result if Mondelez successfully takes over Hershey. [10]

[Total: 30]

Question 2 Rebalancing to generate growth

Extract 5: China's economic growth misses target

China's economy grew 7.4 percent in 2014, at its slowest pace in 24 years as property prices cooled and companies and local governments struggled under heavy debt burdens, keeping pressure on Beijing to take aggressive steps to avoid a sharper downturn.

A further slowdown in China could hinder the chances of a revival in global growth in 2015, given the major role it plays, in particular for commodities and high-tech. China's property market - a major driver of demand across a range of industries - has proven stubbornly unresponsive to policy support, and lending data from the banking system shows enduring weakness. At the same time, there may be a looming fiscal crisis among debt-sodden local governments, which depend on land sales for most of their revenue. And more companies, especially small property developers, could flirt with default.

Policymakers also are concerned about the potential onset of a deflation aggravated by plummeting energy prices, industrial overcapacity and sluggish demand. Systemic deflation is an economically toxic cycle in which investors and consumers hold off on fresh spending on the assumption prices will drop further in the future. This is cited as a major reason why Beijing will need to put more money into the system.

Nevertheless, the International Monetary Fund's chief economist Olivier Blanchard said slower growth seen for 2015 reflects a welcome decision by the Chinese government to rebalance the economy away from a heavy reliance on investment and exports to a more consumption-based growth model.

Source: Kevin Yao and Pete Sweeney, *Reuters*, 20 Jan 2015

Extract 6: Why China's economy is slowing

Structurally, China's economy faces headwinds. In the long run, growth is a function of changes in labour, capital and productivity. When all three increase, as they did in China for many years, growth rates are superlative. But they are all slowing now. China's working-age population peaked in 2012. Investment also looks to have topped out. Finally, China's technological gap with rich countries is narrower than in the past, implying that productivity growth will be lower, too.

Another important development has been its credit binge. Total debt, including government, household and corporate, has climbed to about 250% of GDP, up 100 percentage points since 2008. This debt allowed China to power its economy through the global financial crisis but also saddled it with a heavy repayment burden. Most worrying, much of the credit flowed to property developers. China's inventory of unsold homes sits at a record high. The real-estate sector, which previously accounted for some 15% of economic growth, could face outright contraction. From this vantage point, the abruptness of China's current slowdown looks more cyclical than structural.

Whereas previous leaders propped up growth whenever it slowed, Xi Jinping, China's president since 2013, has instead spread the gospel of the "new normal", by which he means less emphasis on growth and faster structural reform. As a result, the central bank has been hesitant to ease monetary policy. Changes to fiscal rules have also made it harder for local governments to spend money.

Source: *The Economist*, 11 Mar 2015

Extract 7: Fears mount that UK's plan to rebalance the economy is failing

Britain's recovery remained on track in the third quarter but fresh figures revealed growth was heavily reliant on the consumer, leaving the government's much hoped-for rebalancing of the economy elusive. Companies have become increasingly concerned about the economic outlook and falling business investment once again leaves the economic upturn in the hands of the consumer.

Exports fell by 0.4%, while imports increased by 1.4%, worsening Britain's trade position. The UK's trade deficit with the rest of the world widened to £11.2bn in the third quarter from £8.9bn in the second. Business investment, which the government is banking on to drive a sustainable recovery, actually fell by 0.7% or £300m compared with the second quarter. On the other hand, household spending, increased by 0.8% over the third quarter, extending the run of growth to 13 consecutive quarters. Services sector output was revised up to 0.8% from an initial estimate of 0.7%, reinforcing the picture of a UK recovery reliant on the consumer.

A spokesman for the Treasury repeated its persistent line that growth in the third quarter was a sign the government's long-term economic plan is working, and that the UK economy was under threat from factors abroad. "The UK is not immune to weakness in the euro area and instability in global markets, so we face a critical moment for our economy. We need to carry on working through our economic plan that is securing a resilient economy and a better future."

Source: Angela Monaghan, *The Guardian*, 26 November 2014

Extract 8: Deflation in the Euro zone is all too close

The euro area is on the verge of tipping into its third recession in six years. The zone's overall inflation rate has slipped to 0.3% and may well go into outright decline next year. A region that makes up almost a fifth of world output is marching towards stagnation and deflation.

Some price falls are welcome. Tumbling oil prices, in particular, have given consumers' incomes a boost. But slowing prices and stagnant wages owe more to weak demand in the economy and roughly 45 million workers are jobless in the rich OECD countries. Worse, short-term interest rates are close to zero in many economies, so central banks cannot cut them to boost spending.

If Europe is to stop its economy getting worse, it will have to stop its self-destructive behaviour. France and Italy should be allowed to slow the pace of their fiscal cuts; in return, those countries should accelerate structural reforms. Reducing the fiscal deficits has been difficult to achieve because reductions in government spending and increases in taxes depress economic activity. Lower economic activity causes increased transfer payments and reduced tax revenue, offsetting the original fiscal contraction. A cheapening euro would be an important boost for eurozone countries such as Spain, Italy and France that have very large fiscal deficits. Although the lower euro would not change the relative prices among the eurozone countries, it would have a powerful effect because nearly half the trade of the eurozone countries is with countries outside the eurozone.

Source: *The Economist*, 25th October 2014

Table 2: GDP growth rates (Annual % change at constant prices in local currency)

	2010	2011	2012	2013	2014
China	10.6	9.5	7.8	7.7	7.4
UK	1.5	2.0	1.2	2.2	2.9
Euro Area	2.1	1.6	-0.9	-0.3	0.9

Table 3: Inflation rates (Annual % change in consumer price index)

	2010	2011	2012	2013	2014
China	3.3	5.4	2.6	2.6	2.0
UK	3.3	4.5	2.8	2.6	1.5
Euro Area	1.5	3.3	2.5	1.4	0.2

Source of Tables 2 & 3: *World Bank*

Table 4: Government Budget Balance (% of GDP)

	2010	2011	2012	2013	2014
China	-2.5	-1.1	-1.5	-2.1	-2.1
UK	-9.7	-7.7	-8.3	-5.6	-5.6
Euro Area	-6.2	-4.2	-3.7	-3.0	-2.6

Source: *www.tradingeconomics.com*

Questions

(a) Which economy in Table 2 shows the least variation in its growth rate? [1]

(b) **(i)** Besides the balance of trade in goods and services, state one other component of the current account on the balance of payments.

(ii) With reference to Extract 5, explain how a trading partner's current account on the balance of payments is affected by China's slowdown. [2]

(c) How might UK's multiplier size change with the rebalance of the UK's economy? [4]

(d) Comment on the usefulness of GDP growth rates in measuring UK's standard of living. [4]

(e) Discuss whether policymakers should be concerned about the onset of deflation. [8]

(f) Both UK and China are experiencing slow growth and have plans to rebalance their economies. In light of the data, assess the most appropriate policy approaches their governments can adopt to achieve high and sustained growth. [10]

[Total: 30]

- End of Paper –

MERIDIAN JUNIOR COLLEGE

JC2 PRELIMINARY EXAMINATION 2016

9732/01

H2 ECONOMICS

Section A: Case Study Question 1

Name: ____________________ Civics Group: ____________________

Register Number: ______________ Tutor: ____________________

15 September 2016

READ THESE INSTRUCTIONS FIRST
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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)	(i)	
	(ii)	
(b)	(i)	
	(ii)	
(c)		
(d)		
(e)		
TOTAL		/30

MERIDIAN JUNIOR COLLEGE

JC2 PRELIMINARY EXAMINATION 2016

9732/01

COVER SHEET

H2 ECONOMICS

Section A: Case Study Question 2

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Register Number: _____________ Tutor: ____________________

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<table>
<tr><th colspan="2">QUESTIONS ATTEMPTED</th><th>MARKS</th></tr>
<tr><td colspan="2">(a)</td><td></td></tr>
<tr><td rowspan="2">(b)</td><td>(i)</td><td></td></tr>
<tr><td>(ii)</td><td></td></tr>
<tr><td colspan="2">(c)</td><td></td></tr>
<tr><td colspan="2">(d)</td><td></td></tr>
<tr><td colspan="2">(e)</td><td></td></tr>
<tr><td colspan="2">(f)</td><td></td></tr>
<tr><td colspan="2">TOTAL</td><td>/30</td></tr>
</table>

MERIDIAN JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATION 2016

H2 Economics **9732/02**

Paper 2 Essay Questions **19 September 2016**

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 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 essay question on a fresh sheet of 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 question.

[Turn Over]

This document consists of **3** printed pages and **3** cover sheets.

Answer **three** questions in total.

Section A

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

1 Many different types of holiday travel ranging from budget to high-end luxury packages are available in Singapore. A large fall in the cost of producing holiday packages in the midst of a global slowdown are likely to affect the sales of different categories of holiday packages in Singapore.

Critically examine the likely impact of a large fall in cost of production of holiday packages and a global slowdown on the sales volume and revenue earned from the sales of different categories of holiday packages. [25]

2 Sugar consumption contributes to increasing obesity rates in Singapore, where around 1.7 million Singaporeans are at risk of obesity-related diseases such as diabetes. There are calls for a tax on sugared drinks and soda to reduce sugar consumption, following in the footsteps of countries like Mexico, the UK and the city of Berkeley in California.

(a) Explain how the consumption of sugary drinks is likely to cause market failure. [10]

(b) Discuss the view that a sugar tax represents the best option by a government to tackle obesity-related diseases such as diabetes. [15]

3 (a) Differentiate between the key features of the economic models of perfect competition and monopoly, illustrating your answer with examples. [10]

(b) Discuss whether the determination of a firm's price and output is more dependent on the competition that it faces or the firm's objectives.

Section B

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

4 Governments in economies worldwide solve unemployment problems through the use of loose monetary policy and investment in human capital.

(a) Explain why reducing unemployment is a key macroeconomic objective in many countries. [10]

(b) Discuss the view that Singapore would be better off reducing unemployment through the use of exchange rate policy. [15]

5

pumping more than £200 billion into the economy. Record low levels of interest rates have also been maintained within the UK economy. Quantitative easing and low interest rates were also adopted by the US.

Discuss the likely impact of quantitative easing and low interest rates on an economy and its trading partners. [25]

6 Economists warn of the rising waves of protectionism around the world although some governments are opening markets and improving competitiveness.

(a) Explain why protectionism exists. [10]

(b) A country wishes to improve its export competitiveness in producing manufactured goods. What does this mean and how might this be achieved? [15]

– End of Paper -

MERIDIAN JUNIOR COLLEGE

9732/02

COVER SHEET

H2 ECONOMICS

Section A & B: Essay Question

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Register Number: _____________ Tutor: ____________________

19 September 2016 **2 Hours 15 Minutes**

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WRITE down the question number you have attempted.

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QUESTION ATTEMPTED	MARKS
Question _____	/25

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H2 ECONOMICS

Section A & B: Essay Question

Name: ______________________ Civics Group: _______________

Register Number: _____________ Tutor: ____________________

19 September 2016 **2 Hours 15 Minutes**

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QUESTION ATTEMPTED	MARKS
Question _____	**/25**

9732/02/PRELIM/JC2/MJC/2016

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9732/02

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H2 ECONOMICS

Section A & B: Essay Question

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19 September 2016 **2 Hours 15 Minutes**

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QUESTION ATTEMPTED	MARKS
Question _____	/25

9732/02/PRELIM/JC2/MJC/2016

Question 1
Many different types of holiday packages ranging from budget to high-end luxury packages are available in Singapore. A large fall in the cost of producing holiday packages in the midst of a global slowdown are likely to affect the sales of different categories of holiday packages in Singapore

Critically examine the likely impact of a large fall in cost of production of holiday packages in Singapore and a global slowdown on the sales volume and revenue earned from the sales of different categories of holiday packages. [25]

Suggested Answer Model a
Explain how elasticities of demand can assist in understanding the effect of each of these changes on the sales volume of different categories of holidays.

Introduction

Define Sales revenue (TR) : Total amount of money that producers receive from the sale of a product.

A large rise in the cost of holiday packages manufacture and a fall in income would affect the demand and supply of holiday packages respectively and thus, affect holiday packages

Development

Decrease in income

Increase in cost

Basic analysis – Individual effect

Decrease in income →demand curve will shift to the left for a holiday packages with a +ve income elasticity. Sales volume and revenue will fall. For inferiors 'holiday packages' sales volume & revenue will rise as demand increases.
Evaluation: Extent of increase depends on size of YED and the size of the change in income. E.g when YED = +3 , a 10% decrease in income decreases sales volume

Increase in costs & sales volume
Increase in costs → rise in price → fall in sales volume.
Evaluation: Extent of fall depends on size of PED and the size of the change in price (cost).
Increase in costs and **price elasticity of demand** – TR rule – revenue will rise if demand is price inelastic and fall when it is price elastic.
Evaluation: Extent of increase depends on size of PED and the size of the change in price (cost).

Extended analysis – Combined effect

4 possible combinations

Case 1
Volume:
Fall in Y: +ve YED →Q falls
Rise in cost: PED <1 →Q fall
Total Q falls since the impact on Q of a rise in income and that of a rise in cost reinforce each other.

Total revenue:
Fall in Y : +ve YED → TR falls,
Rise in costs : PED <1 → TR rises

Total impact on total revenue is indeterminate since the impact on TR of a fall in income and that of a rise in cost

Case 2
Volume:
Fall in Y: +ve YED →Q falls
Rise in cost: PED >1 →Q fall
Total Q falls since the impact on Q of a rise in income and that of a rise in cost reinforce each other.
Total revenue:
Fall in Y : +ve YED → TR falls
Rise in costs : PED >1 →TR falls:
Total revenue falls since the impact on TR of a fall in income and that of a rise in cost reinforce each other.

Case 3	**Case 4**
Volume: Fall in Y: -ve YED →Q rise Rise in cost: PED <1 →Q fall The impact on Q of a fall in income and that of a rise in cost contradict each other. Total impact on total Q depends on extent of shift of DD compared to that of SS Rise in DD > Fall in SS →Increase in Q Total revenue Fall in Y : -ve YED – TR rises Rise in costs : PED <1 - TR rises: Total revenue rises since the impact on TR of a rise in income and that of a rise in cost reinforce each other.	Volume: Fall in Y: -ve YED →Q rise Rise in cost: PED >1 →Q fall The impact on Q of a fall in income and that of a rise in cost contradict each other. Total impact on total Q depends on extent of shift of DD compared to that of SS Rise in DD > Fall in SS →Increase in Q Total revenue Fall in Y: -ve YED - TR rises Rise in costs: PED >1 - TR falls: Total impact on total revenue is indeterminate since the impact on TR of a fall in income and that of a rise in cost contradict each other.

Evaluation

A comment comparing either different income or

E.g. Impact also depends on the size of the change in income, size of the change in price, magnitude of the YED and PED

- E.g. In case 4 (YED=-ve, PED>1), if the fall in income is very large while the increase in price (due to increase in cost) is very small then the rise in the total revenue due to the fall in income is likely to be greater than fall in total revenue of a rise in price (due to the rise in cost). Hence overall, total revenue rise.

- If the YED value is very positive while the PED is close to one, the effect on the total revenue of the fall in income is likely to be greater than that of a rise in price (due to the rise in cost). Hence, overall total revenue falls.

- If the increase in price is very large, the PED of a good may change. If the decrease in income, is very great the YED of a good may change.

Synthesis / Conclusion

Finally, as a country suffers a slowdown, even the more inferior holiday packages may be perceived increasingly as normal goods.

- The above analysis suggests that overall sales revenue from (i) luxury holiday packages with PED > 1 will fall , (ii) budget holiday packages (normal goods) with PED < 1 will be indeterminate and (iii) budget holiday packages (inferior goods) with PED <1 will rise.
- However, the ceteris paribus assumption is unlikely to hold as factors other than cost of holiday packages manufacture and income may change in reality. Changes in other factors such as prices of related goods, competitive strategies undertaken by firms, government policies and taste and preferences may also impact sales volume and revenue. Hence, the impact on sales volume and revenue for different holiday packages models may be different from the above analysis.

Lev el	Knowledge, Application, Understanding and Analysis	Marks
L3	For an answer using analysis to support the conclusion on whether expenditure rises or falls. Expect 3-4 possible combined effect cases analysed to gain L3 marks (7-9)	**15 – 21 (18)**
L2	For an answer that gives descriptive explanation of the impact of an income and cost change on total revenue for two of the four possible combined effect cases or an analytic answer for one of the four possible combined effect cases. [[Max 6 marks if only one combined effect analysed]. Expect 2-3 combinations to gain L2 marks	**9 – 14 (11.5)**
L1	For an answer that shows descriptive knowledge of effect of an income and cost change on volume and total revenue. For an answer that shows some basic but largely unexplained knowledge of S + D curves plus the factors that might causes them to shift.	**1 – 8 (4.5)**
	Allow up to 4 additional marks for Evaluation	
E2	For an evaluative assessment based on economic analysis e.g. one that uses elasticities or relative shifts in curves to come to a well-argued conclusion. A brief comment comparing either different income or price effects.	3-4
E1	For unexplained assessment e.g. a basic statement that the effect depends on the relative shifts in both the supply and demand. Or an unexplained evaluation statement - revenue from low end model cars will fall whilst that for other models will rise.	1-2

Note: Students may choose to interpret economic slowdown as a smaller increase in income than before or as a decrease in income

2 Sugar consumption contributes to increasing obesity rates in Singapore, where around 1.7 million Singaporeans are at risk of obesity-related diseases such as diabetes. There are calls for a tax on sugared drinks and soda to reduce sugar consumption, following in the footsteps of countries like Mexico, the UK and the city of Berkeley in California.

(a) Explain how the consumption of sugary drinks is likely to cause market failure. [10m] [10]

(b) Discuss the view that a sugar tax represents the best option by a government to tackle obesity-related diseases such as diabetes. [15]

Suggested Answer (a)

Introduction

Define market failure

- Market failure occurs whenever 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

Explain inefficiency

Explain inequity

Inefficiency

Externalities

Consumption of sugary foods which are food which contain high sugar contents will cause the market to

- Consumers' choice is bas… case of Sugary foods, the… derives from consuming … monetary cost of buying them and the healthcare cost as a result of increased risk of obesity related diseases
- However, consumption of sugary foods imposes an external cost on the society i.e. cost borne by 3rd party for which no compensation is made
- E.g. healthcare expenditure by the government on obesity related diseases, lower productivity in the economy as a result of absenteeism from work with rising obesity
- Divergence between private cost and social cost curve (MSB > MPB)
- Individuals do not bear the full cost of their consumption decisions → over consumption of sugary food by Q1Q2 if left to the market →market failure and resource misallocation → society welfare loss ABC (see diagram)

Cost/Benefit

MPC= MSC

C

B

A

MPB

Qty

Q1 Q2

Market Imperfections

Imperfect Information

- In deciding to consume sugary foods, consumers may not be fully aware of the calorie content of the sugary food,; they also not understand fully or perceive accurately the risks and consequences of their choices. While the consumers are able to calculate the price of Sugary foods (short term pte cost) they underestimate the private costs of health deteriorations (long-term private cost) e.g. risk of heart disease
- underestimatation the private cost of consuming sugary foods(high in sugar, salt and sugary) → demand for Sugary Food is higher than what it would have been had they have the full knowledge of the negative private effects of obesity
- overconsumption of sugary foods → market failure and resource

Inequity

- Sugary foods such as unhealthy fast foods are …ally the cheap food …n for the poor. …ncome in unequally distributed, the poor may end up with an unusually higher consumption of sugary foods as compared to the rich and therefore leading to market failure

Conclusion

Price mechanism fails to achieve optimal resource allocation due to the nature of sugary food. This necessitates government intervention.

2016 MJC Prelim Exam H2 Economics EQ 2

Suggested Answer (b)

Introduction

- Obesity is a chronic medical condition which occurs over time when a person continues to consume more calories than needed. These excess calories are converted to fat and stored in the body and this leads to obesity and the higher risk of obesity related diseases.

Use of tax is best

1. Use of Tax is considered as best as it brings about improved society's welfare

Taxation leads to improved efficiency

- This corrects the over-production and over-consumption which explains why it is should be used.

EV:

- In addition, the revenue generated could be used for educational projects on food nutrition and raise awareness on the higher risks associated with obesity → mitigating the problem of imperfect information of the consumers

Use of tax may not be best

Use of Tax may not be best because there are limitations

1. A Tax may worsen equity

- Consumption tax is regressive . The poor pays a bigger portion of their income as taxes
- **EV:** However, the consequences of risking obesity and diabetes are potentially worse than the effects of a slight fall in real purchasing power.

2. Better alternatives such as legislation and education available.

Education helps consumers make informed choices and increases welfare

- The policy option of raising tax should be considered against other options.
- Greater awareness of the health risk of obesity will reduce demand for sugary foods and lead to optimal consumption of sugary foods
- Government may fund campaigns to educate the public on obesity related diseases and put in more healthcare professionals in the schools and at the public outpatient clinics to educate the public and raise awareness → lower demand for sugary foods

EV: However, outcome is hence less predictable

Conclusion

- Obesity in Singapore may be higher than most of her counterparts, and there is an upward pressure on this trend and it is unlikely that the market is able to correct itself. Rising obesity not only raise healthcare expenditure but may lower the quality of the national defence. Over the longer term, the benefits of preventing higher obesity rates will be higher than the short term costs of policies and so government intervention is justified.
- The best approach is probably a

3. **Govt should not do anything if the benefits of intervention doesn't outweigh the cost**

   Cost of enforcing the regulations (substantial political will and manpower) may be greater than the gains from the reduction in consumption of sugary foods and thus obesity

Marking Scheme

Part a

L3	A well structured response demonstrating economic rigour in analysis with a clear theoretical framework.	7-10
L2	Some attempt to respond to the question but quality of response is inconsistent and lack rigour or an answer that lacks scopes.	5 - 6
L1	Mere regurgitation of the various sources of market failure. Students are unable to relate the consumption of sugary foods to market failure	1- 4

Part b

L3	A balanced discussion that is well structured with a clear theoretical framework.	9-11
L2	Some attempt to respond to the question but is largely one-sided and arguments may sometimes lack rigour.	6 - 8
L1	Students did not understand the demands of the question and merely explained, with inaccuracies the various policies that government can use to intervene with rising obesity.	1- 5
	Evaluation	
E2	Judgement based on analysis	3-4
E1	Mainly unexplained judgement	1-2

Question 2

a. Differentiate between the key features of the economic models of perfect competition and monopoly, illustrating your answer with examples. [10]

b. Discuss whether the determination of a firm's price and output is more dependent on the competition that it faces or the firm's objectives. [15]

Define and explain each market structure concept. The key differences that should be explained include those regarding the market structure including barriers to entry, number of producers, market dominance and market outcomes e.g. the ability or otherwise to set price and to make normal or abnormal profits in both the short and long run.

Knowledge, Application, Understanding and Analysis		
L3	Clear differentiation between monopoly and perfect competition with examples. The analysis should refer to the market structure (e.g. barriers to entry etc) and the market outcomes (abnormal v normal profits etc).	**7-10**
L2	Undeveloped differentiation, e.g. of either market structure or of market outcomes but not both, and without underlying analysis.	**5-6**
L1	For an answer that has some basic correct facts such as an unexplained list of key features.	**1-4**

Suggested Answer Model (a)

Assumes profit maximising behaviour of firm

Thus output is determined by MC = MR

Hence, price is set by the AR (Demand curve) at this output for both Perfect competition and Monopoly

Use of diagrams incorporating AC to illustrate price setting in both market structures

Perfect Competition

Monopoly

Many producers of a homogenous product

→Firm is small as it owns a negligible market share

Sole producer of unique product

→Firm is large as it owns the whole market share

Horizontal AR curve

→ Firm is a price taker

→Firm has no market power.

→Goods produced by firm has many perfect substitutes in the market

Ease of entry & exit

→ Existence of supernormal profits → entry of new firms

→Industry supply increases → SS curve shifts right → market price falls

→ Abnormal profits of firm competed away

→Firms have no market power.

Downward sloping price inelastic AR curve

→Firm is a price maker

→Firm has significant market power→ able to restrict output to raise price

→Existing firm may respond by non-price competition to make it's AR even more inelastic

→ Goods produced by firm has no substitutes in the market

Formidable barriers to entry

→ abnormal profits can be preserved

Impact on price and output determination:

- No market power and many perfect substitutes available → perfectly price elastic demand curve
- Earn only normal profits in the long run

Price

MC

AC

AR = MR = P

P1

Pa

Q1 Quantity

If existing firms are earning supernormal profit in the short run (figure above), new firms will be attracted into the industry → The supply curve of the industry will shift rightward. The market price, the AR and the MR faced by the firm will be reduced. Supernormal profit is thus reduced. The rightward shift of the supply curve of the industry continues until the market price, the AR and the MR faced by the firm it is tangent to the LRAC curve and normal profit is made. When the firms in perfect competition make only normal profit, there is no incentive for new firms to enter the market. Long run equilibrium is attained. In the long run, the firm will be producing at output OQ and charging a price of OP, as illustrated by figure below. At OQ, the price charged is just enough to cover AC. Hence the firm is earning normal profit.

•

MC
AC
Price
MC
AC
AR = MR = P
P1
Q1 Quantity

Impact on price and output determination:

- Significant market power and absent of substitutes, low PED
- The monopolist can make supernormal, normal or subnormal profits in the **short run**.
- The monopolist can perserve supernormal profit even in the **long run** because of formidable barriers to entry. Figure below shows a monopoly in long run equilibrium and making long run supernormal profit of P1abc.

MC

•

AC
Price
a

P1

c

b

AR

MR

Q1

Quantity

CONCLUSION

Several differences in the characteristics of perfect competition and monopoly separate the two market structures. This would have important implications on threat of competition that a firm faces or the firm's objectives.

(b) Discuss whether the determination of a firm's price and output is more dependent on the competition that it faces or the firm's objectives. [15]

Introduction

Summarise comparison of PC against oligopoly/monopoly/ monopolistic competitive

- Differences in characteristics
- Imperfect information
- Barriers to entry → size of market power
- number of firms

Development

Determinants of a firm's price and output

Perfect competition

Imperfect competition e.g. Monopoly

Dev 1 : Determination of firm's price and output in PC and monopoly can be similar and is dependent on firm's profit-maximising objective.

Economic Theory suggests that PC firms and imperfectly competitive firms can make their output decision based on same objective of profit maximizing → implies that they can have similar objectives.

Dev 2: Determination of firm's price and output in PC and monopoly are likely to be different .

While PC firms are likely to practise profit maximization, firms in imperfect market structures e.g.

Explain why PC firms are likely to practice profit maximization :

Able to max profit : Perfect Competition→ Maximize profits Profits = TR – TC →Take price as dictated by the industry and set output where MC = MR

In theory → able to max profit In theory, able to get perfect info → can get MR and MC info → profit max

Want/Need to max profit : In theory → Want / Need to max profit In theory → LR can only make normal profits. Use cost and revenue diagram to show → If PC firm does not max profit → must leave industry → competed out.

Explain why imperfect competitive firms e.g. monopolists are not likely to practice profit maximization :

Imperfect competition → In theory, imperfect competitive firms may have other objectives than to max profits

Not able to max profit : May not be able to max profit → Not able to get info on MC and MR→ estimate the average cost of output → adds a profit margin → Cost plus pricing

Not want to : Need not nece want to max profit → Other objectives → Managerial and behaviour aims

Not want to : Need not nece want to max profit → objective is to deter entry . Hence the threat of competition determines the firm's price and output.

3) Keep out potential rivals through predatory pricing

4) Reduce potential competition in highly contestable markets – practise limit pricing

5) Not invite unwanted attention from potential rivals and govt – do not want to make excessive profits → choose a output and price that do not max profits

Synthesis/ Conclusion:

Address the qn → In theory, both may aim to maximize profits. However, economic theory suggests that imperfect competitive firms may have other managerial and behavioural objectives

PC firm has the ability to maximise profit due to perfect information. It also has to maximise profit if it wants to remain in production. State-owned monopoly may be required by regulation to practise MC pricing. For these firms, their P and Q are more dependent on the firms' objective.

In reality, objectives likely to differ for firms in imperfect markets because firms in imperfect markets are not likely to have enough information to be able to maximize profits. Hence, imperfectly competitive firm's price and output is more dependent on the threat of competition

Mark Scheme

Level	Knowledge, Application, Understanding, Analysis	Marks
L3	For an answer that uses appropriate analysis to explain how market structure and a firm's objectives determine a firm's price and output.	7-11
L2	For an answer that gives a descriptive explanation of how market structure and a firm's objectives determine a firm's price and output.	5-6

L1	For an answer that shows knowledge of price and output determination in different market structure, and under alternative objectives of the firms	1-4 (3)
E2	For an answer that arrives at an analytically well-reasoned judgement about whether the determination of price and output is more dependent on the competition or the firm's objectives	2-4
E1	For an answer that makes some attempt at a judgement about whether the determination of price and output is more dependent on the competition or the firm's objectives.	1-2

4 Governments in economies worldwide solve unemployment problems through the use of loose monetary policy and investment in human capital.

(a) Explain why reducing unemployment is a key macroeconomic objective in many countries. [10]

(b) Discuss the view that Singapore would be better off reducing unemployment

Suggested Answer Model:

INTRODUCTION

State the 4 macroeconomic objectives

Explain meaning of unemployment

The four macroeconomic objectives of the government are high and sustained economic growth, low and stable inflation, low unemployment, and healthy balance of payments.

There are two main types of unemployment: cyclical unemployment and equilibrium unemployment (structural unemployment & search unemployment)

Interpret the question

Low unemployment is a key objective of many governments because of the many benefits of low employment, and the pursue of low unemployment allows the countries to achieve other objectives.

DEVELOPMENT 1

Benefit of low unemployment

Increase in Material Well Being

Both demand and supply side caused growth can lead to lower unemployment and hence improvement in SOL

(1) Increase in AD → increase the rate of economic growth when the economy is not operating at capacity → rightward shift in the AD curve from AD1 to AD2 in Figure 1. As total demand for goods and services in the economy increases, this stimulates producers to increase production and hence real output of the economy increases →raises the demand for labour → increases income of households, raise purchasing power and increases their ability to access goods and services and hence their material SOL.

Assuming income growth is faster than the growth in population, the real income per capita

GPL

AS

AD1 AD2

0 Y1 Y2 real output

<u>Individuals :</u>

→ Higher income & standard of living

<u>EV</u>: However, they have less leisure

<u>Firms</u>:

→ Lower unemployment leads to higher income & high demand for firms' goods and services

→ Higher workers' morale which in turn may raise labour productivity

<u>EV</u>:

→ More difficult to recruit staff and people applying for jobs may possess lower skills. The existence of lower unemployment may make workers less fearful of losing their jobs. As a result, they

Economy::
→Most significant gain - higher output (operating nearer the PPC) → Rise in GDP growth
→Higher standard of living
→Less govt resources required to restructure the economy to solve unemployment problem
→Higher revenue from direct and indirect taxes

EV:
→If unemployment falls below the equilibrium level of unemployment (NAIRU/NRU)→ 'overheating' of the economy and inflationary pressure.
→Explain why rising inflation may be undesirable.

.

Development 2

The pursue of low unemployme alise other macroeconomics objectives such as economic g ernment budget. Increasing employment is often accompanied by higher economic growth and higher real GDP, increase in productive activities.

CONCLUSION

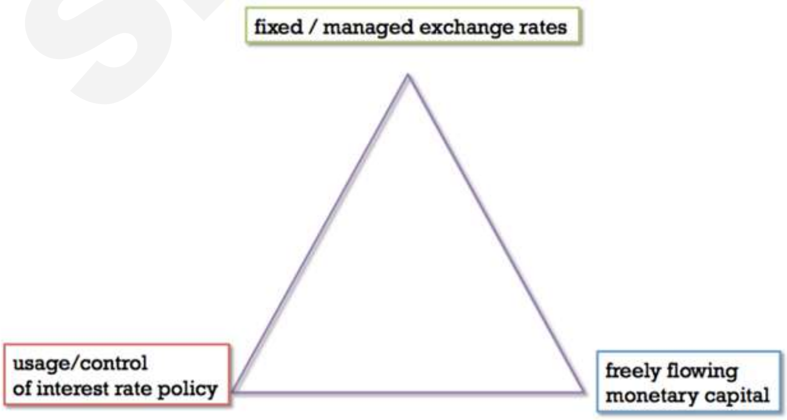
Conclusion: Address the keywords 'many countries' & 'key' and Link to part b)
Low employment is often a key objective of many countries. However, there are times when unemployment may not be the main macroeconomic objective of the economy, for instance, severity of other problems. When a country faced hyperinflation, functions of money will be severely impaired. People will no longer be willing to accept money as a form of payment and store of value. The great uncertainty will result in capital flight and reduce the volume of savings, investment and economic growth. In such situation, government should address the

(b) Discuss the view that a small and open economy such as Singapore would be better off solving
unemployment problems through the use of exchange rate policy. [15]

Introduction

- The policy choices that economies can employ to solve their unemployment problems will depend on
    - The nature and state of their economy restricting their usage of certain economic policies
    - The type of unemployment that they are experiencing

Development 1 – Problems trying to use expansionary i/r policy to solve DD-deficient unemployment in SG



- Open economy trilemma restricts policy choice
    - Open economies like Singapore are heavily engaged in trade. SG's

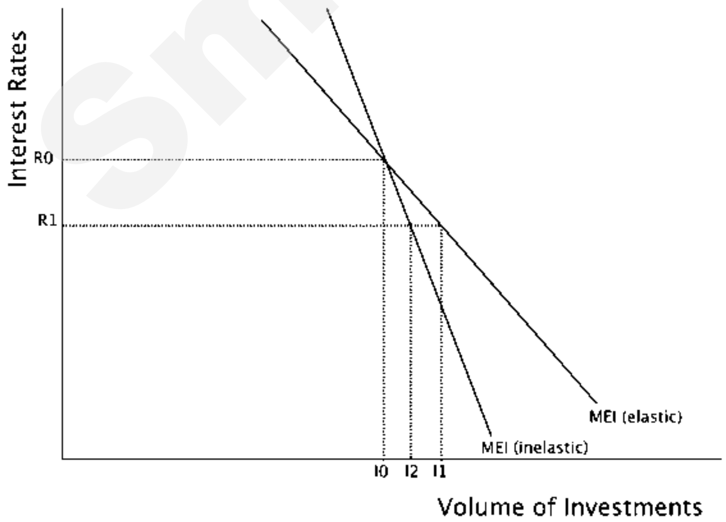
of trading done daily, SG requires freely flowing capital flows in and out of the economy

- If Singapore were to decrease i/r → financial investors will face a fall in monetary returns → due to freely flowing capital, they will withdraw their investments to seek for better returns in other countries → hot money outflow → sell SGD to buy foreign currency → pressure on SGD to depreciate

- In SG → as we are a small and open economy without natural resources → heavily dependent on imports of raw materials and intermediate products as inputs into production, as well as imports of final goods and services → as a result of the need for high amounts of imports, SG is extremely vulnerable to imported inflation
- If SGD depreciates → price of imports become more expensive → worsens imported inflation → increases firms' costs of production and competitiveness, and at the same time decreases consumers' purchasing power and therefore decreasing consumers' material SOL

- Open economies also tend to want to manage their exchange rates so as to control the price of their exports (and therefore, their export competitiveness), and as such any changes in interest rates causing pressures on the exchange rates to appreciate or depreciate would mean that the government needs to further utilize their foreign reserves to manage the exchange rates, on top of what they are already doing → this is a wastage of time and resources for the government

- Therefore, open economies like SG are unlikely to utilize interest rates as a policy tool



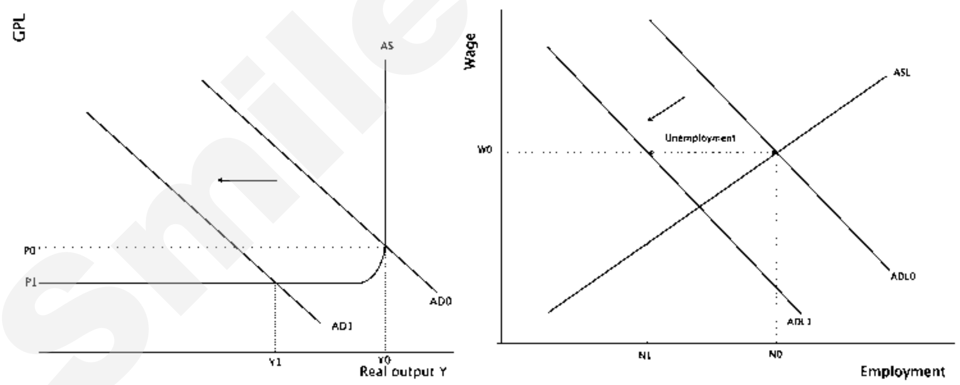
- Interest rates policy tends to primarily affect domestic producers and consumers, and work most effectively in economies that have a large

- Small economies like Singapore tend to have a small domestic demand, and are likely to be very open to foreign direct capital investments
- Since most of the foreign capital investors are likely to have their own source of funding and will not be borrowing from the local banks, it is likely that they are very unresponsive to changes in interest rates
- The MEI function is thus likely to be very interest inelastic, so for a given fall in interest rates from R0 to R1, volume of investment is likely to increase less than proportionately to I2, instead of to I1 when the MEI is relatively more interest elastic

- Therefore, small economies like SG with a small domestic market tend to not utilize interest rates policy

Development 2 – Utilization of exchange rates policy would be better for open economies like SG

- Since open economies are highly dependent on trade, exchange rates policy, which affects prices of exports and imports, are more likely to have a direct impact on export revenue and import expenditure
- Furthermore, open economies are likely to be affected by external events and economic shocks. This increase in volatility would mean any factor affecting demand for their exports (such as a recession in their trading partners' economies, or fall in export competitiveness) will likely decrease export revenue (X) by a significant amount, causing AD to fall



- The fall in AD will cause surpluses of output in the economy, and exporting firms will start to face an unplanned increase in inventories → they thus decrease their demand for labour → since wages are sticky downwards (at W0) due to contractual obligations → dd-deficient unN of N0N1 results
- Utilization of a depreciation of the currency will lead to a fall in the price of exports in foreign currency, increasing the demand for exports in domestic currency, and therefore causing X to rise → this directly solves the root cause of the problem, and exports can be more competitive, thus helping to resolve the fall in export competitiveness (albeit temporarily)
- For small and open economies that do not have a lack of natural resources → the increase in the price of imports due to a depreciation may not impact

exchange rates may not come with negative effects (like it does on SG)
Development 3 – Which policy is best will still have to depend on the type of unemployment • The situations described in Developments 1 and 2 related to demand-deficient unemployment, thus the discussion circled around demand-management policies • If faced with structural unemployment, it is better to use supply-side policies • Open, trading economies such as Singapore are likely to be very vulnerable to structural changes due to changing demand patterns worldwide • As the economy changes its structure to develop new comparative advantages in trade, workers' skills may become obsolete. In this case, supply-side policies like retraining and skills upgrading may thus be necessary (as discussed in part (a)) rather than the demand-management policies such as exchange rates and interest rates • In Singapore, the labour market is at full employment and much of the unemployment is equilibrium unemployment – structural and frictional unemployment • Frictional unemployment in SG (in the form of search unemployment) is mostly caused by the open door policy to foreign labour that is adopted by many open economies → the influx of foreign labour into the economy → wages are lower →more people are voluntarily unemployed as they would prefer to search for a higher paying job → larger search unemployment • Open economies that are reliant on foreign workers may thus need to explore policies that instead reduce the reliance on foreign workers to solve frictional unN, than to use demand-management policies • Therefore, the utilization of policies to solve equilibrium unemployment will likely have to be supply-side policies than demand-side policies
Synthesis and conclusion • The decision to utilize policies should ultimately depend on whether the country is restricted with policy usage, and if the policies solve the problem • All things being equal, small and open economies will find it useful to utilize exchange rates policy, especially if trying to solve demand-deficient unemployment and if the expansionary exchange rates policy does not impact its households' standard of living (through higher import prices) severely • But if the unemployment type is equilibrium unemployment, such as structural unemployment or frictional unemployment → better to solve the problems through supply-side policies

Knowledge, Application, Understanding and Analysis	

L 3	*For an answer using analysis to support the conclusions about the use of exchange rate policy as opposed to other policies to correct unemployment in small, open economies*	**9-11**
L 2	*For an answer that gives a descriptive explanation of exchange rate policy and other policies to correct unemployment*	**6-8**
L 1	*For an answer that shows some basic but largely unexplained knowledge of exchange rate policy , policies to correct unemployment and/or small, open economies*	**1-5**

	Allow up to 4 additional marks for Evaluation	
E 2	*For an evaluative discussion supported by relevant economic analysis that either exchange rate policy or any other policy is justified*	**3 – 4**
E 1	*For an unexplained evaluative e.g. a largely unexplained statement that exchange rate policy is justified*	**1 – 2**

Question 5

During 2009 the Bank of England engaged in what is known as ‘quantitative easing’ by pumping more than £200 billion into the economy. Record low levels of interest rates have also been maintained within the UK economy. Quantitative easing and low interest rates were also adopted by the US.

Discuss the potential impact of quantitative easing and low interest rates on an economy and its trading partners. [25]

Introduction

Question

Development

Development 1 : Explain how quantitative easing and low interest rates in USA and UK might lead to economic growth in USA and UK.

Using AD/AS analysis, explain how a quantitative easing and decrease in interest rates brings about actual growth in the USA/UK economy

- Explain QE
- Assume excess capacity in economy
- Analyse the links between quantitative easing and low interest rates and the components of AD in USA/UK
- Illustrate using AD-AS diagram how AD shifts outwards.
- Explain the adjustment process towards the new equilibrium
- Summarise: ∃ i/r → AD # → η NI, output by a MULTIPLIED amount

GPL

AS1

E1

E2

P1

AD1

AD2

Y1

Real output

EV: While an economy with high unemployment may see increased borrowing due to QE & low interest rate , and a move out of recession, the potential drawback is that QE & lower interest rate may lead to inflation if US and UK are operating close to full employment. (Analyse)

Explain impacts the balance of trade.

<u>Explain impact on the balance of trade</u>

Decrease in export revenue (X) : When inflation in US is relatively high, US produced goods will become more expensive and less competitive internationally. Exports will be relatively more expensive, thus foreigners will reduce the quantity demanded of exports. If PEDx>1, the rise in price of exports will lead to a more than proportionate fall in quantity demanded → Total export revenue (X) will fall because the rise in total revenue due to the increase in price is smaller than the fall in in total revenue due to more than proportionate fall in quantity demanded.

Increase in import revenue (M): When US goods goods become more expensive, US residents will buy more imports assuming imports and US produced goods are substitutes. Demand for imports increases and import expenditure increases.

Assuming that initially there is a balance in the current account position, as receipts from exports falls

Development 2: Explain how quantitative easing and low interest rates in USA and UK impact their trading partners such as Singapore .

Quantitative easing and fall in interest rates in USA and UK might lead to economic growth in USA and UK , hence increased imports by USA/UK which will benefit Singapore as some of this increase will be for exported goods from Singapore. Economic growth, higher disposable income in USA/UK will cause Americans/British to <u>increase</u> their demand for Singapore's exports, leading to an <u>increase</u> in Singapore's <u>export</u> revenue. The increase in exports increases AD. The impact on the SG economy depends on the state of the economy. Assuming that the SG economy is operating very near to capacity i.e on the upward sloping part of the AS curve. The increase in AD promotes AG in

Assuming ceteris paribus condition, AD increases beyond the level of AD (AD3) that brings about full employment then further increases in AD (to AD4) will cause no change in real output but will instead raise GPL and creates demand pull inflation. E.g. increase in AD from AD2 to AD3 and to AD4 , real

GPL

AS1

Singapore economy

P4

E4

E3

P3

P2

E1

E2

P1

AD1

AD2

Y1

Y2

Real

Development 3: Consider the impact of a fall in interest rate on hot money flows or exchange rates and explain the impact of these 'indirect' changes on Singapore.

Conclusion :
Make judgement on extent of the impact and compare the effect caused by US's and

Knowledge, Application, Understanding and Analysis		
<u>Suggested Mark Scheme 5 :</u>		
L3	For an answer using analysis to explain the impact on both an economy and its trading partners	**15-21**
L2	For an answer that gives a descriptive explanation of the impact on an economy and/or its trading partners	**9-14**
L1	For an answer that shows some basic but largely unexplained knowledge of the impact on an economy and/or its trading partners	**1-8**

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**

2016 MJC Prelim Exam H2 Economics EQ 6

Question 6

6 Economists warn of the rising waves of protectionism around the world although some governments are opening markets and improving competitiveness.

(a) Explain why protectionism exists. [10]

(b) A country wishes to improve its export competitiveness in producing manufactured goods. What does this mean and how might this be achieved? [15]

Suggested Answer Model (a)

- Definition of protectionism: Restriction of imports. Protectionism is a deliberate government policy to erect trade barriers in order to shield domestic industries from foreign competition.
- Aim of protection: The aim of protectionism is to switch expenditure, both domestic and foreign to the output of goods and services of the domestic

Barriers on the movement of goods and services between countries.

Types of barriers
→Overt measures
→Covert measures

In real world, countries impose trade

Define subsidies

Explain how subsidies work

Explain & comments on reasons for restrictions of free trade

- protect infant industry
- enable sunset industry to decline gradually/protect employment
- prevent dumping

Price Sd

Sd’

Pw

-

Dd

0 Qd Qs’ Qs Output

Conclusion

Governments may want to restrict imports to reduce some of the costs brought about by free trade. However, such protection measures result in a loss of welfare for consumers. Domestic consumers are forced to buy from high-cost domestic industries, rather than from low-cost foreign industries. They end up with fewer consumer choices and pay higher prices.

Suggested Answer Model 6(b)

Introduction

Meaning of improvement of Export

Export competitiveness has 2 aspects and refers to price competitiveness as well as quality competitiveness. Govts can promote policies that help to increase export competitiveness in specific industries. Improvement in export competitiveness results from a **reduction in relative price of the goods exported or improvement in the quality of these exports.** Export competitiveness is a dynamic concept as it can and does change

Reason for wanting to

Reap **more gains** from trade
→ Increase in Economic growth & therefore a higher

Development

How govts can increase export competitiveness

Increase in the quantity and quality of factors of production available (i.e. the size and efficiency of the available labour force, the productivity of the existing stock of capital and the rate of investment).
Use of supply side measures: Govts can invest in education, increasing stock of human capital and thus raising labour productivity in their manufacturing industries and lowering average costs of producing manufactured goods hence maintain export competitiveness.
Evaluation: A measure that is considered to be good as it addresses the root cause of problems in many countries. However, financing such measures can be costly, outcomes seen only in long-term and these outcomes uncertain. Supply-side measures

Devaluation of domestic currency
E.g. a devaluation of the exchange rate of a country's currency make the domestic exports cheaper in the foreign currency and make them more competitive in the international markets.
Evaluation:
For a small open economy like SG that is highly dependent on imports and hence vulnerable to imported inflation, a devaluation may not necessary improve export competitiveness since the price advantage gained from a devaluation can be negated by an increase in cost of production due to dearer imported raw

Reduce domestic inflation
E..g . The **use of contractionary monetary policy** will lower inflation and raise competitiveness of a country's manufactured goods.
Evaluation: May conflict with other

Export subsidies can be used to create an artificial competitive advantage for a country's products: US cotton producers are a good example.
Evaluation:
Creates tensions with trading partners and invites retaliations as this is considered to be unfair trade practices.

Non-price factors can lead improvement in export competitiveness. e..g product design, reliability, quality of after sales support.
Evaluation: A measure that is considered to be good as it addresses the root cause of problems in many countries. However,

Conclusion

Suggested Mark Scheme (a) :
Description of the classic case for free trade between nations, using the Ricardo Comparative Advantage Approach.

Knowledge, Application, Understanding and Analysis		
L3	For an analytical explanation of protectionism and the reasons for	**7-1**

	restricting imports. Includes some mention of the evaluative aspects.	0
L2	For an answer that shows knowledge of protectionism and provides a descriptive explanation of various reasons for restricting imports. <u>OR</u> For an answer that shows knowledge of protectionism and provides an analytical explanation of one reason for restricting imports.	**5-6**
L1	For an answer that shows some knowledge of protectionism and lists the reasons for restricting imports.	**1-4**

Knowledge, Application, Understanding and Analysis		
<u>Suggested Mark Scheme (b) :</u>		
L3	For good analytic discussion on 3-4 factors which can improve XC	**7-11**
L2	For undeveloped explanation that has not fully addressed both stems e.g. a focus on knowledge and comprehension of 2-3 factors bringing about improvement in XC	**5-6**
L1	An answer which shows some knowledge & comprehension , e.g. Meaning of improvement of CA & reasons for wanting to improve export competiitveness of manufactured goods (XC)	**1-4**

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**

Question 1

Chocolate battles out

Extract 1 Higher costs bite chocolate makers

Hershey Co.'s rebuff of a $23 billion bid by Mondelez International Inc. this month comes as rising commodity prices are making it more expensive to produce a chocolate bar. Cocoa-butter prices are at multiyear highs as cocoa-bean processors struggle with unusually small cocoa beans in West Africa, where about 70% of the world's cocoa is grown. Still, the bulk of the costs of making chocolate are in transportation and marketing costs.

The cocoa crop in Ghana, the world's second-largest producer, experienced an unusually high drop in 2015, after farmers there applied key pesticides late in the crop's development. Moreover, it takes a cacao tree five years before it produces its first beans. Hershey said in its last earnings call that the price increases had hurt demand and were in part to blame for a 3.6% drop in sales volume in the second quarter.

Retail prices are expected to rise 2.2% this year in the U.S., according to Euromonitor International, the lowest year-over-year percentage increase in a decade. That modest price increase is because chocolate makers feel they have to absorb rising costs because they can't pass them on to consumers, analysts say.

Source: *Wall Street Journal*, 11 July 2016

Extract 2 Appeals for anti-trust laws for Nestle, Hershey and Mars

Buyers accused the three confectionery giants of conspiring to raise chocolate prices in US between 2002 and 2007 during discussions at trade shows and association events. However, the case was dismissed because they failed to provide evidence that the firms' actions were concerted and collusive. In light of the court's ruling, over 20 pharmacies and food retail chains filed appeals against the judgment.

Jeff Beckham, spokesperson for Hershey, said that the company had expected the appeal but said it was pleased the court recognised that there is no basis for the case and misconduct. The chocolate firms said that any pricing increases were due to rising ingredient, manufacturing cost and denied price fixing.

Source: *William Reed Business Media, 22 May 2014*

Table 1: Top five US confectionery brands: share of confectionery sector

Share of confectionery sector (%)	2015
Hershey's	31.3
Mars	29.1
Mondelez	5.4
Lindt	5.4
Nestle	5.0

Source: Statista, 2015

Extract 3 Sales Pressure on Mondelez, Hershey Could Bolster Case for Merger

Rival snack makers Mondelez International Inc. and Hershey Co. are both expected to show sales pressure when they report quarterly earnings this week, bolstering some arguments that the two giants could benefit from joining forces. Both Mondelez and Hershey are grappling with changing consumer tastes toward healthier and more natural foods, and in some cases the trend has sent a few companies in search of deals that help them reduce overall costs. Revenue is expected to be $6.34 billion, down 17% from the same period last year, according to consensus estimates from Thomson Reuters.

Last year's megamerger of Kraft Foods Group Inc. and H.J. Heinz Co. helped the packaged food conglomerates save on overhead expenses and distribution costs. The combined company, Kraft Heinz Co., has posted double-digit increases in profits in recent quarters, despite continued sales decline. Analysts said the appeal for Mondelez to buy Hershey lies in the money the combined company could save by pooling resources and ingredient purchasing. Mondelez could also profit from expanding the Hershey brands overseas, which include Reese's peanut butter cups and Twizzlers, as they are heavily concentrated in the U.S. In fact, many of Hershey's brands have global brand recognition and distribution upside.

However, Bernstein analyst Alexia Howard feels that an acquisition of Hershey would be "strategically unsound" for Mondelez. "Our strongly held view that health and wellness trends will play a key part in the U.S. food industry's future makes us naturally skeptical of this transaction," she said. Hershey has said its sales and profit for the year will be lower than expected as its chocolate bars struggle to compete with newer snacks like fruit-and-nut bars considered by many consumers to be healthier.

Source: *Wall Street Journal,* 26 July 2016

Extract 4 Not so sweet if Mondelez buys Hershey

On paper, a sale to Mondelez could benefit Hershey. Hershey's U.S. market share was at about 44% as of last year, and Mondelez, which generates about 30% of its global sales from chocolate, owns major chocolate brands such as Cadbury. While Hershey has a strong U.S. presence, Mondelez has a global network. A marriage of the two would create the world's largest confectionery company with an estimated 18 percent of the market share, said market research firm Euromonitor International Ltd. In addition, because almost 75% of Mondelez's business is concentrated outside of North America, a potential Hershey takeover may not raise many antitrust concerns within the U.S.

However, while Mondelez has vowed to keep Hershey's name and preserve jobs, some said such promises would ring empty. U.S. food giant Kraft drew controversy in 2010 after it shut a factory in southwest England following its takeover of Cadbury, now owned by Mondelez, going back on an earlier promise to keep the factory open.

Mondelez's bid for Hershey to create the world's largest cocoa buyer, could also hand the bargaining chips in the volatile niche market back to the candy makers. With more buying power, candy makers could demand lower prices from traders already operating on thin margins. The consolidation among chocolate makers create larger buyers of commodities including cocoa and sugar, worrying middlemen who have already seen their margins squeezed. Mondelez is already the world's largest cocoa consumer, and after a tie-up with

Hershey it would consume 650,000 tonnes per year, 50 percent more than the No. 2 consumer, Nestle.

Adapted from: *Reuters* and *Fortune*

Figure 1: Cocoa Prices from 2000-2014

Source: CNBC, 13 Feb 2015

Questions

(a) **(i)** With reference to Figure 1, describe the trend in cocoa prices. **[2]**

(ii) With reference to Extract 1, use a diagram to explain how an increase in demand for chocolate affects the market for cocoa. **[2]**

(b) **(i)** Identify and justify the type of market structure operating in the confectionery sector. **[2]**

(ii) Explain how the firms in this market structure compete against one another. **[2]**

(c) Explain why food retail chains are concerned with price fixing by the three confectionery giants. **[4]**

(d) With reference to Extract 3 and 4, discuss the impacts of Mondelez and Hershey "joining forces". **[8]**

(e) Assess the options open to the government to reduce the possible detrimental effects that will result if Mondelez successfully takes over Hershey. **[1 0**

(a)	**(i)**	With reference to Figure 1, describe the trend in cocoa prices.	**[2]**
		Overall, Cocoa prices increased however there was with a sharp drop in 2013.	
	(ii)	With reference to Extract 1, use a diagram to explain how an increase in demand for chocolate affects the market for cocoa.	**[3]**
		Draw a DD/SS diagram An increase in demand of chocolate will cause demand for cocoa to increase since the demand for cocoa is derived from demand. The equilibrium price and quantity for cocoa increased. Given that supply of cocoa beans are price elastic due to its long gestation period of 5 years, the increase in price brings about a less than proportionate increase in quantity supplied.	
(b)	**(i)**	Identify and justify the type of market structure operating in the confectionery sector.	**[2]**
		Oligopoly. The market is dominated with firms with large market share and its 3-firm concentration ratio is larger than 50%.	
	(ii)	Explain how the firms in this market structure compete against one another.	**[2]**
		In an oligopolistic market, firms are mutually interdependent as there are a few firms with huge market share. They could compete where they engage in non-price competition such as repackaging or advertising to differentiate their range of chocolates sold from their rival firms.	
(c)		Explain why food retails chains are concerned with price fixing by the three confectionery giants.	**[3]**
		From Extract 2, it is said that the companies are 'conspiring to raise prices', hence they are colluding to behave like a monopoly where they restrict output and increase prices. The food retail chains are concerned as more costly chocolates sold by the confectionary giants reduce food retail chains' consumer surplus and raise their unit cost of production. [1m] If the food retails chains are unable to pass on the higher cost to the consumers in the form of higher prices, their total revenue and hence profits will fall.	
(d)		With reference to Extract 3 and 4, discuss the impacts of Mondelez and Hershey "joining forces".	**[8]**
		[Impacts on producers]: Examples • The merged firm has more substantial market share (Table 1) and will be able to produce at higher output. It is more able to reap internal EOS e.g. marketing economies as the "combined company can save [money] by pooling resources and ingredient purchasing" (Ext 3), managerial economies from better division of labour. As a result, the firm enjoys lower average cost of production • This is especially beneficial to the firm since "the bulk of the costs of making chocolate are in transportation and marketing costs" (Ext 1)	

and therefore the merger will allow for costs of production to be lower to a large extent.

[EV] However, other confectionary companies might engage in more non-price competition if they view the takeover as a threat. The merged firm may respond by also spending more money engaging in non-price competition (e.g. advertisements) to compete with the other confectionery companies, reducing their profits.

[Impact on consumers]: Examples

- When the merged firm is able to enjoy lower costs, they might be able to pass down cost savings to consumers via lower prices hence increases consumer surplus
- The merged firm's ability to sustain supernormal profits in the LR implies that they will have greater ability to channel supernormal profits into R&D which results in greater ability to innovate, generate new products and greater variety for consumers. It is also more able to generate new processes to lower cost of production too and consumers may benefit in the long term

[Overall impact on economy/society]

- The takeover might lead to more jobs being created as the combined company expands internationally. This increases employment in factories not just in the U.S. but other areas in which both the companies have factories
- However, in its costs savings drive, it might streamline its production process and lay off workers
- This seems plausible as mentioned in Ext 4 that "while Mondelez has vowed to keep Hershey's name and preserve jobs, some said such promises might ring empty" as similar issue happened when Kraft shut down its factory in southwest England following its takeover of Cadbury, now owned by Mondelez (Ext 4) when Mondelez had earlier agreed to keep the factory open

[Potential impact on cocoa farmers]

- The buying power of the merged firm leads to lower prices which may lead to lower profit margins for cocoa traders, hence reducing their material standard of living as the lowered profits reduces their income and hence access to goods and services

[Synthesis/Conclusion]

Cost of merger is likely to outweigh benefits

- [Potential entry/ Theory of contestable markets] The combined market share of Hershey's and Mondelez in U.S. will be significantly higher than the next highest firm, Mars. Together with the fact that cocoa prices are rising (Ext 1), and that consumers are increasingly switching away from consuming chocolates for healthier options (Ext 3), it is unlikely that there will be potential new suppliers entering the market → suggests that there will be little threat of potential competition→ merged firm is less incentivized to pass down cost savings to consumers and innovate further for the benefit of consumers.

Level	Level Marking Scheme	Marks
L3	Candidate demonstrates their ability to analyse and	7-8

			evaluate the pros and cons of merger for consumers and producers with reference to case materials.		
		L2	Candidates accurately analyse the effects of merger with the use of economic tools. However, no evaluative comments are demonstrated. Little use of case materials	**4-6**	
		L1	Candidates makes some relevant comments but without any appropriate analysis.	**1-3**	

Adv/disadv without evaluative conclusion- max 6m
Cite evidence for both sides of analysis. If evidence only cited for 1 side- max 6m
No evidence provided- max 4m

(e)		Assess the options open to the government to reduce the possible detrimental effects that might result if Mondelez successfully takes over Hershey.	**[10]**

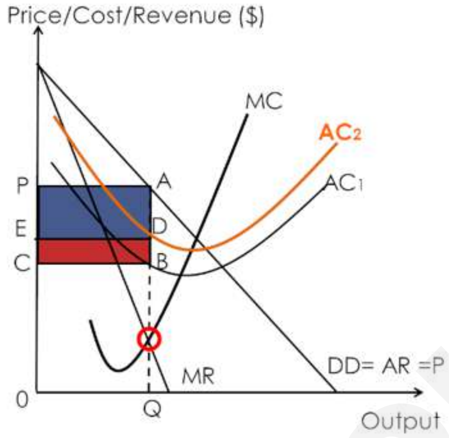
Students are expected to address the detrimental effects identified in part(d)(i)

(Identify the detrimental effects to address)
Detrimental effects to address: possible exploitation of consumers by merged firm, possible loss of jobs (structural unemployment), impact on cocoa traders who might face lower prices

(Identify & analyse the different policies to detrimental effects of a takeover)
Anti-trust policies:
- Detrimental effects: Exploitation of market power leading to higher prices, inefficient allocation of resources and/or anti-competitive behaviours (such as collusion, predatory pricing). The result is a loss in consumer welfare
- Anti-trust policies are programmes designed to prevent the deliberate creation of monopolies, and to prevent dominant firms from engaging in anti-competitive practices (such as the price-fixing behaviour by Nestle, Hershey and Mars in Ext 2). Government agencies can take firms accused of such behaviours to court, forced it to be split up and/or impose penalties such as fines
- **[EV]** However, whether a firm has breached an anti-trust policy is rarely a clear cut case. Also, in this particular instance, as Ext 4 mentions, it seems like the potential takeover may not raise many antitrust concerns within the U.S. simply because almost 75% of Mondelez's business is concentrated outside of North America.
- Moreover, sometimes companies merge or take over another company not to reduce competition but to lower costs through more efficient joint production. The lower cost can benefit the consumers.

Regulation through lump-sum taxes
- Detrimental effect: greater inequity if the merged firm reaps excessive profits at the expense of consumers and other firms
- A **lump-sum tax** can be used to reduce this excessive profit earned as a result of market dominance. A lump-sum tax is a tax fixed in

amount and levied without any regard to the output or revenue of the firm. It can be regarded as a fixed cost to the firm and therefore shifts the AC curve upwards. If the government uses the tax revenue earned to subsidise the lower-income families, inequity issues can be further reduced.



[EV] Firms have incentive to avoid excessive profits by charging lower prices which will help to reduce inequity

Supply-side policies (to deal with loss of jobs)

Conclusion: Offer evaluative judgement as to which policy options are better.

Le vel	Knowledge, Application, Understanding & Analysis	Marks
L3	A well-developed answer on at least 2 detrimental effects of Mondelez's takeover (demerits of monopoly, unemployment due to shutdown of companies, low prices of cocoa) and at least 2 policy available(well explained) to tackle it, considered in the context of that is well supported with usage of analytical tools and evidences. Reasoned judgment on which option should be undertaken based on the problems faced.	7-8
L2	One-sided answer that analyses the effectiveness of 1 relevant policy and 1 detrimental effect OR underdeveloped analysis of two policies and effects of the takeover, with little reference to case materials.	5-6
L1	A descriptive answer that only explains the detrimental effect and policy in brief with many inaccuracies. No evidence capped at level 1	1-4
	Up to 2 marks for evaluation	
E1	Application of relevant economic concepts to	1-2

			make judgment about the appropriateness of measures in the Singapore's healthcare market.		

Question 2 Rebalancing to generate growth

Extract 5: China's economic growth misses target

China's economy grew 7.4 percent in 2014, at its slowest pace in 24 years as property prices cooled and companies and local governments struggled under heavy debt burdens, keeping pressure on Beijing to take aggressive steps to avoid a sharper downturn.

A further slowdown in China could hinder the chances of a revival in global growth in 2015, given the major role it plays, in particular for commodities and high-tech. China's property market - a major driver of demand across a range of industries - has proven stubbornly unresponsive to policy support, and lending data from the banking system shows enduring weakness. At the same time, there may be a looming fiscal crisis among debt-sodden local governments, which depend on land sales for most of their revenue. And more companies, especially small property developers, could flirt with default.

Policymakers also are concerned about the potential onset of a deflation aggravated by plummeting energy prices, industrial overcapacity and sluggish demand. Systemic deflation is an economically toxic cycle in which investors and consumers hold off on fresh spending on the assumption prices will drop further in the future. This is cited as a major reason why Beijing will need to put more money into the system.

Nevertheless, the International Monetary Fund's chief economist Olivier Blanchard said slower growth seen for 2015 reflects a welcome decision by the Chinese government to rebalance the economy away from a heavy reliance on investment and exports to a more consumption-based growth model.

Source: Kevin Yao and Pete Sweeney, *Reuters*, 20 Jan 2015

Extract 6: Why China's economy is slowing

Structurally, China's economy faces headwinds. In the long run, growth is a function of changes in labour, capital and productivity. When all three increase, as they did in China for many years, growth rates are superlative. But they are all slowing now. China's working-age population peaked in 2012. Investment also looks to have topped out. Finally, China's technological gap with rich countries is narrower than in the past, implying that productivity growth will be lower, too.

Another important development has been its credit binge. Total debt, including government, household and corporate, has climbed to about 250% of GDP, up 100 percentage points since 2008. This debt allowed China to power its economy through the global financial crisis but also saddled it with a heavy repayment burden. Most worrying, much of the credit flowed to property developers. China's inventory of unsold homes sits at a record high. The real-estate sector, which previously accounted for some 15% of economic growth, could face outright contraction. From this vantage point, the abruptness of China's current slowdown looks more cyclical than structural.

Whereas previous leaders propped up growth whenever it slowed, Xi Jinping, China's president since 2013, has instead spread the gospel of the "new normal", by which he means less emphasis on growth and faster structural reform. As a result, the central bank has been hesitant to ease monetary policy. Changes to fiscal rules have also made it harder for local governments to spend money.

Source: *The Economist*, 11 Mar 2015

Extract 7: Fears mount that UK's plan to rebalance the economy is failing

Britain's recovery remained on track in the third quarter but fresh figures revealed growth was heavily reliant on the consumer, leaving the government's much hoped-for rebalancing of the economy elusive. Companies have become increasingly concerned about the economic outlook and falling business investment once again leaves the economic upturn in the hands of the consumer.

Exports fell by 0.4%, while imports increased by 1.4%, worsening Britain's trade position. The UK's trade deficit with the rest of the world widened to £11.2bn in the third quarter from £8.9bn in the second. Business investment, which the government is banking on to drive a sustainable recovery, actually fell by 0.7% or £300m compared with the second quarter. On the other hand, household spending, increased by 0.8% over the third quarter, extending the run of growth to 13 consecutive quarters. Services sector output was revised up to 0.8% from an initial estimate of 0.7%, reinforcing the picture of a UK recovery reliant on the consumer.
A spokesman for the Treasury repeated its persistent line that growth in the third quarter was a sign the government's long-term economic plan is working, and that the UK economy was under threat from factors abroad. "The UK is not immune to weakness in the euro area and instability in global markets, so we face a critical moment for our economy. We need to carry on working through our economic plan that is securing a resilient economy and a better future."

Source: Angela Monaghan, *The Guardian*, 26 November 2014

Extract 8: Deflation in the Euro zone is all too close

The euro area is on the verge of tipping into its third recession in six years. The zone's overall inflation rate has slipped to 0.3% and may well go into outright decline next year. A region that makes up almost a fifth of world output is marching towards stagnation and deflation.

Some price falls are welcome. Tumbling oil prices, in particular, have given consumers' incomes a boost. But slowing prices and stagnant wages owe more to weak demand in the economy and roughly 45 million workers are jobless in the rich OECD countries. Worse, short-term interest rates are close to zero in many economies, so central banks cannot cut them to boost spending.

If Europe is to stop its economy getting worse, it will have to stop its self-destructive behaviour. France and Italy should be allowed to slow the pace of their fiscal cuts; in return, those countries should accelerate structural reforms. Reducing the fiscal deficits has been difficult to achieve because reductions in government spending and increases in taxes depress economic activity. Lower economic activity causes increased transfer payments and reduced tax revenue, offsetting the original fiscal contraction. A cheapening euro would be an important boost for eurozone countries such as Spain, Italy and France that have very large fiscal deficits. Although the lower euro would not change the relative prices among the eurozone countries, it would have a powerful effect because nearly half the trade of the eurozone countries is with countries outside the eurozone.

Source: *The Economist*, 25th October 2014

Table 2: GDP growth rates (Annual % change at constant prices in local currency)

	2010	2011	2012	2013	2014
China	10.6	9.5	7.8	7.7	7.4
UK	1.5	2.0	1.2	2.2	2.9
Euro Area	2.1	1.6	-0.9	-0.3	0.9

Table 3: Inflation rates (Annual % change in consumer price index)

	2010	2011	2012	2013	2014
China	3.3	5.4	2.6	2.6	2.0
UK	3.3	4.5	2.8	2.6	1.5
Euro Area	1.5	3.3	2.5	1.4	0.2

Source of Tables 2 & 3: *World Bank*

Table 4: Government Budget Balance (% of GDP)

	2010	2011	2012	2013	2014
China	-2.5	-1.1	-1.5	-2.1	-2.1
UK	-9.7	-7.7	-8.3	-5.6	-5.6
Euro Area	-6.2	-4.2	-3.7	-3.0	

Source: *www.tradingeconomics.com*

Questions

(a) Which economy in Table 2 shows the least variation in its growth rate? [1]

(b) **(i)** Besides the balance of trade in goods and services, state one other component of the current account on the balance of payments. [1]

(ii) With reference to Extract 5, explain how a trading partner's current account on the balance of payments is affected by China's slowdown. [2]

(c) How might UK's multiplier size change with the rebalance of the UK's economy? [4]

(d) Comment on the usefulness of GDP growth rates in measuring UK's standard of living. [4]

(e) Discuss whether policymakers should be concerned about the onset of deflation. [8]

(f) Both UK and China are experiencing slow growth and have plans to rebalance their economies. In light of the data, assess the most appropriate policy approaches their governments can adopt to achieve high and sustained growth.

[Total: 30]

(a) Which economy in Table 2 shows the least variation in its growth rate? [1]

China. It shows a decreasing trend that is consistent throughout, with the least fluctuations.

(b) (i) Besides the balance of trade in goods and services, state one other component of the current account on the balance of payments. [1]

Income flows or current transfers of gifts

(ii) With reference to Extract 5, explain how a trading partner's current account on the balance of payments is affected by China's slowdown. [2]

China's real output is falling, demand for high-tech and primary commodities from trading partners which are used to produced manufactured goods falls leading to a fall in export revenue for the trading partner. Assuming current account was initially in equilibrium, c.p. trading partner's current account will be in deficit.

(c) How might UK's multiplier size change with the rebalance of the UK's economy? [4]

]

Re-balancing economy →reduce reliance on consumer demand & increase reliance investment & external demand to drive economic growth.

The plan to reduce reliance on consumption expenditure to boost growth (Extract 3), implies that government will aim to reduce the MPCd of UK where an additional increase in national income will lead to a smaller increase in Cd. achieved via encouraging a higher MPS value which in turn enables higher accumulation of funds for loans, leading to higher investment levels,fulfilling the rebalancing objectives to drive a sustainable recovery. Assuming MPM and MRT remains constant, a higher MPS will lead to a smaller K size, given that K = 1/ MPW

Address "might"
However, the K size may also remain the same (or increase) UK government may decide to reduce corporate tax rates as another policy option to lower business cost & boost export competitiveness. Hence, this negates the rise in MPS, resulting in negligible change in MPW causing K size to remain the same or even increase

(d) Comment on the usefulness of GDP growth rates in measuring UK's standard of living. [4]

Usefulness in measuring material well-being

UK's GDP growth rates have been positive which suggests annual increase in GDP. If growth rates are higher than the rate of change in population, GDP per capita will increase. An average citizen enjoys higher purchasing power, thus having greater access to goods and services. Material well-being increases, SoL improves.

Limitations

However, GDP growth rates do not reflects the improvement in non-material well-being. The increase in GDP could have come at the expense of longer working hours and greater stress faced at work, resulting in lower quality of life. Hence, more information is required to give a more holistic assessment of SoL in UK.

Comment on the usefulness

To have a more accurate measurement of material well-being, GDP growth rates is insufficient. Information on population growth is needed for a more accurate measurement and hence growth in GDP per capita rather than GDP growth rates is a better indicator. Its usefulness is also largely limited as the non-material aspect of SoL cannot be accurately reflected.

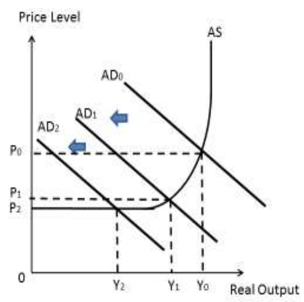
(e) Discuss whether policymakers should be concerned about the onset of deflation. [8]

Introduction: Define deflation – a period of sustained and inordinate fall in GPL. Policy makers would have to examine the underlying causes and consequences of deflation to decide whether it is a cause for concern.

Thesis: Policymakers should be concerned

Analysis: Underlying cause of falling GPL – "sluggish demand" implies that other macroeconomic goals are not achieved.

Extract 5 suggests that the underlying cause of a deflation can be due to sluggish demand. This implies that total expenditure in the economy i.e. falling AD could be the cause of falling GPL.



Draw diagram to explain how deflation suggests other macro goals are not

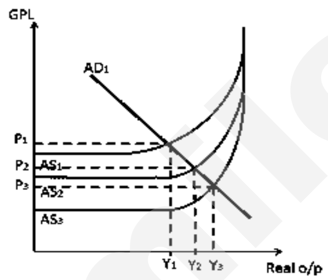
achieved → this results in a fall in real output in the economy, and rising demand deficient unemployment. Hence, it signifies that other internal macroeconomic goals are not achieved. This is reinforced by evidence in Extract 8 where weak demand has resulted in '45 million workers jobless'.

Evaluation: Evidence support that policymakers should be concerned to a large extent. Extract 5 explains how falling GPL in one time period will cause 'investors and consumers' to hold off spending on the assumption that prices will fall further in the future. Such a spending pattern reinforces the negative impact on economic growth and employment making deflation a greater cause for concern for policymakers.

Anti-thesis: Policymakers need not be concerned by deflation

Analysis 1: Underlying cause of deflation – "tumbling oil prices"

As suggested in Extract 8, 'some price falls are welcomed". In the case of falling oil prices, this can have positive impact on the economy and the consumers of oil related products such as petrol.



Explain with diagram the impact of falling oil prices → fall in price of raw materials for economies → shift SRAS to the right as Pm falls→ falling GPL and increase in Real output instead.

Evaluation: However such positive impact tend to be short term in nature as oil producing economies/firms have the incentive to strategize to raise prices of oil again. Given that oil has PED< 1, a fall in price of oil will lead to less than proportionate increase in qty dd for oil, causing a fall in export revenue for oil producing economies. Thus, in the long term, they may choose to restrict oil output in order to cause the price to rise again, eroding any benefits from falling prices.

Synthesis:
Whether a policymaker should be concerned about the onset of deflation depends on the cause and extent of fall in prices. The overall global environment of slowing economic growth as suggested in the case study reinforces the idea that sluggish demand is causing deflation. Hence the onset of deflation is likely to bring about more costs than benefits. Eurozone, China and UK are all experiencing slow growth and inflation rates are

sharpest decline in 2014 (Table 3). Hence the likelihood of deflation is much higher for Eurozone and hence policymakers in the Eurozone should be most concerned about the onset of deflation.

(f) Both UK and China are experiencing slow growth and have plans to rebalance their economies. In light of the data, assess the most appropriate policy approaches their governments can adopt to achieve high and sustained growth. (10m)

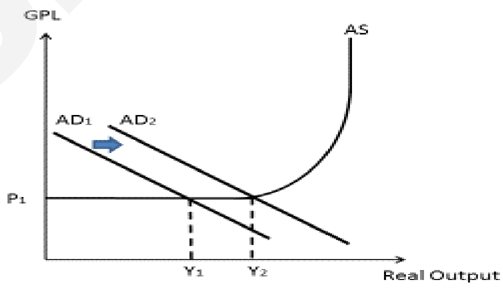
Introduction
Interpret signpost: Both UK and China are experiencing slow growth. However, China is rebalancing towards greater reliance on Cd for future growth, away from I and X. but UK plans to rebalance away from Cd reliance towards more of I and X for future growth. Governments can consider demand management policies and SS side policies in attaining high and sustained economic growth.

Policy 1: Fiscal Policy

1. Analyze how Exp FP works to achieve high and sustained economic growth

   (students only need to explain increase in G or cut in T, not both due to exam time constraints)

   - A cut in personal income taxes → increased Yd → increase purchasing power → increase in Cd and hence AD → Increase in Real output and NI by a K amount, given that the economy is operating with spare capacity.



2. Evaluation: Compare UK and China's approaches

E.g. Both UK and China have budget deficits as seen in Table 3. The budget deficits have been sustained over the last 5 years showing that it is a long term problem for them. Large budget deficits accumulated may result in lower credit ratings and poor investors' confidence. Hence despite the need to expand the economy, the use of expansionary FP

Difference: Size of K The effectiveness of an exp FP policy will differ due to the difference in size of K. Assuming ceteris paribus, Extract 3 suggested that UK has not been very successful in rebalancing the economy implying that the economy is still relatively reliant on Cd as a key driver for growth. Hence, the value of MPS is relatively low also implying a higher K size for UK. Thus in terms of effectiveness of expansionary FP, it would be more appropriate for UK to employ FP then that of China in attaining high growth.
Policy 2: Monetary Policy **Analyze how devaluation works to stimulate growth** Both UK and China may turn to weakening of their currency to boost economic growth in the short term in light that exp FP may not be a viable tool to use. E.g. a weakening of the pound against other foreign currencies will lead to exports of UK becoming cheaper in foreign currency while imports to UK become more expensive in pounds. Demand for UK exports increase while quantity demanded for imports by UK households fall. Assuming Marshall-Lerner condition holds, where PEDx + PEDm>1, a devaluation of the pound will lead to an increase in (X-M). AD increases and leads to increase in real output. **Evaluation:** E.g. A weakening of the currency may be ineffective for both countries. Given that the slow growth environment is a global one since major economies like UK, China and Euro are impacted; a fall in relative price of the good may not be able to offset a fall in demand for goods & services around the world due to falling purchasing power rendering a weakened currency ineffective (Extract 3: UK is not immune to the weakness in Euro). Therefore effectiveness of policies to increase growth will also be dependent on the economic growth recovery of other trading partners. **Compare Exchange Rate policy & Fiscal Policy** Underlying cause of slow growth is rising total debt in China's economy as seen in Extract 2. Whereas, there is only evidence to show that UK's debt is largely that of a fiscal debt. This implies that for China, any fiscal policy stimulant for the economy may not be effective, as increase in Yd or post-tax profits will not be channelled to spending, but rather the repayment of debt. Hence, similarly a devaluation policy <u>might be more appropriate</u> than fiscal policy in the case of China.
Other Policies : E.g. SS Side policy to target sustained long term growth.
Synthesis: Both UK and China will require SS-side policies in order to achieve sustained growth. However, increases in AS without sufficiently high AD will result in potential growth that is not actualised. Hence, both UK and China should complement SS-side policies with demand-management policies. Given UK's intention to drive growth through X and I, devaluation may help to boost its export competitiveness in the short-term and boost investors' confidence. As for China, its rebalancing may have to take a backseat as it continues to rely on X for growth as its consumers and the government struggle to repay the large loans accumulated. As the loans are reduced, the government may then consider

National Junior College
Economics Department

Preliminary Examination 2016
Paper 1 Answer Booklet

Senior High 2
H2 Economics
(9732/01)

Case Study 1 Suggested Answers:

(a)	**(i)**	Compare the change in the market share of the Big Four supermarkets with the change in the market share of the discounters in the grocery market from August 2012 to August 2014.	**[1]**
		The market share of the Big Four supermarkets in the grocery market has generally decreased while the market share of the discounters has generally increased.	
	(ii)	Explain the factor for the change in the market share identified in a(i).	**[2]**
		There has been falling income or stagnant income in UK for a number of years. The Big Four supermarkets offer normal to luxurious goods and services, while the discounters offer more inferior services. Normal to luxury goods/services have positive income elasticity of demand while inferior goods/services have negative income elasticity of demand. Hence, the demand thus the market share for the Big Four supermarkets has decreased while the demand thus the market share for discounters has increased.	
(b)		Explain whether the Single Farm Payment paid to the UK farmers is justified in terms of economic theory.	**[3]**
		The subsidy paid to the UK farmers is justified as it helps to protect the income of the farmers and allow them to continue in their farming activities. However, the subsidies paid to the UK farmers is not justified. This is a form of unfair trade practices and may impoverish the farmers in the third world countries. Whether the subsidies paid to the farmers is justified or not will depend on the extent of the impact it has on the farmers from the third world countries.	
(c)	**(i)**	Using an appropriate elasticity concept, explain why 'global explosion of affluence' will lead to significant concern over world food prices.	**[3]**
		The demand for food has increased significantly due to the "global explosion of affluence". The value of the price elasticity of supply for food is less than 1. The significant rise in demand combined with a low PES will be a significant concern to world food prices as it will result in a rapid rise in world food prices	
(c)	**(ii)**	With the aid of a diagram, explain how the change in world food prices can affect UK domestic food production.	**[3]**
		Price P_D	

$P_{W'}$

P

D_D

0

Q_3

Q_1 Q_2 Q_d S_D Q_4 Quantity of Food Transacted

Figure: UK Food Market

Higher prices increase the producers ability to supply more of a good/service. Since producers face a higher marginal cost, they must receive a higher price for the additional units of output to be able to increase the quantity supplied. With the increase in world price of food from Pw to Pw', UK domestic food production increased.

(d)		As a consultant economist, evaluate the options you would recommend to Tesco in response to the threat from discounters.	[8]

Introduction:
- One of Tesco's main challenges is the threat from the discounters who are attracting shoppers at rapid pace.
- The aims of these strategies include helping Tesco to regain their sales and market share from the discounters in the short run and to maximise their profits in the long run.

Body 1:
Pricing Strategy
- With the entry of more firms into the grocery market, demand for Tesco's service falls. The demand for Tesco has become more price elastic in demand with the increase in competition.
- Hence, Tesco should lower its prices to increase total revenue.
- The strategy of a price competition should result in increase in sales revenue for Tesco.

Limitation:
- A price competition might not work for Tesco given their higher operating cost such as the higher rentals for the larger space occupied by the larger supermarkets.
- It could also lead to price wars among the different supermarkets and this will hurt all the supermarkets profits in the long run.

Body 2a:
Non-price strategy
- Tesco could compete with Aldi for strategic location and accessibility as seen, which might be an important consideration to consumers facing falling income who may not be keen to spend too much on transportation to visit a larger supermarket that is located further away.

Limitation:
- However, this strategy may not guarantee a reduction in the intensity of the competition that Tesco is facing from the discounters.

Body 2a:
Non-price strategy
- Hence, Tesco could produce more of inferior goods and less of luxury goods to attract

consumers to buy inferior goods, increasing demand and hence, TR. Tesco could also focus more on marketing efforts on groups that view certain goods as inferior, promoting the good as 'value for money' for the budget conscious.

Limitation:

- However, demand for inferior goods may not increase if consumers taste and preference towards luxury goods remains. Even in times of falling or stagnant incomes, consumers may still continue to consume luxury goods due to a specific taste and preference for it.

Body 3:

Strategy to lower Tesco's cost of production

- Whether Tesco is considering a pricing strategy against the discounters or simply to achieve profit maximisation, a strategy to lower Tesco's cost of production would be necessary.
- To achieve a lower cost of production, Tesco can consider a merger with the food producer or acquiring the food producers.
- The lower cost of production will allow Tesco to engage in price competition. Ceteris paribus, the lower cost will also help Tesco to increase its profits earned.

Limitation:

- Such a vertical merger may not result in significant cost saving for Tesco as the cost of food as the extract 3 shows that the supermarkets are already paying low prices to food producers to support the price wars among the grocers.

Conclusion:

- Tesco, a profit maximising supermarket is faced with the problems of declining sales and declining market share.
- Strategies recommended to Tesco should help her to increase her revenue or lower her cost of production.

Mark Scheme

Level	Descriptors
L2 4-6	For an answer that exhibits: • Good depth in analysis. • Accurate, precise and clear use of economic concepts and analysis in most explanations. • Most explanations are well-developed. • Good breadth in analysis: Contains • well explained options for Tesco
L1 1 – 3	For an answer that exhibits: • Insufficient depth in analysis. • Accurate use of economic concepts and analysis in some explanations e.g. most explanations are descriptive. • Most explanations are under-developed. • Insufficient breadth in analysis: Contains • well-explained option
E2 (2m)	For a well-reasoned criteria-based judgement
E1 (1m)	For an unexplained criteria-based judgement

(f) If you were an economic advisor to the Australian government, would you recommend that it should encourage the growth of supermarkets or the entry of new discounters? [10]

Introduction:

Government makes decision to maximise the welfare of society. It is important that before deciding on whether to encourage the growth of supermarkets or the entry of new discounters, the benefits should be weighed against the cost of development in the Australian grocery market.

Body 1: Encouraging the Growth of Supermarkets

Benefits to society:

- Large supermarkets such as Woolsworth and Coles tend to offer more variety of goods and provide premium service to their consumers. Encouraging the growth of supermarkets will increase society's welfare.
- Larger supermarkets are able set up higher barriers to entry and consequently will be able to keep the supernormal profits earned in the long run.

Costs to society:

- The Australian grocery market is currently dominated by Coles and Woolworths who among them has more than 70 per cent share of the country's supermarket/grocery sector. This gives them significant market dominance and power.
- Market dominance may lead to inefficient allocation of resources in the economy. Resulting **deadweight loss** to society due to an allocatively inefficient level of production
- If the government encourage the growth of supermarkets, they will gain more market power and dominance. Without the competitive pressure on profit margins, these firms could be lax on cost controls. Hence, they are said to be suffering from X-inefficiency.
- The profitability of the supermarkets have increased substantially. These profits are not widely distributed and will contribute to a worsening of the income distribution in society.

Body 2: Encouraging the Development of discounters

Benefits to society:

- In contrast to the substantive market power of the larger supermarkets to set higher prices, the development of more discounters will ensure the lessening of such power. To compete in the industry and be profitable, these discounters will have more motivation to keep their cost low.
- The no frills shopping also help to eliminate the all the costly extras and overheads. Since they enjoy lower costs, the discounters will be able to pass on cost savings to consumers in terms of lower prices and hence, increasing the consumers welfare.

Costs to society:

(For costs of the development of discounters, refer to the earlier discussion points: lack of variety, lack of R&D and innovations)

Conclusion:

- As an economic advisor any recommendation to the government should consider the impact on the welfare of society after considering the benefits and cost.

<u>**Mark Scheme**</u>

Levels	Descriptors

L3
 	
7-8
	For an answer that exhibits:
	• **Very good depth** in analysis.
	    • Accurate, precise and clear use of economic concepts and analysis in **most** explanations.
	    • **Most** explanations are **well-developed**.
	
	• **Very good breadth** in analysis: Contains
	    • **Costs and/or benefits** analysis in the development of supermarkets

	• Costs and/or benefits analysis in the development of discounters.

L2
 	
4-6
	For an answer that exhibits:
	• **Good depth** in analysis.
	  • Accurate, precise and clear use of economic concepts and analysis in **most** explanations.
	  • **Some** explanations are **under-developed**.
	
	• **Good breadth** in analysis: Contains
	  • **Costs and/or benefits** analysis in the development of supermarkets
	  • Costs and/or benefits analysis in the development of discounters.

L1
 	
1-3
	For an answer that exhibits:
	• Insufficient depth in analysis.
	  • Accurate use of economic concepts and analysis in **some** explanations e.g. most explanations are descriptive.
	  • **Most** explanations are **under-developed**.
	
	• Insufficient breadth in analysis: Contains
	  • Costs and/or benefits analysis in the development of supermarkets **OR**
	  • Costs and/or benefits analysis in the development of discounters.

Levels	Descriptors
E2 **2**	• For a well-reasoned criteria-based judgement that answers the question
E1 **1**	• For an unexplained criteria-based judgement that answers the question

Case Study 2 Suggested Answers:

(a)	**(i)**	Compare the change in the United Kingdom's balance of trade in goods and services with that of United States between 2011 and 2014.	**[2]**
		Similarity: Both countries' balance of trade are in deficits from 2011 to 2014. Difference: UK's balance of trade is worsening whereas US's balance of trade is improving from 2011 to 2014.	
(a)	**(ii)**	With reference to the data in Table 2 and Table 3, explain the effect of the United Kingdom's growth rates on the United Kingdom's balance of trade between 2011 and 2014.	**[2]**
		With reference to Table 3, UK's growth rate increases between 2011 and 2014, which explains for the increase in demand for imports due to the rising income assuming YED>0 for imports/import goods are normal goods. The increase in import expenditure will lead to a fall in net exports, assuming ceteris paribus, hence explaining for the worsening in UK's BOT observed in Table 2.	
(b)		Explain the advantages of the 'changing business relationship between China and the West' on China's economy.	**[3]**
		The changing business relationship refers to the increasing number of Chinese firms acquiring foreign firms in China and/or acquiring foreign firms overseas. Therefore, there is an increase domestic investments by domestic firms in China. Hence, China's AD and LRAS is likely to increase thus promoting economic growth in China. In addition, there might be lesser income outflow in terms of profit remittance hence China's balance of payments/capital-financial account is likely to improve.	
(c)		Using a diagram, explain how 'structural reforms, combined with fiscal austerity, push economies into a deflationary tailspin'.	**[5]**
		Structural reforms refer to efforts to decrease government/public expenditure on infrastructure and increase private consumption expenditure. Fiscal austerity as suggested refers to a policy of reducing government/public spending and raising taxes. An increase in personal income tax is likely to decrease consumers' disposable income and hence	

consumption expenditure. An increase in corporate tax will reduce investment expenditure.

Hence it would lead to a fall in consumption and investment expenditure as well as fall in government expenditure, which in turn would lead to a decrease in AD. The fall in AD leads to a fall in real national and GPL.

(diagram to illustrate)

(d) `TTIP is an excellent idea, say its champions, because it will be a magical GDP bonanza for both economic blocs' (Extract 6). Using your own knowledge and the data where relevant, assess the validity of this statement. **[8]**

Introduction:

- TTIP is an excellent idea according to its champions due to its perceived benefits. However it is likely to bring about problems that will affect both macro and micro aims.

Body 1: TTIP is an excellent idea

- Increase in trade thus for both US and EU thus leads to an increase in net exports for both Eu countries and US. Coupled together with the increase in FDI, this will increase AD and hence real national output. The increase in FDI can also lead to an increase in LRAS, bringing about potential growth. This is supported with Extract 6 that quoted how TTIP will be a magical GDP bonanza for both economic blocs, which will result in an improvement in material SOL of the citizens in both countries.
- TTIP increases the amount of imports and therefore the choice of goods and services available to consumers. The reduction of non-tariff barriers means that exporters may increase their products to the importing country, which results in an increase in consumer choice, which has a positive impact on consumer welfare.

Body 2: TTIP is not an excellent idea due to its limitations

- Loss of jobs and increased unemployment – With increased restructuring of economies according to CA (as mentioned earlier), there might be prolonged and substantial dislocation of jobs under TTIP.
- TTIP's biggest threat to the citizens is its inherent assault on democracy. As mentioned in Extract 6, one of the main aims of TTIP is the introduction of Investor-State Dispute Settlements (ISDS), which allow companies to sue governments if those governments' policies cause a loss of profits. Hence this could imply a decrease in those annoying profit-blocking rules erected by governments to stop their citizens being poisoned or killed, or to prevent rampant pollution.
- TTIP could bring about an enormous transfer of power from public to private hands as mentioned 6, since private companies will be allowed to sue national governments for doing things that harm their bottom line.

Synthesis:

- Indeed TTIP is an excellent idea, because it will be a magical GDP bonanza for both economic blocs. However TTIP can be an excellent idea due to its other benefits.
- Hence the pros and cons of TTIP must be carefully considered and weighed before coming to a stand that TTIP is an excellent idea because it will a magical GDP bonanza for both

economic blocs.

Mark Scheme

Level	Descriptors

Level 2
 	
4 – 6
	For an answer that exhibits:
	• **Good** depth in analysis.
	    • Accurate, precise and clear use of economic concepts and analysis in **all** explanations. Answer shows **good** knowledge of effects of TTIP.
	
	• **Good** breadth in analysis:
	    • Addresses both positive and negative effects of TTIP

Level 1
 	
1 – 3
	For an answer that exhibits:
	• **Insufficient** depth in analysis.
	    • Accurate and clear use of economic concepts and analysis in **some** explanations. Answer shows **insufficient** knowledge of effects of TTIP.
	
	• **Insufficient** breadth in analysis:
	    • Addresses positive and/or negative effects of TTIP

Level	Descriptors
E2 **2**	• For a well-supported judgement with good consideration of criteria/situations on the overall effects of TTIP.
E1 **1**	• For an unexplained judgement on the overall effects of TTIP.

(e) Using the evidence in the data, discuss whether China's slowdown will be the biggest worry to European Union countries. **[10]**

Introduction:
A slowing China could be a worry to EU countries, however it may not be the biggest worry as the weakening of US and the domestic problems in EU countries could be a bigger worry to them.

Thesis: China's slowdown will be the biggest worry to EU countries

- A slowing China means that income will be rising at a slowing rate and hence this will lead a slowdown in demand for imports by the Chinese if YED>0 for these imports. This is equivalent to a slowdown in demand for EU exports. CA and BOP of EU countries will worsen, assuming ceteris paribus.

- The fall in EU countries' net exports will also lead to a fall in AD and real national output. Hence cyclical unemployment will increase due to the fall in production which results in a fall in demand for labour since labour is a derived demand.

- Slowdown in the inflow of FDI will lead to a slower increase in AD and a increase in real national output.

Anti-thesis : There are other worries to EU countries

(1) Weakening US:
- As mentioned, bad inflation in US where companies are charging more for goods with price inelastic demand in an attempt to offset low sales volumes shows signs of profit price-push inflation in US, illustrating stagflation in US which will lead to a fall in external demand in EU countries.

(2) Domestic problems in EU countries:
- Debt problem. The axing of government spending on projects and the bolstered taxes that have throttled public and private investment across southern Europe has also not helped. And even if fiscal austerity proves less damaging in 2014 than in 2013, European growth will be crimped by the disastrous state of France's economy where taxes weigh too heavily on income and moves to rein in public spending are coming far too late.
- EU countries tend to be slower in adopting new technology and hence face a relatively slower productivity growth compared to US due to a slower increase in LRAS. This might hinder EU countries in achieving high and sustainable economic growth.

Synthesis:
- Whether or China's slowdown is the biggest worry to EU countries depends on how dependant EU countries are on China for trade.

<u>Mark Scheme</u>

Level	Descriptors

Level 3
 	
7 – 8
	For an answer that exhibits:
	• **Excellent** depth in analysis.
	    • Accurate, precise and clear use of economic concepts and analysis in **all** explanations.
	• **Excellent** breadth in analysis: Contains
	    • **Excellent** knowledge of the reasons why China's slowdown will be a worry to EU countries and other factors that are worries to EU countries.

Level 2
 	
4 – 6
	For an answer that exhibits:
	• **Sufficient** depth in analysis.
	    • Accurate use of economic concepts and analysis in **some** explanations i.e. some explanations are descriptive.
	• **Good** breadth in analysis: Contains
	    • **Good** knowledge of the reasons why China's slowdown will be a worry to EU countries and other factors that are worries to EU countries.

Level 1 **1 – 3**	For an answer that exhibits: • **Insufficient** depth in analysis. • Inaccurate or insufficient use of economic concepts and analysisin most explanations.

	- Conceptual errors in analysis. - **Insufficien**t breadth in analysis: Contains - Lack of knowledge of the problems

Level	Descriptors
E2 **2**	- For a well-supported judgement with good consideration on whether China's slowdown will be the biggest worry to EU countries.
E1 **1**	- For an unexplained judgement on whether China's slowdown will be the biggest worry to EU countries.

NATIONAL JUNIOR COLLEGE
SH2 Preliminary Examinations for General Certificate of Education Advanced Level
Higher 2

ECONOMICS 9732/01

Paper 1 **30 August 2016**

2 hour 15 minutes

Additional Materials: Answer Paper, Cover Pages

READ THESE INSTRUCTIONS FIRST

Write your name and subject class on all the work you hand in.
Write in dark blue or black pen.
You may use an HB pencil for any diagrams or graphs.
Do not use staples, paper clips, glue or correction fluid.
DO **NOT** WRITE IN ANY OF THE MARGINS.

Answer **all** questions.

Start each question on a new piece of paper.
Start parts (c), (d) and (e) for both case studies on a new piece of paper.
Fill in the necessary information on the cover pages.

At the end of the examination, fasten all your work securely with the cover pages given.
The number of marks is given in brackets [ ] at the end of each question or part question.

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

National Junior College
Economics Department

Answer **all** questions.

Question 1

Competition in the Grocery Market

Table 1: Grocery Market Share (%) from August 2012 to August 2014

	Great Britain	**12 weeks to 19 August 2012 (%)**	**12 weeks to 17 August 2013 (%)**	**12 weeks to 18 August 2014 (%)**
"The Big Four" supermarkets	Tesco	30.9	30.2	28.8
	Asda	17.5	17.1	17.2
	Sainsbury's	16.4	16.5	16.4
	Morrisons	11.5	11.3	11
Discounters	Aldi	3	3.7	4.8
	Lidl	2.8	3.1	3.6
	Iceland	2	2	2
	Others	13.9	14	14.1

Source: Adapted from Statistica and Roy Morgan

Extract 1: Tesco suffers biggest fall in sales for decades

Tesco has reported its largest fall in sales for decades as shoppers turn away from Britain's biggest retailer. The supermarket chain reported that like-for-like sales fell by 3.7percent in the UK in the three months to May 25 which threatens Tesco's profit for the year. Tesco is losing sales as the German discounters Aldi and Lidl attract shoppers at a rapid pace. Industry analyst, Planet Retail said, "in the context of 20 years when Tesco's just been powering ahead, they didn't really made provisions for when times were tough". When asked whether the performance was due to strategic errors, Philip Clark, Tesco's chief executive, said the company should have been quicker in shifting the focus of its expansion from supermarkets to convenience stores. Tesco is looking to revamp 650 of its stores this year.

Source: Adapted from *The Telegraph*, 04 Jun 2014

Extract 2: Aldi's price plan shook up Tesco, Morrison's, Asda and Sainsbury's

The message that Aldi is getting cheaper and bigger will be welcomed by British shoppers battered by years of austerity and stagnant wages. But for the German supermarket's suffering rivals, it is another turn of the screw. A steely focus on price and simplicity, against a backdrop of falling living standards that has sharpened customers' eye for a bargain, has seen the discounter grab market share from competitors and transform what we expect from our weekly shop.

With shoppers now fully aware of the low prices at Aldi and its fellow German discounter Lidl, mighty Tesco, the giant British retailer, which came close to controlling a third of all grocery sales in the UK, is in disarray, while Morrisons and Sainsbury's are also suffering. All have been forced to cut prices in a bid to stop shoppers leaking away. Competing on price is difficult for the large supermarket groups, which can stock more than 40,000 different products in their largest stores, but are up against the limited range of goods in discounters like Aldi.

Source: *The Guardian*, 29 September 2014

Extract 3: A supermarket price war is bad news for Britain's ability to feed itself

For consumers struggling with food bills, last week seemed to bring a glimmer of hope, as bad news for retailers promised good news on prices. Tesco chief executive Philip Clarke announced £200m worth of price cuts. Spurred by sales down 7.1%, Morrison's has also been offering bargains. A supermarket price war is under way, with Asda and Sainsbury's piling in, which can only be good news for shoppers.

Or perhaps not. For just as Tesco was sharing its dismal trading figures, the Department for the Environment, Food and Rural Affairs (Defra) was releasing statistics on Britain's food self-sufficiency. They revealed the cumulative effect of those price wars on our ability to feed ourselves. For the third year in a row, self-sufficiency was down, from a peak in 1984 of 78% to 60% now. And many believe that's an overestimate. What's more, when one calculates in products exported, the amount that we consume in the UK that is actually produced here falls to around 50%.

Much of that decline is being attributed to the brutal deals on price enforced by the mighty supermarkets. In the mid-80s we grew 4 million hectares of wheat. Now it's 3.14 million. The national sheep flock has fallen by a third. "Much of this is land that would have shown a small profit a few years ago and simply doesn't now because of the prices being paid," said Guy Smith, vice-president of the National Farmers Union.

Why does this matter? After all, we live in a globalised world. Clearly we're supplying our needs from the international markets.

The problem is twofold. First, in the future those international markets will be far less reliable. There has been a global explosion of affluence, especially in Asia. At the beginning of this century, 14% of the world's middle classes were there. By 2050, 68% will be in Asia, and they are insisting on eating as we do, with meat consumption in China alone almost quadrupling over the past three decades. Already Chinese retailers are willing to pay more for ungraded, unpacked apples than British supermarkets will pay for graded and packed. The simple laws of supply and demand mean that all edible commodities are going to be under pressure. At least if we have access to a robust internal food market we'll be protected from some of the worst price excesses.

But there is another, more moral issue. The global population is expected to rise from seven billion now to more than nine billion by 2050. The United Nations estimates that by 2030 we will need to be producing 50% more food globally on the same or even less land. What's more, the latest report from the UN Panel on Climate Change actually predicates a 2% drop in food production. In short, every country needs to do its bit. And we aren't.

It's noticeable that the decline has resulted from the wars on price by large supermarkets that have forced so many British farmers to give up farming. The European Union's Common Agricultural Policy (CAP) emphasised direct subsidies. EU, which included UK as a member, spends around €59 billion a year on farm subsidies, called the Single Farm Payment which subsidised farmers on a per-hectare basis. The Single Farm Payment is a large proportion of income for many farmers, who say they could not profit without subsidies. However, farm subsidies in developed countries push down food prices and impoverish third-world farmers.

Tesco chief executive Philip Clarke did say in an interview last year that food prices would have to rise. He also told farmers that the retailer had changed and would be looking after producers and paying them better. But that was before Aldi and Lidl eroded his market share. The problem is that Tesco is now fighting a battle it simply cannot win. The assumption had long been that if you shopped at a discounter such as Aldi or Lidl you were compromising on quality. Consumers now

[Turn Over

know this isn't the case. By stocking single lines of products – one type of unbranded chocolate biscuit or ham against the 15 or 20 big-name brands in Tesco or Morrison's – the discounters have economies of scale that enable them to charge less without eroding quality. And it turns out consumers are more than willing to trade choice for price. Meanwhile, the big four keep trying to add value through choice and service while also competing on price, which simply isn't possible.

Source: Adapted from *The Guardian*, 8 June 2014

Extract 4: Why do Australians love Aldi?

The supermarket industry is dominated by a select group of retail entities, of which Coles and Woolworths are Australia's largest. Both companies have experienced substantial growth over the last four decades; more than doubling their combined market share to over 70 per cent of the country's supermarket/grocery sector. The profitability of Coles and Woolworths has increased substantially; by 40 per cent and 24 per cent respectively. Further growth remains a real possibility. However, a German discount supermarket is now forcing them into a corner.

Since it opened in 2001, Aldi has grown like wildfire. A cultural shift is taking place, as we grow tired of traditional shopping experiences and become more accepting of bargain-hunting. Aldi has refined its business model over the years to help keep those prices extremely low. The minimal product range, functional store design and lack of short-term promotions besides the "Special Buy" means it is the no-frills airline of supermarkets.

An Aldi spokesperson said: "We've eliminated all costly extras and overheads by selecting only the best products in each category, displaying products in reusable crates and not giving out plastic bags, which encourages customers to recycle. We concentrate on selling our select range of exclusive brands rather than spending money on customer loyalty programs or expensive point of sale displays.". Aldi picks prime geographic locations, to ensure it is easily accessible. Stores often appear close to the other leading supermarkets, but outside of the busy shopping centres, and have car parks.

Source: Emma Reynolds, *News.com.au*, 23 November 2014

Questions

(a) **(i)** Compare the change in the market share of the Big Four supermarkets with the change in the market share of the discounters in the grocery market from August 2012 to August 2014. [1]

(ii) Explain the factor for the change in the market share identified in a(i). [2]

(b) Explain whether the Single Farm Payment paid to the UK farmers is justified in terms of economic theory. [3]

(c) **(i)** Using an appropriate elasticity concept, explain why 'global explosion of affluence' will lead to significant concern over world food prices. [3]

(ii) With the aid of a diagram, explain how the change in world food prices can affect UK domestic food production. [3]

(d) As a consultant economist, evaluate the options you would recommend to Tesco in response to the threat from discounters. [8]

(e) If you were an economic advisor to the Australian government, would you recommend that it should encourage the growth of supermarkets or the entry of new discounters? [10]

Question 2

European Union and The World's Largest Economies

Table 2: Net trade in goods and services: US$ at current prices (millions)

	2010	2011	2012	2013	2014
China	223023	181903	231844	235379	284022
United Kingdom	-66695	-41968	-53552	-53755	-56573
United States	-494659	-548629	-536773	-478398	-508321

Source: *World Bank*

Table 3: Growth in real gross domestic product: % change per annum

	2010	2011	2012	2013	2014
China	10.4	9.3	7.7	7.7	7.4
United Kingdom	1.7	1.1	0.3	1.7	3.2
United States	2.5	1.6	2.3	2.2	2.2

Source: *International Monetary Fund:* World Economic Outlook Database

Extract 5: The car industry shows how Europe's relationship with China is bearing fruit

This year Zhejiang Geely Holding Group will celebrate the fourth anniversary of its acquisition of Volvo Cars from Ford Motor Company. Under Chinese ownership, Volvo has returned to profitability and is investing €11 billion in new products, plants and technologies. It is not alone. Geely has also acquired the London Taxi Company, where more than £200 million is being spent on new technologies and the next generation of famous black cabs.

From being an export destination, China is now emerging as a direct investor and active owner of European companies in numerous industries. Currently, China is now the European Union (EU) countries' second trading partner behind the United States and the EU is China's biggest trading partner.

Last year Chinese companies acquired 120 European companies, a third of them in the UK, Germany and France. These acquisitions symbolise the overseas growth potential of Chinese companies. Under Chinese ownership, companies in different sectors are benefiting from increased investment as well as research collaboration that will benefit both European subsidiaries and Chinese parent companies. These transactions form part of a changing business relationship between China and the West.

To be successful, these deals must preserve the corporate culture and brand identity of the companies acquired. A strong corporate culture is an important intangible asset that comes with a takeover. So China's corporate approach, at least in making foreign acquisitions, has so far focused on safeguarding the national identities of new subsidiaries, to invest in localised R&D, maintain product segmentation and then to marry these local strengths to a global procurement and market-growth strategy. This has also help to lessen China's dependence on foreign investment in the economy.

Source: Adapted from *The Times*, 26 June 2014

Extract 6: Language has the power to disarm the concerned citizen

Let's say you want to push through a massive programme of anti-democratic corporate protection over two continents. It might be a good idea to festoon your official explanations with tedious-sounding acronyms, and with any luck concerned citizens will fall asleep before realising what is going on under their noses.

Consider the case of the US-EU trade deal called TTIP, with its controversial provisions for ISDS (Investor-State Dispute Settlement), and its reassuring talk of removing "barriers" and consulting "stakeholders". George Monbiot, a British writer and others has made clear, this threatens to constitute an enormous transfer of power from public to private hands. Private companies will be allowed to sue national governments for doing things that harm their bottom line.

TTIP is short for the Transatlantic Trade and Investment Partnership. It sounds benign enough. Its point is to remove "barriers" or "obstacles" to trade between the continental blocs. As it happens, the normal kinds of trade "barriers", i.e. import and export duties, are already very low between the US and EU. So TTIP is focusing on the reduction of "non-tariff barriers".

Things begin to appear more worrisome when a persistent reader realises that most of the "non-tariff barriers" being targeted by TTIP are regulations: those annoying profit-blocking rules erected by governments to stop their citizens being poisoned or killed, or to prevent rampant pollution. TTIP's advocates say they just want to make regulations more compatible on both sides of the Atlantic, so that a car manufacturer, say, will not have to pass two different expensive procedures, one for the US and one for the EU, that are aimed at ensuring similar safety levels.

TTIP is an excellent idea, say its champions, because it will be a magical GDP bonanza for both economic blocs. In case anyone is worried that jobs might be at risk, the language of the economic models cited is careful to speak not of job losses, still less of job destruction; instead they refer to possible "job displacements".

Source: *The Guardian*, 21 November 2014

Extract 7: Weak US + slowing China = big EU trouble

After having initially predicted a 1 per cent economic slowdown for the first quarter of this year, US official economic statistics were massively adjusted downwards. Moreover, this is happening in spite of the most accommodative monetary policy on record, with interest rates down to zero. The incipient rise in US consumer prices is a cause for serious concern. Higher prices are not being driven by swelling consumer demand. We are dealing rather with "bad inflation", where companies are charging more for goods with inelastic demand in an attempt to offset low sales volumes.

If that happens, Europe can expect major, palpable trouble. The contribution of external demand to GDP is the EU's most important source of growth at the moment.

Mario Draghi, European Central Bank president has done an excellent job of reassuring investors that the Euro is here to stay, but his efforts have had no impact so far on growth in the real economy. The axing of government spending projects and the bolstered taxes that have throttled public and private investment across southern Europe have also not helped. And even if fiscal austerity proves less damaging in 2014 than in 2013, European growth will be crimped by the disastrous state of France's economy where taxes weigh too heavily on income. Faced with high external and domestic public sector debt, the EU's peripheral countries are being forced to balance their budgets and current accounts.

The trouble is that the disappointing US growth figures came when demand from emerging markets is waning, most notably in China. Until recently China has thrived by restricting households' spending. The financial crisis showed that the world couldn't afford to go on buying. To keep the wheels turning, Chinese authorities were allowed to borrow. Last year the Chinese leadership said it recognised that plan was flawed, but the policy was quickly reversed and public sector debt needed to be cut as part of China's structural reforms to lessen state investment. George Soros, chairman of Soros Fund Management said: "China's leadership was right to give precedence to economic growth over structural reforms, because structural reforms, combined with fiscal austerity, push economies into a deflationary tailspin. But there is an unresolved contradiction in China's current policies."

Looking further out, the main threat to the Eurozone is that nominal growth will remain too low for member countries to reverse their public debt trajectories.

The economic structures in Europe also tend to be less conducive to technology adoption than in the US, a channel which has been highly favourable for productivity growth. An explanation why Europe has lagged behind the US in terms of productivity growth is the slower adoption of information and communication technology, in particular in the services sector. One reason is the relatively closed nature of services markets within Europe, which slows down the diffusion of new technologies. The second reason is the relative rigidity of national labour markets. Reaping the productivity gains from adopting new technology requires fundamental organisational restructuring. Hence firms need to have the flexibility to reallocate workers to different tasks, which in turn requires them to have access to adequate training – something which European firms do not seem to be able to excel in.

Source: Adapted from *Financial Times*, 16 July 2014

Questions

(a) **(i)** Compare the change in the United Kingdom's balance of trade in goods and services with that of United States between 2011 and 2014. [2]

(ii) With reference to the data in Table 2 and Table 3, explain the effect of the United Kingdom's growth rates on the United Kingdom's balance of trade between 2011 and 2014. [2]

(b) Explain the advantages of the 'changing business relationship between China and the West' on China's economy. [3]

(c) Using a diagram, explain how 'structural reforms, combined with fiscal austerity, push economies into a deflationary tailspin'. [5]

(d) `TTIP is an excellent idea, say its champions, because it will be a magical GDP bonanza for both economic blocs' (Extract 6). Using your own knowledge and the data where relevant, assess the validity of this statement. [8]

(e) Using the evidence in the data, discuss whether China's slowdown will be the biggest worry to European Union countries. [10]

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ECONOMICS 9732/02

Paper 2: Essay Questions

23 August 2016

2 hour 15 minutes

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your name and subject class on all the work you hand in.
Write in dark blue or black pen.
You may use an HB pencil for any diagrams or graphs.
Do not use staples, paper clips, glue or correction fluid.
DO **NOT** WRITE IN ANY OF THE MARGINS.

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

Start each question on a **new** piece of paper.

At the end of the examination, fasten all your work securely with the cover pages given [**one cover page for each question**].
Fill in the necessary information on the cover pages.

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

This document consists of **7** printed pages; including **1** blank page and **3** cover pages.

National Junior College
Economics Department

Answer **three** questions in total.

Section A

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

1 In 2014, oil prices plunged to a historical low. Despite weak economic activities worldwide, there has been an increase in activities to produce oil which is a time-consuming process.

Discuss how these events are likely to impact the market for oil and its related markets. [25]

2 In the global pharmaceutical market, the World Health Organisation (WHO) recommends international tiered pricing to improve access to medicines for the poor. With globalised and increasingly digital markets, dominant pharmaceutical firms are at the mercy of savvy consumers.

(a) Explain the impact of globalisation on the price and output determination of a dominant firm. [10]

(b) In the light of globalisation, assess the extent a firm might decide to increase its firm size or to not price discriminate. [15]

3 As economies gain greater success by ensuring a more efficient use of resources, there is an increasing call for governments to ensure that the success is better distributed.

Assess the appropriateness of alternative policies that can be adopted by a government to correct different causes of market failure. [25]

Section B

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

4 India and many developing countries faced a severe depreciation of their currencies in 2013, largely caused by capital flight and weak external demand.

Discuss the view that the government of a developing country should intervene by only strengthening its currency. [25]

5 "We have made skills, innovation and productivity the basis for economic growth. This is key to keeping our economy vibrant, with a strong core of Singapore-based companies where every Singaporean is in well-paying and meaningful jobs by managing foreign workforce growth."

Source: Singapore Budget Speech 2014

Discuss why the Singapore government should focus on supply side policies rather than demand management policies to achieve sustained economic growth. [25]

6 **(a)** Explain why a small economy should embrace globalisation. [10]

(b) Discuss whether protectionism is justified during times of worldwide recession.

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National Junior College
Economics Department

Preliminary Examination 2016
Paper 2 Answer Booklet

Senior High 2
H2 Economics
(9732/02)

Examiners' Report for 2016 H2 Economics Prelims

<u>Essay Question 1</u>

In 2014, oil prices plunged to a historical low. Despite weak economic activities worldwide, there has been an increase in activities to produce oil which is a time-consuming process.

Discuss how these events are likely to impact the market for oil and its related markets. [25]

<u>Suggested Answer:</u>

Introduction:

- Explain how market equilibrium price and quantity is achieved: via the intersection of the demand and supply curves. It is a situation whereby there is no tendency for change in the market. This occurs when the quantity demanded equals the quantity supplied (Qd=Qs), where there is no shortage or surplus in the market.
- Hence, fluctuations in the demand and supply conditions, as well as elasticity concepts would affect the market equilibrium for oil and its related markets.

Market for oil:

- Demand for oil is derived from the demand of all goods as services worldwide. This is because power and energy such as light/electricity is needed to produce the various goods and services (e.g.: clothes, computers, cars).
- Weak economic activities worldwide imply that there is a weak global demand for goods and services due to falling incomes worldwide. Hence, assuming that most goods in general have YED>0, falling income will lead to a fall in demand for goods and services. Hence , the demand for oil which is a derived demand will fall as well.
- Demand for oil shifts left from D_0 to D_1 as illustrated in Figure 1
- Equilibrium price of oil falls while equilibrium quantity decreases.
- Supply of oil tends to be price inelastic in the short run due to the fact that the length of production time of oil will be long. Hence, there is less degree of responsiveness of quantity supplied of oil to a decrease in price in the short run.
- Since there has been an increase in activities over the years to produce oil. It has resulted in the world supply of oil increasing.
- Hence the supply of oil increases, shifts right from S_0 to S_1 as shown in Figure 1
- Equilibrium price of oil falls while equilibrium quantity increases.
- Oil is has a high degree of necessity and there are also few alternative close substitutes available to oil.
- Hence PED <1, which implies that a decrease in the price of oil will result in a less than proportionate increase in quantity demanded of oil, ceteris paribus.

- Combined effect:
    - o Overall, the equilibrium price of oil decreases significantly and equilibrium quantity of oil increases.

D1

Figure 1

- o At the initial price P_0, there is a surplus (ref to Fig 1) where Qs>Qd.
- o With the surplus, there is a downward pressure on prices. As long as the surplus exists in the market, the market price will decrease and movements along the demand and supply curves continue until a new market equilibrium E1 is achieved where $Q_D = Q_S$ again at lower price at P_1 and higher quantity Q_1.

Market for Air Travel:

- o Oil is refined into different petroleum products such kerosene for jet fuel, gasoline for car petrol.
- o Since oil prices have now fallen, it will mean that the cost of producing for example, jet fuel is lowered.
- o Supply of air travel increases from SS_0 to SS_1.
- o However, weak economic activities worldwide signify that incomes are likely to be falling. Air travel is a luxury good with YED >1 (income elastic) in comparison with bus or rail travel. Hence with a fall in income, demand for air travel will fall more than proportionately.
- o Hence, it is likely that overall equilibrium price will fall and equilibrium quantity will fall due to a larger than proportionate fall in demand compared to increase in supply.

Market for Biofuels:

- Identify that oil and for example biofuel are substitutes in consumption.
- Define cross elasticity of demand (XED): Measures the degree of responsiveness of quantity demanded at every price level of biofuels to a change in the price of oil, ceteris paribus.
- Both oil and biofuels are substitutes in consumption and thus have positive cross elasticity of demand (XED>0).
- Demand for biofuels decreases illustrated by a leftward shift of demand, resulting in the price and quantity of biofuels to decrease.

Conclusion:
In analysing the markets, we assumed ceteris paribus which may not hold in the real world. Hence changes in price and quantity may not be as expected.

<u>Mark Scheme</u>

Levels	Descriptors

**High L3
19 – 21**
	For an answer that exhibits **<u>Excellent Depth</u>** in analysis:
	• Accurate, precise and clear use of economic concepts and analysis in **all** explanations.
	• **Most** explanations are **well-developed**
	• **Good explanation** of price mechanism
	
	For an answer that exhibits **<u>Excellent Breadth</u>** in analysis:
	• Oil Market
	    • PES is considered **AND**
	    • YED value is considered
	    • Simultaneous shifts of demand and supply on the final price **and** quantity **and** clear justifications of shifts
	• Related markets
	    • Use of XED OR PED

**Low L3
15 – 18**
	For an answer that exhibits **<u>Very Good Depth</u>** in analysis:
	• Accurate, precise and clear use of economic concepts and analysis in **all** explanations.
	• **Most** explanations are **well-developed**.
	• **Good explanation** of price mechanism
	
	For an answer that exhibits **<u>Very Good Breadth</u>** in analysis:
	• Oil Market
	    • PES is considered **and/or**
	    • YED value is considered
	    • Simultaneous shifts of demand and supply on the final price and/or quantity but may not have justifications of shifts
	• Related markets
	    • Use of XED OR PED

High L2 12 – 14	For an answer that exhibits **<u>Good Depth</u>** in analysis:

	explanations i.e. some explanations are descriptive.
	• **Some** explanations are **under-developed**.
	• **Some** explanation of the price mechanism
	
	For an answer that exhibits **<u>Good Breadth</u>** in analysis:
	• Oil Market
	    • PES is considered **and/or**
	    • YED value is considered
	
	• Related market

Low L2 **10 – 11**	For an answer that exhibits **<u>Some Depth</u>** in analysis: • Accurate use of economic concepts and analysis in **some** explanations i.e. some explanations are descriptive. • **Some** explanations are **under-developed**. • **Minimal or no explanation of price mechanism** For an answer that exhibits **<u>Some Breadth</u>** in analysis: • Oil Market • PES or YED is considered • Related market
High L1 **6 – 9**	For an answer that exhibits **<u>Insufficient Depth</u>** in analysis: • Answer is **primarily descriptive**, not using economic concepts/terms in reasoning. • Explanations are **mostly under-developed**. • **No or minimal** price mechanism For an answer that exhibits **<u>Insufficient Breadth</u>** in analysis: • Oil Market • PES or YED value is considered
Low L1 **1 – 5**	• Most parts **irrelevant** to question • **Major errors** in the use of economic concepts

Levels	Descriptors
E2 **3-4**	For a well-reasoned criteria judgment .
E1 **1-2**	For an unexplained criteria-based judgement

Essay Question 2

In the global pharmaceutical market, the World Health Organisation (WHO) recommends international tiered pricing to improve access to medicines for the poor. With globalised and increasingly digital markets, dominant pharmaceutical firms are at the mercy of savvy consumers.

(a) Explain the impact of globalisation on the price and output determination of a dominant firm. **[10]**

(b) In the light of globalisation, assess the extent a firm might decide to increase its firm size or to not price discriminate. **[15]**

Part (a)

Suggested Answer

Introduction:

- Essentially globalisation leads to lowered barriers that allows for freer movement of trade, capital and factors of production between countries. This lowered barrier to entry will thus affect the price and output determination of a dominant firm.
- There is a need to consider the price and output determination in the short term and in the long term, where freedom of entry and exit of firms occur.

Body

- A dominant firm is a firm with relatively significant market share and relatively significant barriers to entry. Thus, a dominant firm is likely to have market power and price-setting ability. This means that the firm's average revenue (AR) and marginal revenue (MR) curves are downward-sloping, indicating that an attempt by the firm to increase price would lead to only a less than proportionate fall in quantity demanded.

1. Impact of globalisation on revenue curves of a dominant firm

- As globalisation lowers barriers to entry of various markets, there is likely to be an increase in rival firms for a dominant firm. Rival firms that enter the market will compete away the market share of the dominant firm, thus leading to a fall in the dominant firm's both AR and MR curves.

- Both AR and MR curves will also become more gently-sloping to reflect the likely increase in price-elasticity of demand of a dominant firm, given the increase in availability of substitute goods and services offered by the increased number of rival firms
- As such, at the original output, MC is now higher than the new MR. Thus, each additional output produced by the firm and beyond adds more to costs than to revenue of the firm, leading to a fall in profits. Hence, a profit-maximising firm will be incentivised to reduce output where MR = MC again, where profits are maximised.
- Given the fall in AR curve, at the new profit-maximising output, price of the firm's product has fallen .

2. Impact of globalisation on cost curves of a firm
- Globalisation allows firms to have increased access to cheaper imported raw materials, intermediate inputs and labour. With increased access to export markets overseas, firms may also enjoy external economies of scale such as economies of disintegration, where auxiliary firms help support the main firms, allowing main firms to specialise in the core production processes and reduces average costs.
- With globalisation, MC and AC curves shift downwards.
- As such, at the original output, MR is now higher than the new MC. Thus, each additional output produced by the firm would add more to revenue than to cost of the firm, leading to an increase in profits. Thus, a profit-maximising firm will be incentivised to increase output, where MR = MC again, where profits are maximised.
- At the new profit-maximising output, price of the firm's product has fallen.

3. Combined consideration of the impact of globalisation on a firm's price and output
- With globalisation, the price of a firm is likely to fall but the impact on firm's output is indeterminate and depends on whether globalisation has a more significant impact on the firm's revenue or costs.
- Given that globalisation not only increases the availability of rival firms but also reduces imperfect information as a source of market power for dominant firms of global brands, the impact of globalisation on a firm's revenue curves is likely to be more significant. Thus, it is likely that a firm's output will also fall with globalisation.

<u>Conclusion:</u>
- Globalisation impacts both revenue and costs curves of a dominant firm, leading to a definite fall in price but the impact on output is depends on whether the impact on revenue or costs is more significant.

<u>Mark scheme</u>

Levels	Descriptors

High L3
9-10
	For an answer that exhibits:
	• **Excellent** depth in analysis.
	    • **Accurate, clear and precise** use of economic concepts and analysis in **most** explanations.
	    • **Almost all** explanations are **well-developed**.
	
	• **Excellent** breadth in analysis: Contains
	    • Analysis of firm's revenu) **<u>and</u>** costs
	    • Analysis of **combined** impact of revenue and cost changes on **<u>both</u>** price **<u>and</u>** output of a firm.
	    • Firm's profit-maximising decision making process (explanation of

Low L3
7-8
	For an answer that exhibits:
	• **Very good** depth in analysis.
	    • **Accurate and clear** use of economic concepts and analysis in **most** explanations.
	    • **Most** explanations are **well-developed**.
	
	• **Very good** breadth in analysis: Contains
	    • Analysis of firm's revenue **and** costs
	    • Analysis of **combined** impact of revenue and cost changes on price **and/or** output of a firm.
	    • Firm's profit-maximising decision making process (explanation of **why** MR = MC gives the profit-maximsing output).

L2
5-6
	For an answer that exhibits:
	• **Good** depth in analysis.
	    • **Accurate** use of economic concepts and analysis in **most** explanations i.e. some explanations are descriptive.
	    • **Most** explanations are **developed** i.e. some explanations are under-developed.
	• **Good** breadth in analysis: Contains
	    • Analysis of firm's revenue **and/or** costs

High L1
3-4
	For an answer that exhibits:
	• Insufficient depth in analysis.
	    • **Inaccurate** use of economic concepts and most explanations are descriptive.
	    • Most explanations are **under-developed**.
	• **Insufficient** breadth in analysis. Contains
	    • Analysis of firm's revenue **or** costs
	• Conceptual errors in analysis.

Low L1
1-2
	• For an answer that:
	    • Is largely irrelevant.
	        • Cause(s) of change is not related to globalisation.
	        • Effect(s) of change is not related to price and output determination.
	    • Contains **fundamental** conceptual errors in analysis.

Part (b)
Suggested Answer

Introduction:
- Globalisation presents firms the opportunity of tapping on overseas export markets to allow them to increase their scale of production to tap on both revenue and cost advantages.
- However, a firm may not necessarily wish to increase its firm's size as there might be concerns of diseconomies of scale setting in.
- Also with globalisation, as seen in part (a), barriers to entry to markets have been lowered. This may does negatively affect a firm's decision to price discriminate.

Body
1. With the advent of globalisation, firm decides to increase its firm size
- Globalisation presents firms the opportunity of tapping on overseas export markets to allow them to increase their scale of production to tap on both revenue and cost advantages.
- With an increase in scale of production, firms will be able to reap internal economies of scale (EOS). For example, with an increase in scale of production, firms may be able to reap technical EOS as there may be greater scope for increased specialisation. Thus, with globalisation firms are likely to increase its scale of production to increase its profits.
- In addition, a firm is also able to increase its revenue with increased scale of production by tapping onto international consumers markets. With a larger consumer base, firms are able to gain sales revenue. This allows firms to implement non-price strategies to enhance the demand of their good and make the demand of their goods less price-elastic. If non-price strategies are successful, the firm's demand curve will shift outwards.

2. Despite the advent of globalisation, firm decides not to increase its firm size
- Assuming that the market is one with low marginal efficiency of scale (MES) i.e. minimal internal EOS to be reaped but where diseconomies of scale (DisEOS) sets in quickly, then a firm might not choose to increase its firm size.
- For example, a firm when they choose to increase its scale of production, especially across international borders, internal DisEOS may set in due to miscommunication and coordination problems. Firms will suffer higher average costs and experience a decrease in profits with an increase in scale of production in such markets. Thus, a firm may decide not to increase its firm size.
- Assuming that the nature of the business is one where customisation and personalisation is preferred, there would be revenue advantages to be gained if a firm were to keep its firm size and consumer base small. As such, with enhanced consumers' preference due to customisation and personlised services, a small firm may benefit from an increase in its' firm's demand. Firm's demand may also become less price elastic, allowing the firm to increase its price to increase revenue. Thus, the firm may decide not to increase its firm size.

3. With the advent of globalisation, firm decides not to price discriminate
- For a firm to decide to price discriminate, the following conditions must be present. The firm must be able to separate the consumer market, that is, to be able to prevent those who pay the lower price from reselling the product to those who pay the higher price. The firm should also have sufficient market power in order to have ability to set its price. And in order for price discrimination to increase a firm's revenue, the firm should face different price elasticities of demand from separate groups of buyers.

- Globalisation lowers barriers to entry to markets and thus increases the likelihood of seepage between international consumer markets. For example, if a pharmaceutical firm were to charge a higher price for a drug in developed countries and a lower price for the drug in developing countries in consideration of the difference in price elasticity of demand (PED). Consumers in developing countries may purchase the pharmaceutical drug at a lower price and attempt to resell to those in developed nations. The pharmaceutical firm will thus be only able to mainly sell to the lower-priced market in developing countries, thus rendering the price discrimination (in order to increase revenue) unsuccessful.

4. Despite the advent of globalisation, firm may still decide to price discriminate
- Within domestic markets, there is also minimal impact on seepage between different groups of consumers. Thus, while firms may be discouraged to price discriminate across international markets, firms may still be willing and able to price discriminate within domestic markets.

Synthesised Conclusion:
- The firm's decision to price discriminate depends how significant the impact of globalisation is on the market's barriers to entry. If the market is well 'protected' by legal barriers, then firms may still proceed to price discriminate despite the advent of globalisation.
- The firm's decision to increase its firm size depends on the type of market. For markets with high MES (e.g. heavy manufacturing industries), then firms are more likely to increase its scale of production. However, if the markets are characterised by lower MES (e.g. customised consumer accessories), then firms in such markets may prefer to not increase its scale of production.

Mark scheme

Levels	Descriptors

High L3
11
	For an answer that exhibits:
	• **Excellent** depth in analysis.
	  ○ **Accurate, clear and precise** use of economic concepts and analysis in **most** explanations.
	  ○ **Almost all** explanations are **well-developed**.
	• **Excellent** breadth in analysis: Contains
	  ○ Explanation of the possibility of a firm's decision to increase its firm's size **and/or** also the possibility of a firm to not to increase its firm's size.
	  ○ Explanation of the possibility of a firm's decision to not price discriminate **and/or** also the possibility of a firm to still price discriminate.
	  ○ **Both** revenue **and** cost considerations.

Low L3
9-10
	For an answer that exhibits:
	• **Very good** depth in analysis.
	  ○ **Accurate and clear** use of economic concepts and analysis in **most** explanations.
	  ○ **Most** explanations are **well-developed**.
	• **Very good** breadth in analysis: Contains
	  ○ Explanation of the possibility of a firm's decision to increase its firm's size **and/or** also the possibility of a firm to not to increase its firm's size.
	  ○ Explanation of the possibility of a firm's decision to not price discriminate **and/or** also the possibility of a firm to still price discriminate.

High L2
7-8
	For an answer that exhibits:
	• **Good** depth in analysis.
	  ○ **Accurate** use of economic concepts and analysis in **most** explanations i.e. some explanations are descriptive.
	  ○ **Most** explanations are **developed** i.e. some explanations are under-developed.
	• **Good** breadth in analysis: Contains
	  ○ Explanation of the possibility of a firm's decision to increase its firm's size **and/or** also the possibility of a firm to not to increase its firm's size.
	  ○ Explanation of the possibility of a firm's decision to not price discriminate **and/or** also the possibility of a firm to still price discriminate.

Low L2
6
	• For an answer that exhibits:
	• **Sufficient** depth in analysis.
	  ○ **Accurate** use of economic concepts and analysis in **some** explanations i.e. most explanations are descriptive.
	  ○ **Some** explanations are **developed** i.e. most explanations are under-developed
	• **Sufficient** breadth in analysis. Contains:

		firm's size **and/or** also the possibility of a firm to not to increase its firm's size. • Explanation of the possibility of a firm's decision to not price discriminate **and/or** also the possibility of a firm to still price discriminate.
L1 **1-5**	For an answer that: • Is largely irrelevant. • Factor affecting firm's decision (s) to price discriminate and increase its firm size is not related at all to globalisation. • Contains **fundamental** conceptual errors in analysis.

Levels	Descriptors
E2 **3-4**	For a well-reasoned criteria-based judgement that answers the question on why a firm will decide to increase its firm size or to not price discriminate.
E1 **1-2**	For an unexplained criteria-based judgement that answers the question on

Essay Question 3

As economies gain greater success by ensuring a more efficient use of resources, there is an increasing call for governments to ensure that the success is better distributed.

Assess the appropriateness of alternative policies that can be adopted by a government to correct different causes of market failure.

Suggested answer

Introduction

- In the real world, there are many examples of market failure.
- Different policies are required to correct the different causes of market failure.

Body 1: Explain why and how the case of merit goods results in market failure i.e. the existence of positive externalities, imperfect information and inequity.

- Market failure can occur in the case of merit goods e.g. healthcare services such as vaccinations. Merit goods are private goods that have positive externalities and deemed socially desirable but often under-consumed in a free market without any form of government intervention perhaps also due to the lack of information.

a. Positive externalities

- Positive externalities are spill over benefits associated with the production and/or consumption of goods to third parties who are not directly involved in the production and/or consumption of the goods and no compensation is involved.

- Healthcare services have private benefits such as longer life expectancy because of the lesser probability of becoming infected by viruses and private costs such as the payment for the high cost of vaccinations and medical examinations.

- However, it also has external benefits such leading to their absent from work and thus the reduction in the economy productivity.

- Healthcare services are often under-consumed resulting in deadweight losses because the external benefit is not internalised by the consumers.

- The private benefit and the private cost can be illustrated by MPB and MPC

(include a diagram)

- The free market equilibrium is achieved at Ep where MPB=MPC with output Qp and price Pp. The existence of external benefit suggests that there will be a divergence between MPB and MSB by the amount MEB at every possible output level as shown in Diagram 1 because private economic agents fail to internalise the external benefit.

- Assuming no external cost and hence MEC=0, MPC=MSC, social optimality is achieved at Es where MSB=MSC with output Qs and price Ps. Since Qs>Qp, there is an under allocation of resources resulting in an under-consumption of healthcare services by quantity QsQp. Hence resulting in allocative inefficiency illustrated by a deadweight loss triangle of area AEpEs and therefore results in market failure.

b. Imperfect information

- Merit goods are also often under consumed due to imperfect information e.g. consumers might not be fully aware of the existence or the magnitude of the private benefit and thus under-value the private benefit.

- For example, consumers might not be fully aware of the private benefit of regular health che

Diagram 1: Market for healthcare

c. Inequity

- Healthcare services also exhibit market failure because of inequity reasons meaning that the unequal distribution of wealth may lead to over allocation of resources to the production of goods and services for the rich and under allocation of resources to that for the poor.

- The demand of a good is both reflective of the willingness and ability of consumers to consume. If left to the free market, low income families may not have the ability to afford good quality healthcare services since the market price is largely reflective of the demand of those who can afford. Therefore, the combination of goods and services produced and/or consumed does not allow the society gain the greatest level of satisfaction.

Body 2: Explain why and how the inexistence of markets in the case of public goods results in market failure.

- Another cause of market failure is the inexistence of markets as in the case of public goods. Public goods (e.g. road sign) are goods that are characterised by non-rivalry and non-excludability in consumption.

- Non-rivalry in consumption suggests that an additional consumption does not reduce the benefit available to the next user and hence suggests that the marginal cost of using the good is zero. To achieve allocative efficiency, price must be equal to marginal costs and hence price should be equal to zero. Hence a profit maximising firm would unlikely provide for road signs .

- Non-excludability in consumption suggests that it is almost impossible to charge non-paying users from enjoying the benefit arising from using the good once the good is produced and hence suggests that users would not be willing to pay for using the good because they can free ride. Therefore, there would unlikely be a demand for the good in a free market even if the supply for the good exists.

Body 3: Policies

- When the free market fails, government interventions might be necessary to achieve allocative efficiency. However, different policies might be needed to correct different causes of market failure.

a. Direct provision for free and subsidies

- While direct provision for free is necessary to correct market failure in the case of public goods, direct provision for free to correct market failure due to positive externalities in the case of merit goods might result in over consumption of the merit goods and therefore might worsen allocative inefficiency.

- Direct provision of a merit good for free can be illustrated by a shift of MPC resulting in an over consumption which in turn leads to deadweight loss

- The use of subsidies might be more appropriate to internalise the positive externalities in the case of merit goods. The use of subsidies, for example, indirect subsidies to lower the cost of the production of the merit goods thus achieving allocative efficiency at social optimal level Q_S.

- In addition, the use of subsidies would involve lower government spending as illustrated as compared to direct provision for free thus the former would also involve lower opportunity cost, for example, in terms of the benefit of other developmental projects forgone.

- Nevertheless, the use of subsidies might not be a better way compared to provision for free to correct market failure in the case of public goods because consumers would still prefer to free ride to enjoy the goods for free.

- Moreover, a profit maximising firm would still not produce the goods if the production of the goods would result in post-subsidies sub-normal profit.

b. Provision of information

- To correct market failure due to imperfect information in the case of merit goods, a government can provide the necessary information (e.g. fund exhibitions, posters, television advertisements, etc) to help consumers make rational decisions.

- On the other hand, provision of information might not be appropriate to correct market failure in the case of public goods because even with perfect information, consumers would still prefer to free ride to enjoy the goods for free.

- In addition, provision of information might not be appropriate to correct the market failure due to externalities in the case of merit goods because even if with perfect information, consumers who are assumed to be self-interest motivated would not likely internalise the externalities.

c. Distributional policies

- To correct the market failure due to inequity in the case of healthcare services as merit goods, distributional policies are required. For example a tax can be imposed on luxurious services to increase their private cost to the rich to decrease their demand while to increase the consumption of under-consumed necessary services by the poor, tax revenue collected can be used to provide subsidies for the poor to increase their demand for such services.

Evaluative conclusion

- In conclusion, different policies are required to deal with different causes of market failure given that some policies are more appropriate than others. Therefore, if an example of market failure exhibits different causes of market failure, a combination of complementary policies would be required.

<u>Mark Scheme</u>

Levels	Descriptors

**High L3
19-21**
	For an answer that exhibits:
	• Excellent depth in analysis.
	    • **Accurate, clear and precise** use of economic concepts and analysis in **most** explanations.
	    • **Almost all** explanations are **well-developed**.
	• Excellent breadth in analysis: Contains
	    • **Causes** of market failure.
	    • **Appropriate policies** to correct the causes of market failure. .

**Low L3
15-18**
	For an answer that exhibits:
	• Very good depth in analysis.
	    • **Accurate and clear** use of economic concepts and analysis in **most** explanations.
	    • **Most** explanations are **well-developed**.
	• Very good breadth in analysis: Contains
	    • **Causes** of market failure.
	    • **Appropriate policies** to correct the causes of market failure.

**High L2
12-14**
	For an answer that exhibits:
	• Good depth in analysis.
	    • **Accurate** use of economic concepts and analysis in **most** explanations i.e. some explanations are descriptive.
	    • **Most** explanations are **developed** i.e. some explanations are under-developed.
	• Good breadth in analysis: Contains
	    • **Causes** of market failure.
	    • **Appropriate policies** to correct the cause(s) of market failure.

Low L2 10-11	For an answer that exhibits: • Sufficient depth in analysis. • **Accurate** use of economic concepts and analysis in **some** explanations i.e. most explanations are descriptive.

	under-developed.
	• Sufficient breadth in analysis: Contains
	  • **Cause** of market failure.
	  • **Appropriate policy** to correct the cause(s) of market failure.

High L1
6-9
	For an answer that exhibits:
	• Insufficient depth in analysis.
	  • Use of economic concepts and analysis in **some** explanations e.g. most explanations are descriptive.
	  • **Most** explanations are **undeveloped**.
	• Insufficient breadth in analysis: Contains
	  • **Cause** of market failure.
	OR
	  • **Appropriate policy** to increase allocative efficiency and/or improve equity.

Low L1
1-5
	For an answer that:
	• Is largely irrelevant.
	  • Cause(s) is not related to market failure or policies to increase allocative efficiency and/or improve equity.
	  • Effect(s) is not related to allocative efficiency or equity.
	• Contains **fundamental** conceptual error(s) in analysis.

Levels	Descriptors
E2 **3-4**	For a **well-reasoned criteria-based judgement** that answers the question on the appropriateness of alternative policies that can be adopted by a government to correct different types of market failure.
E1 **1-2**	For an **unexplained criteria-based judgement** that answers the question on the appropriateness of alternative policies that can be adopted by a government to correct different types of market failure.

Essay Question 4

India and many developing countries faced a severe depreciation of their currencies in 2013, largely caused by capital flight and weak external demand.

Discuss the view that the government of a developing country should intervene by only strengthening its currency.
[25]

Suggested answers

Introduction:

- In view of the capital flight and weak external demand, while the strengthening of the currency via the purchase of the domestic currency in the foreign exchange market is 1 way of mitigating the problem, other solutions should be considered too.

Body 1: Explain the macroeconomic problems brought about by capital flight, weak external demand, and a severely depreciated currency

1a: Macroeconomic impact of the situations

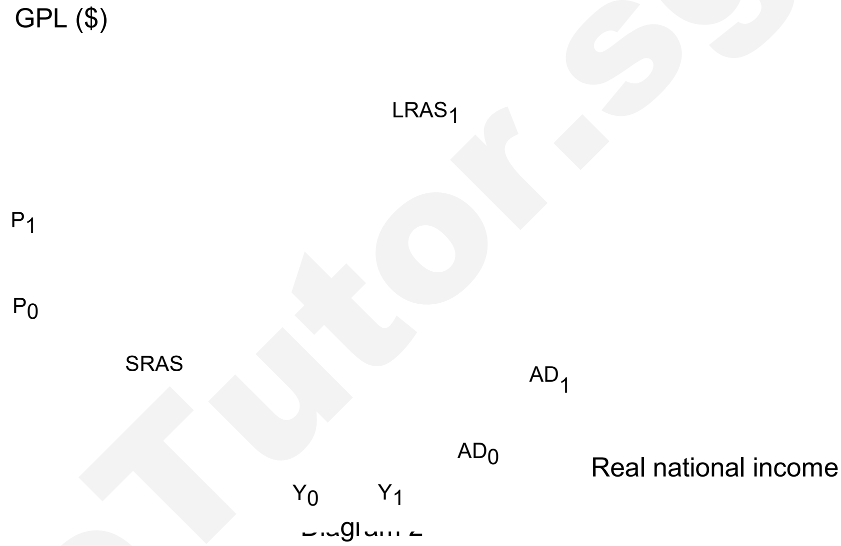
- Capital flight brings about problems for the economy. As capital leaves the economy, the money supply in the economy decreases, as seen from MS0 to MS1, which may lead to an increase in equilibrium interest rates from i0 to i1. When interest rates increase, this increases the cost of borrowing, and decreases the expected return on investment of firms. Hence, I decrease in the economy, thus the AD decreases, which decrease real natonal income. Cyclical unemployment also increases as a result. As investment falls, this reduces the extent of potential economic growth. (Draw LP/MS/AD-AS diagram)
- Similarly, a weak external demand for their exports will cause a fall in export revenue X. This further worsens the level of national income and the level of cyclical unemployment in the economy. The current account also worsens as (X-M) decreases.
- A depreciating currency may also signal to potential foreign investors of the poor economic health of the economy, and hence foreign direct investment will fall. AD will thus be lower, and potential economic growth is similarly hindered.

Body 2: Explain how strengthening the currency will affect the macroeconomic health of the economy

- A strengthened currency will reduce or reverse this flow of capital as the speculators no longer fear their investments will decrease in value due to a depreciating currency.
- Hence, the negative impact on consumption, investment and thus national income, unemployment and standard of living is subdued.
- The BOP may cease to worsen as there is a reduced outflow in the C&FA account.
- Strengthening the currency is likely to lead to an increase in positive outlook and thus may increase FDI if the government is seen to be credible in its actions in correcting the weak economy.
- The increase in investment is likely to lead to an increase aggregate demand. AD increases from AD0 to AD1, ceteris paribus, national income increases. Cyclical unemployment thus decreases. The aggregate supply will also increase as the productive capacity of the economy increases, hence leading to potential economic growth.
- A depreciating currency results in exports becoming cheaper in foreign currency, hence

the demand for exports and export revenue increases. Imports become relatively more expensive their domestic currency and hence become relatively expensive compared to domestically produced substitutes.

- A country's quantity demanded of imports will decrease more than proportionately to the change in price, assuming the country has a relatively low reliance on imports. Import expenditure will thus decrease.
- Given that export revenue increases and import expenditure decreases, assuming overall consumption to be constant and Marshall-Lerner Condition $|PED_x + PED_m| > 1$ holds, net exports increases. AD increase from AD0 to AD1, ceteris paribus, national income increases from Y_0 to Y_1. Cyclical unemployment thus decreases.



- Hence, the effect of the weak external demand on the economy will be mitigated if the currency was allowed to depreciate. Strengthening the currency will therefore cause domestic goods to be relatively more expensive and less export competitive, causing a further fall export demand, and thus export revenue. Net exports X-M also worsens, causing a further worsening of the current account and hence balance of payments.

- An appreciation of the currency will reduce the price of imported raw material, intermediate and final goods and services. This will reduce the cost of production and reduce the general price level, while increasing national income and decreasing unemployment.

Body 3: Explain how AS policy could be used

- To tackle to problem of weak external demand, supply-side policies must be used in order to increase competitiveness for domestic country's export sectors in the long run. For instance, subsidies could be given to fund research and development projects to allow the country to produce better quality products.
- Hence this might cause foreign consumers to switch to the country's exports and the country's residents will switch form imports to domestically produced goods. Since X increases and M decreases, net exports increases. This increases the national income and reduces cyclical unemployment.
- Such supply-side policies improves the infrastructure of the economy, improve the quality and cost of labour which will attract foreign long term investments. FDI may

increase due to greater confidence with the economy due to a greater expected return on investment. The LRAS will hence increase and shift to the right, resulting in potential economic growth.

- Hence, other than improving the current account, it will also result in a net credit in the capital and financial account, hence effectively improving the BOP.

Body 4: Any other policies

Conclusion:

- Strengthening the currency may stem the outflow of capital temporarily, but that has a negative impact on national income as it lowers the export competitiveness of the developing country's exports.
- Hence it is important to consider a mixture of policies bearing in mind the pros and cons of each policy.

Mark Scheme

<table>
<tr><th>Level</th><th>Description</th></tr>
<tr><td>High L3

19-21</td><td>For an answer that exhibits:
Excellent depth in analysis: Contains
Analysis of the macroeconomic implications of the situation
Excellent breadth in analysis: Contains
Analysis of the macroeconomic impact of the situation
Analysis of the impact of currency strengthening + other policies</td></tr>
<tr><td>Low L3

15-18</td><td>For an answer that exhibits:
Very Good depth in analysis: Contains
Analysis of the macroeconomic implications of the situation
Excellent breadth in analysis: Contains
Analysis of the macroeconomic impact of the situation
Analysis of the impact of currency strengthening + other policies</td></tr>
<tr><td>High L2

12-14</td><td>For an answer that exhibits:
Good depth in analysis: Contains
Analysis of the macroeconomic implications of the situation
Good breadth in analysis: Contains
Analysis of macroeconomic impact of the situation
Analysis of the impact of currency strengthening + other policy</td></tr>
<tr><td>Low L2

10-11</td><td>For an answer that exhibits:
Sufficient depth in analysis.
Analysis of the macroeconomic implications of the situation
Sufficient breadth in analysis: Contains
Analysis of the macroeconomic impact of the situation
An absence of the analysis of other policies other than exchange rate</td></tr>
<tr><td>High L1

6-9</td><td>For an answer that exhibits:
Insufficient depth in analysis.
Analysis of the macroeconomic implications of the situation
Insufficient in analysis: Contains
Analysis of the macroeconomic impact of the situation
An absence of the analysis of other policies other than exchange rate</td></tr>
<tr><td>Low L1</td><td>For an answer that exhibits:</td></tr>
</table>

1-5	• Absence of depth in analysis.
	    • Shows an absence or highly inaccurate use of economic tools of analysis.
	
	• Absence of breadth in analysis. Contains
	    • Smattering of points
	• Many conceptual error(s) in analysis.

E2 **3-4**	Criteria based judgment made on the view the government of a developing country should intervene by only strengthening its currency.
E1 **1-2**	Attempt to make a criteria based judgment on the view the government of a developing

Essay Question 5

"We have made skills, innovation and productivity the basis for economic growth. This is key to keeping our economy vibrant, with a strong core of Singapore-based companies where every Singaporean is in well-paying and meaningful jobs by managing foreign workforce growth."

Source: Singapore Budget Speech 2014

Discuss why the Singapore government should focus on supply side policies rather than demand management policies to achieve sustained economic growth.

[25]

Suggested answer:

Introduction:

Sustained economic growth is defined as non-inflationary growth where a country is able to achieve an increase in national output, yet able to keep the inflation rate low. It requires the long run aggregate supply to increase in tandem with the increase in aggregate demand where the country achieves both actual and potential economic growth. In the case of Singapore, the government should place more emphasis on supply side policies due to the root causes of the problems faced by the Singapore economy and the unique characteristics of the Singapore economy.

Body:

Body 1: Supply side policies should be the focus rather than demand management

1) Singapore has a small multiplier value:

- Demand management policies that Singapore use includes exchange rate policy and fiscal policy. These policies have an impact on Aggregate Demand (AD) which will influence the National Income via the multiplier effect.
- During times of economic recession such as in 2009, the government may choose to do depreciation of the exchange rate which will result in net exports (X-M) increasing for Singapore since Marshall-Lerner condition of IPEDx+PEDmI >1 is fulfilled. This will results in National income increasing from Y0 to Y1, resulting in actual economic growth.
- However, demand management policies may not be effective in increasing national income by a large extent due to the fact that Singapore has a small multiplier size.
- Our small multiplier size is because of our high Marginal propensity to Import (MPM), high marginal propensity to save (MPS). Hence, there is high leakages from the circular flow of income, resulting in national income increasing by a smaller extent for Singapore.
    - Hence, demand management policies have their limitations as they work through increasing national income through the multiplier

e ff e c t .

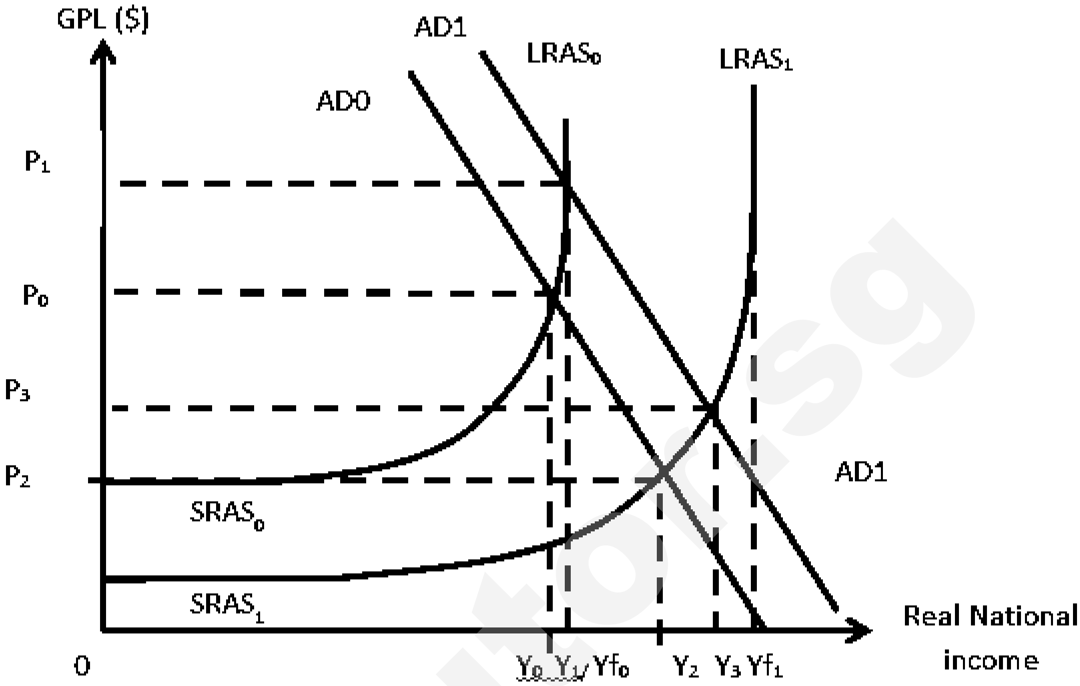


Figure 1

2) Crowding out effect

3) Any other limitations of demand management policies

Hence, due to the limitations of demand management policies, supply side policies are preferred.

Body 2: Supply side policies should be the focus rather than demand management

- The use of expansionary fiscal policy increasing AD and national income. Actual economic growth is achieved but this comes at the expense of demand pull inflation.

- This is because Singapore's economy is near the full employment level. Therefore, this excessive demand coupled with lack of spare capacity to expand output will cause demand-pull inflation where prices increase from P_0 to P_1 as shown in Fig 1.

- This results in inflationary pressures in which there are detrimental effects of inflation on the economy.

- Hence, supply side policies are needed to dampen the increase in inflationary pressures so as to allow Singapore to experience non-inflationary economic growth.

- Policies such as government encouraging R&D and improvements in technology help to make Singapore's exports more competitive. LRAS increases from LRAS0 to LRAS1 whereby higher potential growth is achieved and at the same time mitigating inflationary pressures.

Body 3: Supply side policies should be the focus rather than demand management

- Singapore is a small and open economy, open to trade and foreign direct investments. Hence, supply side policies enable Singapore to be less reliant on the external economy in terms of trade and FDI.

- The use of demand management policies such as gradual appreciation of exchange rate to curb cost push inflation (SRAS increase) and expansionary fiscal policy of lowering corporate tax rates to boot investments (AD increases) have enabled Singapore to achieve actual economic growth.

- Hence, to minimise overreliance on other countries for goods and services, the government should use supply side policies to boost local enterprise or encourage firms to innovate to come up ways to allow us to be more self-reliant.

- Demand management policies such as fiscal policy, exchange rate policy do not enable Singapore to overcome the problem of overreliance on foreign labourers since these policies mainly targets changing of aggregate demand.

- Hence, supply side policy are preferred as a long term solution whereby the government now manages the foreign workers growth by implementing higher foreign workers levies. By relying less on foreign workers, firms will have the impetus to raise their own productivity through R&D and innovation to improve their production processes to make it more efficient.

Conclusion:

- In the context of wanting Singapore to have a vibrant economy where we are able to achieve both actual and potential economic growth, supply side policies will be preferred over demand management policies.

Mark scheme

Levels	Descriptors
High L3 **19 – 21**	For an answer that exhibits **Excellent Depth** in analysis: • Accurate, precise and clear use of economic concepts and analysis in **all** explanations. • **Most** explanations are **well-developed**. For an answer that exhibits **Excellent Breadth** in analysis: • Factors to explain supply side policy is preferred
Low L3 **15– 18**	For an answer that exhibits **Very Good Depth** in analysis: • Accurate and clear use of economic concepts and analysis in **most** explanations. • **Most** explanations are **developed**. For an answer that exhibits **Very Good Breadth** in analysis:

High L2 **12 – 14**	For an answer that exhibits **Good Depth** in analysis: • Accurate use of economic concepts and analysis in **some** explanations i.e. some explanations are descriptive. • **Some** explanations are **under-developed**. For an answer that exhibits **Good Breadth** in analysis: • Factors to explain supply side policy is preferred
Low L2 **10 – 11**	For an answer that exhibits **Some Depth** in analysis: • Accurate use of economic concepts and analysis in **some** explanations i.e. some explanations are descriptive. • **Some** explanations are **under-developed**. For an answer that exhibits **Some Breadth** in analysis: • Factors to explain supply side policy is preferred
High L1 **6 – 9**	For an answer that exhibits **Insufficient Depth** in analysis: • Answer is **primarily descriptive**, not using economic concepts/terms in reasoning • Explanations are **mostly under-developed**. For an answer that exhibits **Insufficient Breadth** in analysis: • Factor to explain why supply side policy is preferred
Low L1 **1 – 5**	• Most parts **irrelevant** to question • **Major errors** in the use of economic concepts

Levels	Descriptors
E2 **3-4**	Criteria based judgment made on why AS policy is preferred
E1 **1-2**	Attempt to make a criteria based judgment on why AS policy

Question 6

(a) Explain why a small economy should embrace globalisation. [10]

(b) Discuss whether protectionism is justified during times of worldwide recession. [15]

Part (a)

Suggested Answers

Introduction

- A small economy (e.g. Singapore) should embrace globalisation because by tapping on external demand, external capital and foreign labour, the economy can better achieve its macroeconomic objectives.

Body:

- Being a small economy like Singapore that enjoys comparative in capital intensive goods can export these goods and thus increase its net export revenue (X-M). This would improve the small economy's balance of trade (and hence balance of payments) which in turn increases its aggregate demand AD=C+I+G+(X-M) as illustrated by the shift of the AD curve from AD_0 to AD_1 in Diagram 1. (include diagram)
- The increase in AD results in an increase in real national income (i.e. actual growth) a decrease in demand deficient unemployment as labour is a derived demand.
- Being a small economy, the economy is likely to be heavily dependent on foreign direct investments to achieve sustained economic growth
- In addition to the benefit of an increase in AD to the small economy as explained previously, the increase in FDIs increase LRAS from $LRAS_1$ to $LRAS_2$ as shown in Diagram 2. (include diagram)

Demand pull inflation is likely to occur in the long run if the small economy is near or at full employment level of output.

- Furthermore, the inflow of FDIs is also likely to improve its balance of payments.

Conclusion

- In conclusion, a small economy can benefit from embracing globalisation.

Mark scheme

Levels	Descriptors

**High L3
9-10**
	For an answer that exhibits:
	• Excellent depth in analysis.
	  • **Accurate, clear and precise** use of economic concepts and analysis in **most** explanations.
	  • **Almost all** explanations are **well-developed**.
	• Excellent breadth in analysis: Contains
	  • Benefits a small economy can enjoy from

**Low L3
7-8**
	For an answer that exhibits:
	• Very good depth in analysis.
	  • **Accurate and clear** use of economic concepts and analysis in **most** explanations.
	  • **Most** explanations are **well-developed**.
	• Very good breadth in analysis: Contains
	  • Benefits a small economy can enjoy from

**L2
5-6**
	For an answer that exhibits:
	• Good depth in analysis.
	  • **Accurate** use of economic concepts and analysis in **most** explanations i.e. some explanations are descriptive.
	  • **Most** explanations are **developed** i.e. some explanations are under-developed.
	• Good breadth in analysis. Contains
	  • benefits a small economy can enjoy from

**High L1
3-4**
	For an answer that exhibits:
	• Insufficient depth in analysis.
	  • **Accurate** use of economic concepts and analysis in **some** explanations i.e. most explanations are descriptive.
	  • **Some** explanations are **developed** i.e. most explanations are under-developed.
	• Insufficient breadth in analysis. Contains
	  • benefit a small economy can enjoy from
	• Conceptual errors in analysis.

**Low L1
1-2**
	For an answer that:
	• Is largely irrelevant.
	  • Cause(s) of change is not related to globalisation.
	  • Effect(s) of change is not related to macroeconomic objectives.
	• Contains **fundamental** conceptual errors in analysis.

Part (b)
Suggested Answer

Introduction

- During times of worldwide recession, world economies would generally suffer from a decrease in real national income (i.e. actual growth), an increase in demand deficient unemployment, a worsening of balance of payments and a lower living standard.
- Some economies may turn to protectionism to boost actual growth, decrease demand deficient unemployment, improve balance of payments and improve living standards. Nevertheless, turning to protectionism during times of worldwide recession might backfire.

Explain why and how protectionism might be justified
Body 1:

- During times of worldwide recession, a domestic economy might employ protectionism via imposing import tariffs to boost actual growth, decrease demand deficient unemployment, improve balance of payments and improve living standards.
- As illustrated in Diagram 3, the imposition of an import tariff would lead to an increase in the price of the good in the domestic market. (include diagram)
- Due to the higher price, domestic consumption of the good is likely to decrease. Also, domestic production of the good is likely to increase. With the increase in domestic production, there is lesser reliance on the imported good thus quantity of the imported good is likely to decrease.
- The decrease in import expenditure is likely to lead to an improvement in the domestic economy's balance of trade (X-M) and hence improvement in its balance of payments.
- The increase in net export revenue (X-M) is also likely to lead to an increase in the domestic economy's aggregate demand AD. The increase in AD is therefore likely to lead to an increase in real national income (i.e. actual growth).

Body 2:

- Moreover, during times of worldwide recession, the domestic economy might employ protectionism to ensure survival of infant industries. Infant industries are are likely to gain comparative advantages in the long term if given sufficient time to develop themselves.
- During times of worldwide recession, the relatively low demand for infant industries' goods may lead to infant industries having limited profits, infant industries are more vulnerable to closure.
- The closure of infant industries is likely to decrease real national income, increase demand deficient unemployment, worsen balance of payments
- To prevent the shutdown of infant industries and the associated negative effects, the domestic economy might want to protect infant industries during worldwide recession. If so, protectionism might be justified during times of worldwide recession.

Explain why and how protectionism might not be justified
Body 3:

- However, during times of worldwide recession, real national incomes of the domestic economy's trading partners are also likely to be decreasing. Protectionism by the domestic economy is likely to decrease export revenue of its trading partners leading to decreases in their AD and hence further lower the trading partners' real national incomes. The lower purchasing power of trading partners might lead to lower demand for the domestic economy's export and thus lead to a decrease in its AD.
- Also, the trading partners might retaliate by imposing protectionism on the domestic economy and thus worsen the domestic economy's balance of trade and hence decrease its AD further.
- The decrease in AD is likely to worsen the negative effects of the worldwide recession on the domestic economy thus protectionism might not be justified during times of worldwide recession.

Evaluative conclusion

- In conclusion, protectionism during times of worldwide recession brings both benefits and disadvantages.
- Protectionism is arguably justified if the reason is to protect infant industries
- However, if the domestic economy is heavily dependent on exports for growth protectionism which invites retaliation might lead to significant disadvantages and thus more likely worsen the negative effects of the worldwide recession on the domestic economy.

<u>**Mark scheme**</u>

Levels	Descriptors

High L3
11
	For an answer that exhibits:
	• Excellent depth in analysis.
	    • **Accurate, clear and precise** use of economic concepts and analysis in **most** explanations.
	    • **Almost all** explanations are **well-developed**.
	• Excellent breadth in analysis: Contains
	    • **Well selected** arguments for and against protectionism given the context of a worldwide recession.

Low L3
9-10
	For an answer that exhibits:
	• Very good depth in analysis.
	    • **Accurate and clear** use of economic concepts and analysis in **most** explanations.
	    • **Most** explanations are **well-developed**.
	• Very good breadth in analysis: Contains
	    • **Well selected** arguments for and against protectionism given the context of a worldwide recession.

L2 **6-8**	For an answer that exhibits: • Good depth in analysis. • **Accurate** use of economic concepts and analysis in **most** explanations i.e. some explanations are descriptive.

	explanations are under-developed. • Good breadth in analysis. Contains • Arguments for and against protectionism.

High L1
3-5
	For an answer that exhibits:
	• Insufficient depth in analysis.
	  • **Accurate** use of economic concepts and analysis in **some** explanations i.e. most explanations are descriptive.
	  • **Some** explanations are **developed** i.e. most explanations are under-developed.
	• Insufficient breadth in analysis (i.e. one sided answer). Contains
	  • Protectionism might be justified.
	OR
	  • Protectionism might not be justified.

Low L1
1-2
	For an answer that:
	• Is largely irrelevant.
	  • Cause(s) of change is not related to
	  • Effect(s) of change is not related to
	• Contains **fundamental** conceptual errors in analysis.

Levels	Descriptors
E2 **3-4**	For a **well-reasoned criteria-based judgment** that answers the question
E1 **1-2**	For an **unexplained criteria-based judgment** that answers the

NYJC	PRELIMINARY EXAM 2016
	Economics JC2 H2 (9732/01)

PAPER 1

Friday
16 September 2016
08:00 – 10:15 **TIME** : 2 hours 15 mins

INSTRUCTIONS TO CANDIDATES

Do not open this paper until you are told to do so.

Write your name, class and name of economics tutor in the space provided on the writing paper.

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

Answer **all** questions. The number of marks is given in the brackets at the end of each question. Write your answers on the writing papers provided. If you use more than one sheet of paper, fasten the sheets together. Submit the answers for both case study questions **separately.**

You are advised to spend several minutes per question reading through the data and questions before you begin writing your answers.

There are 8 printed pages including this cover page

Question 1: A Sweet Affair

Sugar is one of the oldest traded commodities in the world. It can be refined from sugar cane or sugar beet. Sugar from cane accounts for eighty percent of all sugar produced in the world whereas the remaining twenty percent comes from sugar beet. Sugar from beet and cane is seen as the same, consequently there is no difference in sugar prices between the two.

Extract 1: Sugar Surges Most in Twenty-Two Years

Sugar prices surged the most in at least twenty-two years after the International Sugar Organization increased its forecast for a production deficit in the current crop year amid rising concern about the impact of the El Nino weather pattern on supplies. El Nino has already hurt plantings in Brazil the largest sugar grower, as well as India and Thailand, spurring price gains in the final months of 2015.

It's not just adverse weather that's supporting prices. Brazilian mills are making more ethanol from sugar cane to meet surging domestic demand for the biofuel. In addition, the expansion of food processing industry in China, India and Russia is also adding extra pressure on sugar prices.

Source: Adapted from Bloomberg, 23 February 2016

Figure 1: World Sugar Price (US Cents per Pound)

Source: IndexMundi, accessed 26 July 2016

Extract 2: Soft Drinks, Hard Questions

The British government announced in March that it intends to introduce a tax on sugary drinks in 2018 to tackle childhood obesity. The United Kingdom is not alone in worrying about the global rise in obesity-related ailments such as diabetes and cardiovascular disease — costly conditions that can lead to significant disability and early death. Many countries have introduced, or are considering, taxes on unhealthy foods and drinks — in particular, those to which sugar has been added.

These food taxes operate one of the most effective behavioural-change levers available to policymakers: Price. But it would be premature to conclude that higher prices necessarily lead to lower consumption and thus better health outcomes. A tax's effectiveness depends on how it is designed, and how consumers and the food industry respond to the incentives it creates.

The introduction of taxes on sugary drinks in Mexico and Berkeley, California, has lowered profits and the industry is resisting the legislation. Evidence suggests that these taxes, once implemented, did indeed result in a change in price for customers, who subsequently bought fewer sugary drinks. Unfortunately, however, little is known about the effect of these taxes on public health. Obesity and its related ailments take a long time to develop, and isolating the effects of food taxes from changes caused by other health policies and cultural trends is challenging.

The debate has already begun. The UK soft drink industry is considering legal action, arguing that the tax is anti-competitive given that pure fruit juice and sweetened milk are not included.

Source: Adapted from Today Online, 28 July 2016

Extract 3: Soft Drinks Groups Digest UK Sugar Tax

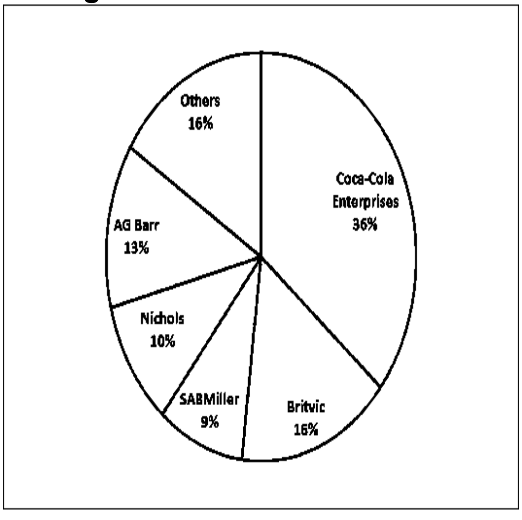
The outlook is less sweet for soft drinks companies after a long-dreaded sugar tax was revealed on Wednesday by George Osborne, the UK chancellor. Mr Osborne said he expected the levy to raise £520m in its first year and slightly less than £1.5bn over three years. That is a sizeable amount for an industry whose revenues — which last year were £16bn — have fallen in two out of the past three years.

The share prices of the UK's biggest drinks manufacturers fell sharply on Wednesday and saw slides on Thursday as analysts said they expected further sales declines as a result of the new tax. Coca-Cola Enterprises, the Coke bottler in the UK, has the biggest share of the UK market, thirty-six percent of its carbonate sales. However, the UK is less than two percent of the Coca-Cola Company's overall business. Britvic is the second-largest producer, with sixteen percent of the soft drinks market. It acts as bottler for PepsiCo and has its own drinks.

Charles Pick, analyst at Numis, says: "If the levy is passed on to the consumer, as it probably will be, most brands will see a short-term fall in consumption." Ian Shackleton at Nomura, calculates that raising £520m implies a high twenty-five to thirty percent increase to retail selling prices.

Source: Adapted from Financial Times, 17 March 2016

Figure 2: UK Carbonated Drinks Market



Source: Adapted from Euromonitor, 20 March 2016

Extract 4: Sugar Market Braced for EU's Return

Many sugar producing countries protect their domestic industries through some combination of guaranteed payments to farmers, production restrictions or import limits. But the industry is gradually liberalizing in a series of moves that could push the price of sugar lower. That has refiners and exporters scrambling to work out what newly opened markets will mean for them.

In the biggest change, the European Union will remove production and export quotas for its sugar-beet farmers from October 2017. Together with other measures, the quotas were meant to promote greater self-sufficiency of sugar in the EU market and price stabilisation that ensured the profitability of sugar-beet farmers. Sugar producers in Europe, currently the world's third largest, say they plan to produce more as a result of the removal of the quotas. The EU may then turn from a net importer to an exporter. More than two-thirds of European sugar is produced from its sugar beet, with the remaining from imported sugar cane refined in EU and imports from other sources.

The change will benefit beet growers who are cost-efficient and can scale up their production at competitive prices. How much sugar the EU will be able to sell overseas, however, will depend on the international price compared with the production costs. Claudiu Covrig, an analyst at sugar consultants Kingsman, says the EU sugar groups will be returning to an already competitive international market.

For sugar cane farmers, especially those in the bloc of African, Caribbean and Pacific (ACP) countries that has historically benefitted from the EU's managed market, the future looks grim. Many ACP countries seem likely to be squeezed out of the market as they are considered to be uncompetitive vis-à-vis sugar beet producers. As high-cost producers with few alternative markets, they will need to undergo radical restructuring in order to preserve industry revenue and jobs, or else transition out of sugar cane altogether.

Source: Various, 2016

Answer all questions

(a) (i) Describe the trend in world sugar prices between June 2015 and June 2016. **[2]**

(ii) With the help of diagrams, explain how the surging demand for biofuel may have resulted in the trend described in (a)(i). **[4]**

(b) (i) Describe the type of market structure operating in the UK carbonated drinks market. **[2]**

(ii) Explain how firms in the UK carbonated drinks market will compete. **[4]**

(c) Assess the possible impacts of the removal of "production and export quotas for its sugar beet farmers" mentioned in Extract 4 on the EU and ACP countries._ **[8]**

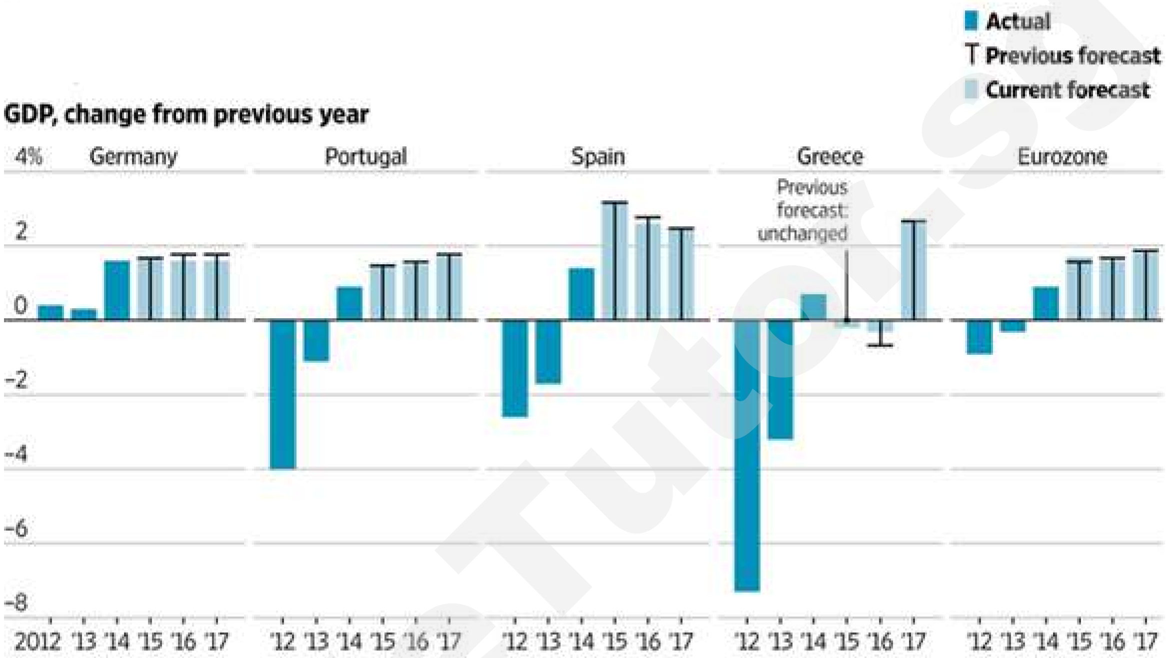
(d) Extract 2 mentioned about the increasing worry on the global rise in obesity-related ailments.

Discuss if the tax on sugary drinks will necessarily lead to "a better health outcome". **[10]**

Question 2: Concerns over China's Slowdown

Extract 5: EU Sees Weaker Growth in Eurozone and Wider EU as China Slowdown Weighs

Figure 3: GDP changes in Europe



Source: European Commission

Growth in the Eurozone and the wider European Union will be slightly weaker this year than previously forecast, the European Commission predicted Tuesday, warning that the economic slowdown in China and other emerging markets, geopolitical tensions and uncertainty ahead of the U.K. referendum on EU membership could weigh on the economy. The EU's economists also cautioned that the impact of factors that have been supporting growth in the region, such as low oil prices and a weaker euro, could start to fade. Fundamental problems in many of the bloc's economies, including high levels of private debt and unemployment, continue to hold back the recovery, they said. The EU economy expanded 1.7% in 2015.

Source: Adapted from Wall Street Journal, 3 May 2016

Extract 6: How Exposed Is Europe To A Chinese Economic Slowdown?

China has become one of the EU's key external trading partners in goods. It ranks second overall in terms of total trade and in particular has been a key source of demand for exports in recent years. At a time when the Eurozone is struggling, it should not be under-estimated as a source of external demand and cheap inputs. While it is important in terms of goods trade, total trade in services is relatively limited.

It is clear from the above that Europe does have some exposure to China. Any slowdown in China and emerging markets more broadly might hamper the fragile economic recovery which is in place in the Eurozone. Additionally, while China is one of the EU's largest external trade partners, it ranks fairly low for most individual countries in terms of trade as much of their trade is with other EU states or the US.

Germany has brushed off concerns that turmoil in China could impact its economy with a spokeswoman for the Economy Ministry saying the “immediate consequences” should be “limited”. One of the reasons behind this could be that net exports have actually been a less important driver of German economic growth than domestic consumption since 2012.

Germany has also shown impressive export flexibility in the face of crisis – when Eurozone demand for its exports halted it was able to shift towards China and other markets; it could yet try to pull off such a move again. For example, it has shown some success in tapping into the nascent US recovery with exports growing quickly in past few months. Similarly, the surprisingly impressive recovery in Spain has been driven by consumption and domestic demand rather than net exports, let alone demand from Asian markets.

Source: Adapted from Forbes, 25 August 2015

Extract 7: China's Slowdown Could Be a Plus for U.S. and Europe in the End

China’s slowdown is blamed for causing everything from global market turmoil to falling sales of crocodile-skin handbags. Yet the slowest growth in 25 years in the world’s second-biggest economy is proving a boost for consumers and companies in Western Europe and the U.S., according to Neville Hill, an economic analyst in London.

When China grew at double-digit rates, its voracious demand for materials drove up commodity and energy prices. That hurt the buying power of consumers in Western economies and weighed on corporate sentiment as rising costs hurt profits.

Now, that situation is being reversed. Plunging commodity prices are boosting European and American shoppers and spurring corporate earnings growth. "China is exporting deflation, but for the West it is good deflation rather than bad deflation in that the cost of the stuff we buy has gone down" Hill said.

Source: Adapted from Bloomberg, 4 November 2015

Extract 8: China's Slowdown will Hit Singapore Hardest: ANZ Warns

The slowdown in China will hit Singapore faster and harder than any country in the region, economists from Australian bank ANZ have warned.

Other economists were not as dire in their prognoses, but agreed that the open nature of the local economy and the strong trade, investment and tourism links between the two nations mean that slower growth on the mainland will have a direct and broad-based impact on businesses and jobs here. "Singapore's economy has been on a structural shift - getting more dependent on China - over the last 10 to 20 years," said DBS economist Irvin Seah. Unlike its Asean neighbours, Singapore does not have a big domestic market to act as a buffer against weaker demand from China, said Mr Seah.

But DBS and HSBC take a slightly more positive view. "Singapore's manufacturing sector is already in recession, but domestic services are holding up relatively well," said HSBC economist Joseph Incalcaterra. He noted that services exports, even those to China, are still growing.

Other than slower growth, Chinese import demand is also sliding, partly because of the weak yuan, said Barclays economist Leong Wai Ho. This could have a larger-than-expected impact on China's trading partners and suppliers in Asia, which will hit Singapore factories and worsen the ongoing manufacturing recession, he added.

Source: Adapted from Straits Times, 12 Jan 2016

Figure 4: Singapore Exports To Major Partners(S$bn)

Source: Department of Statistics, Singapore

Extract 9: Singapore Must Prepare for Economic Slowdown: PM Lee

With the global economy facing cyclical headwinds, Prime Minister Lee Hsien Loong has warned that Singapore must brace itself to handle a possible downturn.

Advances in technology, meanwhile, is also disrupting industries and displacing workers at all levels, be they blue-collar workers in the factories or professionals such as lawyers and doctors.

"We know our direction, (which is) to improve productivity so that we can sustain higher wages for all. But we need to review specific measures - how to help our domestic sectors grow, how to attract investments and help companies develop new markets, and how to make best use of the foreign workers and talent that we need in Singapore," he said.

Overall, Singapore is in a better position than most other countries to tackle the tough challenges ahead. Mr Lee highlighted the Republic's strengths such as a well-educated population, an ethos that is outward-looking, a tech-savvy society and competent unions.

Source: Adapted from Business Times, 27 October 2015

Table 1: Singapore: Selected Indicators

Indicators (Quarter-on-Quarter)	2015 1Q	2015 2Q	2015 3Q	2015 4Q	2016 1Q
Change in GDP At 2010 Market Prices (%)	0.2	-1.6	2.3	6.2	0.2
Workers made redundant in Manufacturing	950	870	920	2,480	1,790
Workers made redundant in Services	1,930	2,100	2,120	2,360	2,530
Net Exports Of Goods And Services (bn)	29.4	26.9	25.6	29.9	25.7
CPI (Base Year 2014 = 100)	99.9	99.7	99.4	99.2	98.9
Tourism Receipts (S$m)	5,314	5,039	6,039	5,385	na

Source: Department of Statistics, Singapore

<u>Answer all questions</u>

(a) (i) Compare the economic growth of the countries shown in Fig 3 from 2012 to 2015. **[2]**

(ii) Account for the economic growth trend of Eurozone over the same period. **[3]**

(b) (i) Explain why economists consider deflation to be undesirable. **[3]**

(ii) With the aid of a diagram, explain why the London analyst used the term "good deflation" in Extract 7. **[4]**

(c) In view of the current economic conditions, Monetary Authority of Singapore announced a policy change to zero appreciation of currency in January 2016.
Comment on the appropriateness of this policy for the year 2016. **[8]**

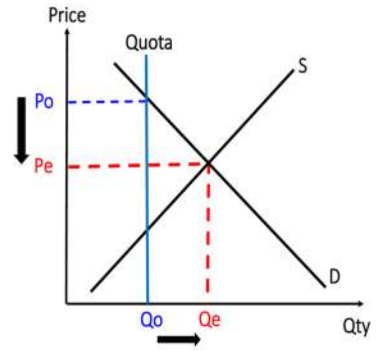
(d) With reference to the data where appropriate, discuss the view that China's economic slowdown will impact Singapore more than Europe. **[10]**

********** The End **********

(a)	**(i)**	**Describe the trend in world sugar prices between June 2015 and June 2016.** • Overall increasing trend (1) • Sharpest increase between April 2016 to June 2016 (1) or any other anomaly	**[2]**
	(ii)	**With the help of diagrams, explain how the surging demand for biofuel may have resulted in the trend described in (a)(i).** • Sugar cane can be used to produce either biofuel or sugar (Extract 1, para 2), biofuel and sugar are in competitive supply. (1) • Surging demand for biofuel → Demand for biofuel ↑ → Eqm price and qty of biofuel ↑ + Diagram (1) • Increased eqm qty of biofuel requires more sugar cane → Demand for sugar cane ↑ → Price of sugar cane ↑ (1) • Price of sugar cane ↑ → cost of producing sugar from sugar cane ↑ → Supply ↓ → Price of sugar ↑ (Diagram) → Leading to rising trend (1)	**[4]**
(b)	**(i)**	**Describe the type of market structure operating in the UK carbonated drinks market.** • Oligopoly (1) • From Figure 2, five-firm concentration ratio is 84%. (1)	**[2]**

	(ii)	**Explain how firms in the UK carbonated drinks market will compete.**
		
		• Interdependence → Firms will take into account actions of rival firms (1)
		• Explain how total revenue will fall due to price competition (1)
		    o Price ↓ → Rival firms will also ↓ price → Inelastic portion of the kinked demand curve → Qd ↑ by less than proportionate → TR ↓
		• Thus, engage in non-price competition to increase demand and/or make demand more price inelastic. (1)
		• Non-price competition strategy (1)
		    o Advertising to create imaginary differences & develop brand loyalty
		    o R&D to create real differences, new products, higher quality products etc.
			[4]

(c)	**Assess the possible impacts of the removal of "production and export quotas for its sugar beet farmers" mentioned in Extract 4 on the EU and ACP countries._** <u>Impact on market for sugar beet</u> • With a quota of Qo, eqm price and qty of sugar beet were Po and Qo		**[8]**



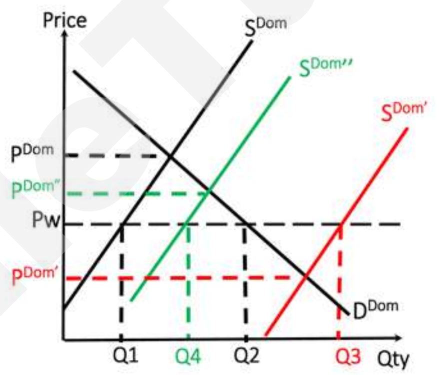
- With the removal of quotas, supply of sugar beet can be determined by market forces, eqm price of sugar beet ↓ from Po to Pe and eqm qty ↑ from Qo to Qe.

Impact on market for sugar

- With a lower eqm price on sugar beet, COP for producing sugar from sugar beet ↓ → Supply of sugar in EU ↑

Macro impacts on EU

- With higher production of sugar, EU may turn from a net importer to exporter (Extract 4, para 2).



- Before the quota was lifted, domestic price of sugar P^{Dom} was above the world price Pw. EU was a net importer and imported Q2-Q1 amount of sugar.
- With the removal of quota on sugar beet, supply of sugar by EU ↑ from S^{Dom} to $S^{Dom'}$, new domestic price $P^{Dom'}$ is lower than Pw. EU becomes a net exporter and exports Q3-Q2 amount to the world market.
- However, if supply of sugar by EU only ↑ from S^{Dom} to $S^{Dom''}$, the new domestic price $P^{Dom''}$ is still higher than Pw. EU remains as a net importer but imports a smaller amount of Q2-Q4.
- With a ↑ in export revenue / ↓ in import expenditure, AD ↑ → RNY ↑, unemployment ↓
- Sugar from sugar beet and sugar from sugar cane are perfect substitute. As supply of sugar from sugar beet ↑ and could be sold at a lower price, sugar from sugar cane loses its competitiveness in the EU market. Demand for sugar from sugar cane ↓
- About one third of EU's sugar is produced from imported sugar cane and imports from other sources (Extract 4, para 2). Although unemployment in EU falls, sugar cane importers and refiners in the EU may go out of business and be unemployed.

Macro impacts on ACP countries

- Exports of sugar cane by ACP countries to EU ↓ as sugar cane is more expensive than sugar beet (Extract 4, para 4).
- In addition, as price of sugar beet ↓ due to higher production by EU, coupled with the lifting of export quota on sugar beet, sugar producers in other parts of the world may also substitute sugar cane with the cheaper sugar beet → ↑ competition from sugar beet by EU → Exports of sugar cane to other countries also ↓
- Export revenue of ACP countries ↓ → AD ↓ → RNY ↓ → Sugar cane farmers become unemployed.

Evaluation

- Actual impacts on EU and ACP countries depend on the magnitude of the ↓ in price of sugar beet after the quotas are removed.
- Impacts on EU are largely positive as RNY and employment ↑, although sugar cane exporters and refiners in EU are likely to be the losers of the policy.
- Impacts on the ACP countries are clearly negative as they are the high cost producers who are uncompetitive. Extent of impact depends on actions taken by the govt.

Level	Knowledge, Application, Understanding & Analysis	Marks
L2	A well-developed answer that analyses the micro impacts on the sugar beet and sugar markets and the macro impacts on both EU and ACP, supported with usage of analytical tools and evidence from extracts. An answer that only analyses the macro impacts on EU and ACP.	4-6 Max 4
L1	An underdeveloped answer that focuses on the micro impacts without sufficient explanation on the macro impacts. Or One sided answer that analyses only the impacts on EU or ACP countries.	1-3
E	Application of relevant economic concepts to make judgment on the overall impacts to EU and ACP countries.	1-2

(d) **Extract 2 mentioned about the increasing worry on the global rise in obesity-related ailments.**

Discuss if the tax on sugary drinks will necessarily lead to "a better health outcome". **[10]**

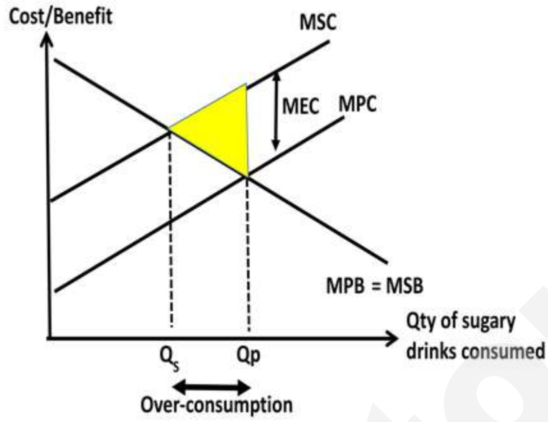
- "A better heath outcome" refers to a fall in the incidence of obesity-related ailments such as diabetes and cardiovascular disease

Explain that sugary drink is a demerit good.

- Sugary drinks → deemed to be socially undesirable by the govt (Extract 2, para 1) → demerit good

Explain the negative externality in consumption of sugary drink and its relation to obesity-related ailments

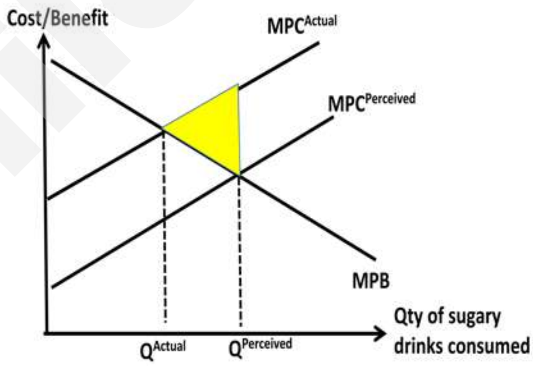
- Explain the negative externality in consumption of sugary drinks



- Explain the MPB, MPC and MEC in the context of sugary drink (Extract 2, para 1)
- Explain that given MEC, MSC is greater than MPC → Qp is greater than Qs → Overconsumption and DWL → Market has failed
- Overconsumption of sugary drinks → ↑ obesity-related ailments.

Explain the imperfect information in the consumption of sugary drink and its relation to obesity related ailments

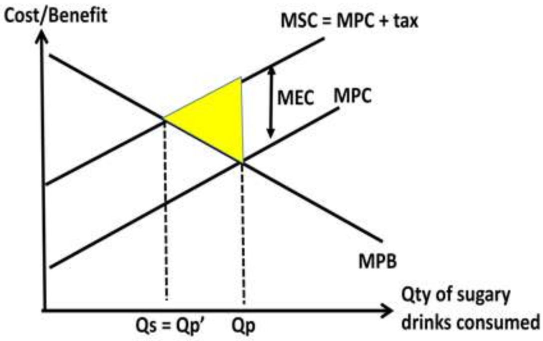
- Explain the MPC and MPB in the context of sugary drink



- Explain the imperfect info and the divergence between $MPC^{Perceived}$ and MPC^{Actual}.
- Explain that $MPC^{Perceived}$ is higher than MPC^{Actual}, Q^P is greater than Q^A → Overconsumption and DWL → Market has failed
- Overconsumption of sugary drinks → ↑ obesity-related ailments.

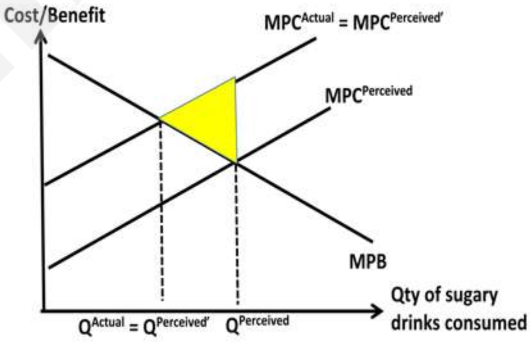
Thesis: An indirect tax will lead to better health outcome

- An indirect tax can be imposed to correct the negative externality in consumption.



- When a tax equal to MEC is imposed, MPC will rise by the MEC amount and coincide with MSC → New Qp, Qp' coincides with Qs → Consumption at Qs, DWL is eliminated.
- Consumption of sugary drink now at the socially optimal level → Leads to better health outcome.
- Provide evidence from Ext 4 to illustrate how tax has resulted in higher prices and consumers subsequently bough fewer sugary drinks.

<u>Anti-Thesis: An indirect tax will not lead to better health outcome</u>
- Government may undertax due to
  - Government failure → govt doesn't know the extent of MEC
  - Demand for sugary drinks could be price inelastic → amount of tax required is high
- Due to undertax, overconsumption of sugary drink is not solved (Explain with diagram) → Will not lead to better health outcome.
- An indirect tax could not solve the root cause for imperfect information → Measures to provide information on the true cost of consuming sugary drinks, such as education, health campaign etc is needed to solve the imperfect information.



- With the measures, $MPC^{Perceived}$ coincides with MPC^{Actual} → New $Q^{Perceived}$ coincides with Q^{Actual} → Consumption at Q^{Actual} → DWL is eliminated.
- Consumption of sugary drink now at the optimal level → Leads to better health outcome.

<u>Evaluation: Ceteris paribus assumptions may not hold, other reasons also affect health outcome</u>
- Reasons other than consumption of sugary drink will also affect health outcome (Extract 2, para 3) → Other health policies e.g. healthy lifestyle campaigns etc may also affect health outcome → Hard to isolate the effect of

tax.

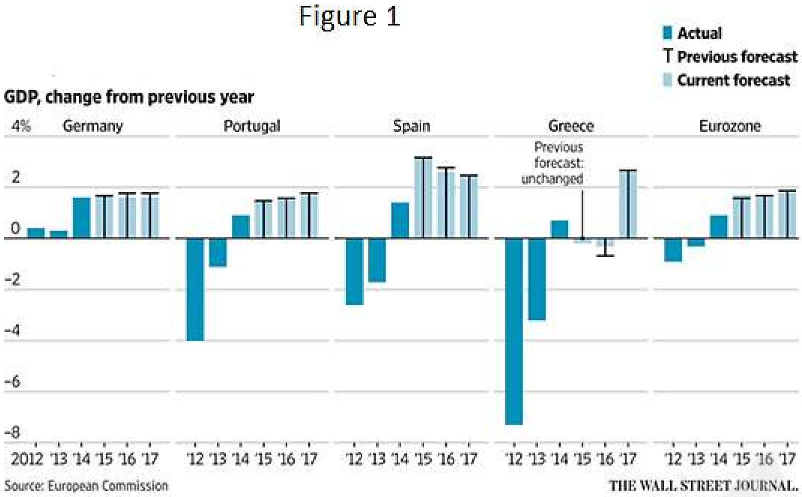
- Other sugary drinks such as fruit juice and sweetened milk are not subjected to the sugar tax (Extract 2, para 4) → consumers may substitute sugary soft drink with these other drinks → consumption of sugar remains unchanged → May not lead to better health outcome
  -

Level	Knowledge, Application, Understanding & Analysis	Marks
L3	A well-developed, balanced answer on the effects of a tax to tackle both sources of market failure with explicit link to health outcome. Well supported with usage of analytical tools and evidence.	7-8
L2	An underdeveloped analysis on the effects of a tax to both sources of market failure, without sufficient references to case materials. Or A balanced analysis that only analyses the effects of a tax in solving negative externality in consumption or imperfect information Or One-sided answer that analyses only the effectiveness or limitation of a tax An answer that analyses the effects of a tax without explaining the source of market failure.	4-6 Max 4
L1	For a descriptive answer that makes little reference to economic theory, or makes reference to economic theory but with little application to the context. Answer is likely to be one-sided.	1-3
E	Application of relevant economic concepts to make judgment about the effectiveness of a tax and recognises that there are other factors affecting the health outcome.	1-2

[Total: 30 marks]

Question 2 Concerns Over China's Slowdown

Figure 1



Extract 5: EU Sees Weaker Growth in Eurozone and Wider EU as China Slowdown Weighs

Growth in the Eurozone and the wider European Union will be slightly weaker this year than previously forecast, the European Commission predicted Tuesday, warning that the economic slowdown in China and other emerging markets, geopolitical tensions and uncertainty ahead of the U.K. referendum on EU membership could weigh on the economy. The EU's economists also cautioned that the impact of factors that have been supporting growth in the region, such as low oil prices and a weaker euro, could start to fade. Fundamental problems in many of the bloc's economies, including high levels of private debt and unemployment, continue to hold back the recovery, they said. The EU economy expanded 1.7% in 2015.

Wall Street Journal May 3, 2016 (Adapted)

Extract 6: How Exposed Is Europe To A Chinese Economic Slowdown?

China has become one of the EU's key external trading partners in goods. It ranks second overall in terms of total trade and in particular has been a key source of demand for exports in recent years. At a time when the Eurozone is struggling, it should not be under-estimated as a source of external demand and cheap inputs. While it is important in terms of goods trade, total trade in services is relatively limited.

It is clear from the above that Europe does have some exposure to China. Any slowdown in China and emerging markets more broadly might hamper the fragile economic recovery which is in place in the Eurozone. Additionally, while China is one of the EU's largest external trade partners, it ranks fairly low for most individual countries in terms of trade as much of their trade is with other EU states or the US.

Germany has brushed off concerns that turmoil in China could impact its economy with a spokeswoman for the Economy Ministry saying the "immediate consequences" should be "limited". One of the reasons behind this could be that net exports have actually been a less important driver of German economic growth than domestic consumption since 2012. Germany has also shown impressive export flexibility in the face of crisis – when Eurozone demand for its exports halted it was able to shift towards China and other markets; it could yet try to pull off such a move again. For example, it has shown some success in tapping into the nascent US recovery with exports growing quickly in past few months. Similarly, the surprisingly impressive recovery in Spain has been driven by consumption and domestic demand rather than net exports, let alone demand from Asian markets.

FORBES Aug 25, 2015 (Adapted)

Extract 7: China's Slowdown Could Be a Plus for U.S. and Europe in the End

China's slowdown is blamed for causing everything from global market turmoil to falling sales of crocodile-skin handbags. Yet the slowest growth in 25 years in the world's second-biggest economy is proving a boost for consumers and companies in Western Europe and the U.S., according to Neville Hill, an economic analyst in London.

When China grew at double-digit rates, its voracious demand for materials drove up commodity and energy prices. That hurt the buying power of consumers in Western economies and weighed on corporate sentiment as rising costs hurt profits.

Now, that situation is being reversed. Plunging commodity prices are boosting European and American shoppers and spurring corporate earnings growth. "China is exporting deflation, but for the West it is good deflation rather than bad deflation in that the cost of the stuff we buy has gone down, but the price we receive for our labour has gone up," Hill said.

BLOOMBERG 4 Nov 2015 (Adapted)

Extract 8: China's slowdown will hit Singapore hardest: ANZ warns

The slowdown in China will hit Singapore faster and harder than any country in the region, economists from Australian bank ANZ have warned.

Other economists were not as dire in their prognoses, but agreed that the open nature of the local economy and the strong trade, investment and tourism links between the two nations mean that slower growth on the mainland will have a direct and broad-based impact on businesses and jobs here. "Singapore's economy has been on a structural shift - getting more dependent on China - over the last 10 to 20 years," said DBS economist Irvin Seah. Unlike its Asean neighbours, Singapore does not have a big domestic market to act as a buffer against weaker demand from China, said Mr Seah.

But DBS and HSBC take a slightly more positive view. "Singapore's manufacturing sector is already in recession, but domestic services are holding up relatively well," said HSBC economist Joseph Incalcaterra. He noted that services exports, even those to China, are still growing.

Other than slower growth, Chinese import demand is also sliding, partly because of the weak yuan, said Barclays economist Leong Wai Ho. This could have a larger-than-expected impact on China's trading partners and suppliers in Asia, which will hit Singapore factories and worsen the ongoing manufacturing recession, he added.

Straits Times Jan 12, 2016 (Adapted)

Extract 9: Singapore must prepare for economic slowdown: PM Lee

WITH the global economy facing cyclical headwinds, Prime Minister Lee Hsien Loong has warned that Singapore must brace itself to handle a possible downturn.

Advances in technology, meanwhile, is also disrupting industries and displacing workers at all levels, be they blue-collar workers in the factories or professionals such as lawyers and doctors.

"We know our direction, (which is) to improve productivity so that we can sustain higher wages for all. But we need to review specific measures - how to help our domestic sectors grow, how to attract investments and help companies develop new markets, and how to make best use of the foreign workers and talent that we need in Singapore," he said.

Overall, Singapore is in a better position than most other countries to tackle the tough challenges ahead. Mr Lee highlighted the Republic's strengths such as a well-educated population, an ethos that is outward-looking, a tech-savvy society and competent unions.

Business Times OCT 27, 2015 (Adapted)

Table 1 Singapore: Selected Indicators

Indicators (Quarter-on-Quarter)	**2015 1Q**	**2015 2Q**	**2015 3Q**	**2015 4Q**	**2016 1Q**
Change in GDP At 2010 Market Prices (%)	0.2	-1.6	2.3	6.2	0.2
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Tourism Receipts (S$m)	5,314	5,039	6,039	5,385	na

Department of Statistics Singapore

Questions

a i	Compare the economic growth of the countries shown in Fig 3 from 2012 to 2015.	2
ii	Account for the economic growth trend of Eurozone over the same period.	3
b i	Explain why economists consider deflation to be undesirable	3
ii	With the aid of a diagram, explain why the London analyst used the term "good deflation" in Extract 7.	4
c	In view of the current economic conditions, Monetary Authority of Singapore announced a policy change to zero appreciation of currency in January 2016. Comment on the appropriateness of this policy for the year 2016.	8
d	With reference to the data where appropriate, discuss the view that China's economic slowdown will impact Singapore more than Europe.	10
	Total	**30**

Suggested Answers

a i	**Compare the economic growth of the countries shown in Fig 3 from 2012 to 2015.**	**2**
	Increasing trend for all countries (1 mark) Germany's economic growth was always positive compared to other countries **OR** only Greece is forecasted to have negative growth in 2015 compared to other countries (any one reason 1 mark)	
a ii	**Account for the economic growth trend of Eurozone over the same period.**	**3**
	Eurozone growth is generally increasing for the same period. (1mark) This can be due to low oil prices or weak Euro currency . • Explain how low oil price lead to growth (2 marks) **OR** • Explain how weak Euro contributes to growth (2 marks) (diagram not needed)	
b i	**Explain why economists consider deflation to be undesirable.**	**3**
	Define deflation – sustained/persistent decrease in GPL (1 mark) • If the consumers expect that, the fall in price will continue they will tend to delay purchases as they wait for lower, more attractive prices →This in turn causes	

	falling output and investment → producers may start retrenching workers leading to rising unemployment. • During inflation borrower's gain but during deflation they lose as the value of debt is higher. • Easier for employers to control real wages when there is positive inflation however, it is difficult to cut wages when there is deflation. (well elaborated any **one** reason (2 marks)	
b ii	**With the aid of a diagram, explain why the London analyst used the term "good deflation" in Extract 7.**	**4**
	• Evidence (Extract 7 last para) • Lower EG in China caused China to reduce demand for energy and commodities. This reduces the world price of energy and commodities and hence reduces cost of production for other countries. (2 marks) (*Cannot accept lower COP for other countries because of raw materials imported from China has become cheaper – the effect must be shown via reduced global prices of energy and commodities*) • Illustrate using AD/AS model: • AD/AS Diagram (1 mark) • →AS increase → SRAS shifts downwards →GPL fall yet RNY rises • Good deflation because although prices are falling there is increase in RNY .(1mark)	
c	**In view of the current economic conditions, Monetary Authority of Singapore announced a policy change to zero appreciation of currency in January 2016.** **Comment on the appropriateness of this policy for the year 2016.**	**8**

Identify the possible problems faced by Spore in 2016 (can be from case study or outside)

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Tourism Receipts (S$m)	5,314	5,039	6,039	5,385	na

From Table 1 identify the problems Singapore is currently facing: low economic growth, falling tourism receipts, falling exports, increasing unemployment.

- The policy of zero appreciation of currency can help address this fall. Singapore Government generally uses a policy of modest appreciation to maintain price stability. However, with CPI falling in 2016 imported inflation is less of a concern, and slow growth is a more pressing issue.
- Zero appreciation means that MAS has taken the Singapore dollar off the path of modest and gradual appreciation and has completely flattened the slope of the band.
- Thus the policy of zero appreciation coupled with deflation will make our exports more competitive and can also make investments less expensive in terms of foreign currency. This will also encourage tourism as tourists need to spend less in terms of their own currency → increase X and I component of AD and hence cause RNY to increase ceteris paribus leading to economic growth.
- This will also address the unemployment problem arising in export sector.

Anti-thesis

- Structural unemployment (Ext 8) will not be addressed.
- **Zero appreciation of currency** may not be **sufficient** to address slowdown in major export markets, as X is about 200% of GDP.
- Other countries may have depreciated their currencies also therefore making Singapore relatively less competitive.
- The lower export prices may not be sufficient to counter the fall in demand from trading partners because of fall in income.

Evaluate :Suggest an alternative policy that can address the problems faced in 2016 (policies that addresses other components of AD e.g. I & C.)

- Refer to extract 5 - Need to "help our domestic sectors grow, attract investments and help companies develop new markets"

- Help domestic firms to expand – Fiscal policies like tax allowances for automation, grants for investing in technology, etc
- Attract Investments - LR Supply side policy to upgrade infrastructure, FP to reduce tax burden
- Develop new markets – Trade policy with other countries beside China – Europe seems a promising mkt according to Fig 2.: FTAs:
- Raise outward FDI to raise returns from foreign investment to reduce reliance on exports.
- Structural Une – training of PMETs, Career conversion programmes.

L2	*Two sided answer that looks at the effectiveness of zero appreciation of currency* ***in the light of*** *problems mentioned in the data.*	*4-6*
L1	*One sided discussion that explains the appropriateness of zero appreciation of currency* ***Or*** *superficial two sided explanation without case study references*	*1-3*
E	*One alternative policy suggestion that address the problems identified above*	*1-2*

d **With reference to the data where appropriate, discuss the view that China's economic slowdown will impact Singapore more than Europe.** **10**

Intro : Explain how China's economic slowdown will impact Singapore and Europe in terms of macro-economic variables like economic growth and employment.

Thesis :China's economic slowdown will impact Singapore more than Europe because (Need to justify why the impact on Singapore is higher as well as explain why Europe may not be affected significantly)

- Spore has been getting more dependent on China in terms of trade, investment and tourism. (Evidence from Extract 4). Moreover Singapore doesn't have a big domestic market to buffer against fall in external demand (China being a major trading partner)

On the other hand the impact of China's economic slowdown on Europe may not be very significant because of the following reasons

- Europe conducts more trade with US and within Europe
- Their main source of EG comes from domestic economy rather than exports eg. Spain,
- Trade in services is limited
- Evidence was seen in Germany's ability to adjust – shift to other markets like USA
- Good deflation – rising real incomes and profits in Europe

<u>Anti thesis:</u> China's economic slowdown might impact Europe more than Singapore because :

(Need to justify why the impact on Singapore may not be so significant as well as explain why Europe may be affected significantly)

- **Europe's e**xposure to China is quite high – key trading partner.
- Germany accounts for half of EU exports to China
- China provides cheap inputs - affect cost of production
- The forecast for the Eurozone countries is higher growth in figure 1.

Impact on Singapore may not be significant because

- Service sector is resilient.
- Service export to China is still growing.
- Good deflation will benefit Spore too
- Spore in a better position due to its well educated workforce and high tech population.

Judgement

In the short run, Spore may be in a better position to absorb the impact due to its ability to adjust quickly and low unemployment. Europe is saddled with high unemployment and high debt that makes adjustment difficult.

However, in the long run, Europe, with her large domestic market will be able to offset China's slowdown while Spore will still be reliant on Exports.

L3	*Well-developed and balanced answer that clearly discusses how China's economic slowdown will impact Singapore and Europe. Makes good reference to data.*	*7-8*
L2	*Underdeveloped answer that considers both Singapore and Europe but with gaps in explanation and analysis.* ***Or*** *Answer that discusses the impact of China's slowdown on either Singapore or Europe (two sided views)* *OR* *One-sided answer for both countries with reference to data.*	*4-6*
L1	*A sketchy answer that refers to some data to explain how China's slowdown affects either countries.*	*1-3*
E	*A well-developed evaluative judgment on the validity of the argument.*	*1-2*

NYJC	PRELIMINARY EXAM 2016 JC2 Economics H2 (9732/02)

Paper 2 - Essay

Tuesday
20 September 2016
08:00 – 10:15 **TIME**: 2 hours 15 mins

INSTRUCTIONS TO CANDIDATES

Write your name, class and name of economics tutor in the space provided on the writing paper.

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

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

The number of marks is given in the brackets at the end of each question or part question. Write your answers on the writing papers provided. At the end of the examination, fasten all your work securely together.

There are __2__ printed pages including this cover page
Answer **three** questions in total.

Section A

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

1 Many countries are reporting economic growth due to an increase in merchandise trade, technology transfer and labour mobility.

Assess the impact of these developments on different product markets in Singapore. [25]

2 (a) Explain how firms can increase market power. [10]

(b) Discuss the extent to which the performance of a firm is determined by its market power. [15]

3 Shisha smoking was banned in Singapore in 2014 because smokers were at risk of developing the same health problems as cigarette smokers, such as cancer and heart disease.

(a) Explain why government intervention is advocated in the markets for both merit and demerit goods. [10]

(b) Discuss whether a ban is the best response in addressing the market failure arising from shisha smoking. [15]

Section B

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

4 Amid the slowest GDP growth in six years and the flattest employment growth in more than a decade, Finance Minister Heng Swee Keat announced a Budget with a strong focus on economic restructuring such as tightening the foreign labour market to raise productivity.

Source: channelnewsasia.com/news/singapore/budget-2016

(a) Explain the key determinants of sustained economic growth. [10]

(b) To what extent should the Singapore government focus on raising productivity to achieve sustained economic growth? [15]

5 (a) Explain the different types of unemployment an economy can face. [10]

(b) Discuss the view that structural unemployment is the most significant macroeconomic problem faced by open economies. [15]

6 Globalisation has made the planet more equal. As communication gets cheaper and transport gets faster, developing countries have closed the gap with their rich-world counterparts. But within many developing economies, inequality has worsened.

Discuss the effects of globalisation on the standard of living in the different economies. [25]

Demand & Supply

1 "Many countries are reporting growth due to an increase in world merchandise trade, technology transfer and labour mobility."

Assess the impact of these recent developments on different product markets in Singapore. [25]

Suggested Approach

Interpretation of Question		
What is the **command** cue? (What are the skills required for the question?) "Assess" – a 2-sided analysis, and evaluation of likely outcomes in the different markets with justification.	What are the **content** cues? (What are the concepts required to answer the question) "recent developments": - "increase in world merchandise trade" → economic growth → increase in income → change in demand depending on the nature of good - "technological transfer" → lower cost of production → increase supply of goods - "labour mobility" → reduce pressure on wages → lower cost of production → increase supply of goods "impact of … on markets": - impact on equilibrium price, quantity, total revenue	What are the **contextual** cues? (What is the context for the question?) "Different product markets in Singapore" – luxury, necessity and inferior products sold in Singapore

Introduction

Issue: The experience by many countries based on the preamble are essentially traits of globalization.

- Growth in world merchandise trade → result in economic growth → rise in income for households.
- Increase in trade → increase in exports and imports → availability of wider range of consumer goods and services.
- Increase in transfer of technology and labour mobility → increase productivity and reduce wage pressures → lowering cost of production.

Approach: This essay aims to discuss the possible impact of the above developments on different product markets in Singapore, using demand and supply analysis.

The relevant economic concepts to include for analysis are: PED, YED, PES and shifts in DD and SS curves.

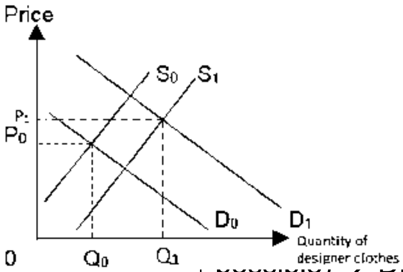
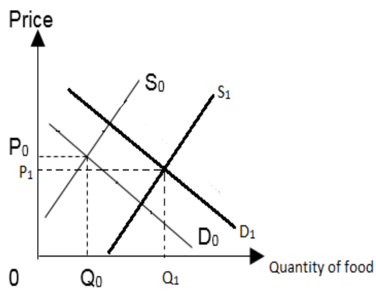
Body

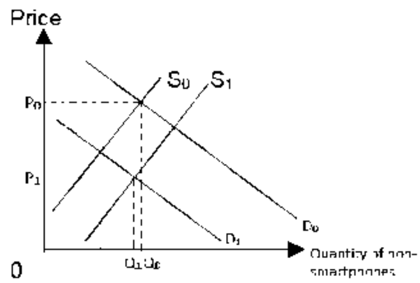
The product markets here refer to the luxury, necessities and inferior goods markets in Singapore.

The rise in income arising from the increase in world merchandise trade and capital flows shifts the demand curve to the right for luxury goods and necessities while the demand for inferior good falls, shifting the demand curve leftward.

The supply curve for all product markets increase due to the lower cost of production arising from higher productivity from technology transfer and the influx of labour. More goods are also available from increased imports due to increase in trading activities and this increases the supply of goods as well.

Elaboration

Product Market	**Δ in Demand when Y↑(Consider YED & PES)**	**Δ in Supply (Consider PED)**	**Final impact on the product market (Evaluate which outcome is most likely)**
Luxury goods (e.g 	Demand↑ more than proportionately … uming luxury … top quality … r production … vely smaller … ucers (niche … S > 1 also … possible) → DD↑ → P↑, Q↑	PED > 1 due to the nature of the good + higher proportion of income SS↑ → P↓, Q↑ (more than prop.)	DD↑ > SS↑: P↑, Q↑, TR↑
Necessities (e.g. food) (Justify 0<YED<1)	Demand↑ less than proportionately PES < 1 assuming necessities such as fresh food which have shorter shelf lives and difficult to accumulate stocks DD↑ → P↑, Q↑ **Ev: P↑ but to a smaller extent compared to luxury goods**	PED<1 as they are basic goods + smaller proportion to income SS↑ → P↓, Q↑ (less than prop.)	DD↑ < SS↑: P↓, Q↑, TR↑ 
Inferior goods (e.g. 2nd hand cars or non-smart phones) (Justify YED<0)	Demand↓ with a rise in income. PES > 1 assuming they are low-end manufactured goods with stocks that are easily accumulated DD↓ → P↓, Q↓	PED>1 assuming many substitutes SS↑ → P↓, Q↑ (more than prop.)	DD↓ + SS↑ → P↓, Q?, TR? *Effect on Q and TR depends on the magnitude of shifts of dd and ss (e.g. Q can ↓ if dd for inferior goods is income elastic, leading to TR↓)*

Evaluation

- **Question ceteris paribus assumption** – In reality, ceteris paribus assumption does not hold and many factors may change concurrently to influence the impact on the product markets.
- **Difficulty of getting accurate elasticity data**

Conclusion

The impact on the different product markets (luxury, necessities, inferior) differ when there is an increase in world merchandise trade, capital flows, technology transfer and labour mobility, depending on the relative shifts of demand and supply. In the case of luxury goods, it is clear that both price and quantity will increase but not necessarily so for necessities though the case for inferior good is likely to see a fall in both price and quantity.

Despite the limitations of using elasticity concepts, the above analysis can still be useful as a guide for businesses in Singapore in deciding the industries to focus on, the choice of goods to produce and if there is a need to restructure or divest in view of the developments in order to remain competitive.

Note:
• Students are free to justify the PED/PES of the goods concerned as long as they are conceptually sound and reasonable. And that will have impact on the final outcome of the product markets.

Mark Scheme

Level	Descriptors
Level 3 18 – 21	• Answer shows excellent knowledge of demand and supply forces and how these affect the 3 different product markets namely luxury, necessity and inferior products. • Clear analysis of simultaneous shifts, recognition that equilibrium price or quantity may be reinforced and in another instance, it may be indeterminate. • Answer is balanced in consideration of demand and supply forces. Answer includes the different extent of shifts of supply vs demand. • Excellent rigour in economic analysis and development.
15 – 17	• Answer shows good knowledge of demand and supply forces and how these affect the 3 different product markets. • Good consideration of elasticity concepts (i.e. YED and PED &/or PES) and its relevance in influencing market equilibrium. • Good use of diagrams that is adequately explained (which includes diagrams with simultaneous shifts). • Max 15m if answer shows knowledge of the 3 markets, but only does combined shift for 1.
Level 2 12 – 14	• Answer shows adequate knowledge of demand and supply forces and how these affect equilibrium price and quantity. • Some consideration of elasticity concepts (i.e. at least one elasticity concept well explained) and its relevance in influencing market equilibrium. • Some rigour in economic analysis and development. • Max of 13m if only 2 out of 3 markets are well analysed.
10 – 11	• Answer is relevant but analysis has some inaccuracies/incomplete examples. Is able to identify forces in DD and SS but lacking in detailed elasticity discussions. • But answer lacks balance in consideration of demand and supply forces.
Level 1 6 – 9	• Able to sketch a DD & SS diagram and identify & briefly explain impact on the product markets. • Some errors and inconsistencies occur in the explanation and use of some economic concepts. • Minimal reference to context.
1 – 5	• Misinterpreted question as a macroeconomic issue but there are few valid points though they do not clearly address the question. • Demonstrates some basic knowledge of different types of products.
E2 (3 – 4)	Explained judgement with economic analysis with regards to the impact on different product markets resulting from the combined effects of change in demand and supply. Include the ability to question assumptions.
E1 (1 – 2)	Mainly unexplained judgement.

MARKET STRUCTURE

(a) Explain how firms can increase market power? [10]
(b) Discuss the extent to which the performance of firms is determined by their market power.
[15]

Approach: Students are expected to explain various strategies that firms may employ to increase their market power. Answers can categorised under demand and supply factors (At least 3)

Suggested outline

Introduction

Market power refers to a firm's ability to influence the market price without losing all of its sales. Market power is measured by the no of producers, size of the firms, level of barriers to entry and the availability of substitute goods.
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

Demand factors

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.
- Duplication of operations is removed to reduce costs. Cost advantage over rivals, enables firm to increase its market power.
- Merged firm controls a larger market share, better able to raise prices.
- Eg.

Strategic deterrence

- Incumbent firms engage in aggressive advertising campaigns to increase brand loyalty and brand awareness amongst its consumers.
- Advertising campaigns - leads to higher demand for product, increasing the consumer base for firm.
- Make the demand for the firm's product relatively price-inelastic due to greater brand loyalty.
- Deters potential competitors from entering industry, as new firms would have to incur a sizeable cost for advertising (BTE) to be able to successfully penetrate the market.
- Pursuing other objectives like output-maximising to raise customer base and increase market share, or enable firm to enjoy IEOS when producing a large output (especially for new firms). Includes predatory pricing when firm is trying to drive out competition in a foreign market. Aim is to reap long-run profits by sacrificing short-run profits.
- **Eg.**

<u>Supply Factors</u>

Control of raw materials

- Firms can also increase their market power by controlling necessary raw materials.
- 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.
- Eg. DeBeers

Conclusion

Level	Descriptors	Marks
L1	For a descriptive answer with no or limited link to how firms can increase market power. Concept errors.	1-4
L2	For an underdeveloped (lacking in scope or depth) answer that explains **<u>at least 2</u>** methods firms can use to increase their market power. Mere description of barriers with no linkage to what firms can do to protect these advantages – max 5 marks	5-6
L3	For a well-developed answer that explains **<u>at least three methods</u>** firms can use to increase their market power. With examples provided 3 well-developed points **<u>with brief examples</u>** – max 8 marks Well-developed explanation with at least 3 factors and **<u>no examples</u>** – max 7 marks	7-10

(b) Discuss the extent to which the performance of firms is determined by their market power.
[15]

Approach: *Students are expected to highlight how performance of firms, in the form of profits and efficiency, are influenced by variations in market power (MC/PC vs Monopoly/oligopoly?). Students are then expected to highlight factors besides its market power that could influence its performance.*

Suggested Outline

Introduction

- Performance of firms in a market is often measured by looking at several different criteria – type of profits in the long run, allocative efficiency, productive efficiency and dynamic efficiency. For different groups of agents in society, performance of a firm would focus on different areas.

Body
Thesis: The performance of firms in a market is determined by market power

Performance

1. Profits:

- A competitive market, for example **perfect competition**, has a large number of buyers and sellers, homogeneity of product and no barriers of entry.
- Flatter demand curve facing firm due to low barriers to entry suggests no/limited market power for firms to raise prices (price-taker) to earn supernormal profits in long run.
- Would only make normal profits in the long run as the supernormal profits would entice competitors who can easily enter and exit the industry. Due to low barriers to entry firms lack market power in influencing prices. As a price taker, a single firm has no power to raise prices to earn more profits.
-

[Diagram showing PC OR Monopolistic Comp Eg. earning normal profits in LR]

- **In contrast,** firms in an **oligopolistic** industry and a **monopoly** are likely to earn supernormal profits in the long run due to the high level of barriers (steep DD curve facing firm) new firms are prevented from entering thus conferring market power to existing firm/s

- This allows firms to restrict output to raise prices, the market power to do so allows them the possibility to earn supernormal profits in the long run.

[Diagram showing Monopoly OR Oligopoly eg. earning supernormal profits in LR]

- **Extent** of market power is determined by barriers to entry. The greater the degree of BTEs the more market power a firm has in setting higher prices thereby earning greater supernormal profits in the long run

2. Productive efficiency

- Productive efficiency is achieved when the firms in an economy are producing the maximum output for the given amount of inputs, or producing a given output with the least cost combination of inputs.
- All firms may be productively efficient.

- However, under perfect competition, where firms have **a lack of market power**; in the long run, competition **forces perfectly competitive firms** to produce at the point of minimum average total cost of production and to charge that price which is just consistent with these costs.
- Firms with greater market power (monopoly) may tend to be more **X-inefficient**. Given greater market power may imply limited competition therefore complacency in minimising costs may set in.

3. Dynamic Efficiency (Variety of products and Innovation)

- Absence of barriers to entry implies that there are no super-normal profits to make in the long run and this means that firms do not have the resources to engage in innovation. So Firms in a perfectly competitive market lack the ability to innovate. No product or process innovation.
- Oligopolies and monopolies can maintain supernormal profits in the long run, this is due to their ability to raise prices and therefore earn supernormal profits. As a result, more able to carry out research and development to create new products and increase the variety of products available to consumers. Therefore they can improve product type and improve production processes.
- ***Firms under monopolistic competition have the highest incentive to differentiate because the monopolistically competitive firm competes directly with many other small sellers in the same market.***
- ***Evaluate extent of DE***
- *Depending on whether the firms are a collusive or competitive oligopoly, the incentive to innovate is different. Under a collusive oligopoly, firms may agree to limit advertising expenditure or even product development, because retaliatory advertising and extensive spending on R&D by each and every firm may be self-cancelling and reduce total industry profits.*
- *On the other hand, competitive oligopolies may have an incentive to create new products to differentiate their product in order to raise the demand for their product and capture a greater market share. Firms that do not innovate or try and create some sense of brand loyalty may see themselves losing market share to their rivals.*

Allocative Efficiency

- *Explain Allocative Efficiency*
- Allocative efficiency is only present under perfect competition due to the presence of many competitors all selling the same product. A PC firm faces a perfectly price elastic demand curve, where the marginal revenue of selling a product is exactly equal to the marginal cost for selling an additional unit. Assuming a profit maximising firm, the PC firm will charge consumers at P=MC.
- For a firm that has very little market power, in the face of significant competition (PC) and the inability to exert any influence over increasing its price it will be more likely for the firm to set prices closer to its MC rendering it closer to allocative efficiency.
- Hence, it is possible to assert that the extent of how allocatively efficient a firm might be, as reflected by the slope of its demand curve, would be that the less market power it has the more allocatively efficient it will be.

Anti-thesis: The performance of firms in a market is not determined by market power – Other factors

Regulation:

- Governments often play a regulatory role in protecting the welfare of consumers in society. In cases where an industry is considered crucial such as utilities but is a natural monopoly, the government is likely to regulate the market to force these firms to produce a larger output at a lower price than they otherwise would have if unregulated. (AC pricing? MC pricing? Affects supernormal profits and efficiency)

- A firm's performance could also be affected if a firm is nationalised. Nationalisation may give rise to inefficiency due to government bureaucracy and corruption. In the absence of the profit motive, governments may not run nationalized companies as efficiently as a private company. Hence, firms could become ***X-inefficient*** as they become lax with cost controls.
- A firm's performance in this case would be determined by government intervention in the market.

Alternative objectives of firms:

- The traditional theory of firms assumes that the main objective of firms is to profit maximise. However, in reality, firms may choose **alternative goals** other than profit maximisation particularly in the short run.

Contestability:

- The theory of contestable markets argues that what is crucial in determining a firm's behaviour and hence performance is not the actual amount of competition but whether there is the real threat of competition.

Prevailing economic conditions, nature of goods sold, etc:

- E.g. during a recession, demand for luxury goods sold will fall while demand for inferior goods will rise. A firm which has high market power (e.g. oligopolistic firm) but selling luxury goods may suffer from losses while a firm which has little market power (e.g. monopolistic competitive firm) but selling inferior goods may earn profits. This shows that market power is not the factor that determines the performance of firms.

Conclusion/Synthesis:

- In theory, the performance of a firm in a market is influenced by market power.
- However, there are several other factors in reality that affect the performance of firms. Governments can choose to regulate monopolies to ensure that the welfare of consumers are protected, managers can choose to pursue alternative objectives to maximise their own benefits rather than to profit maximise and the threat of competition could alter a firm's behaviour and hence performance.
- The view that the performance of firms in a market is determined by market power is likely to hold true under conditions that firms do not deviate from the traditional objective of profit maximisation and in the absence of government intervention.

Level	Descriptors
L1 **(1 – 2)**	• Largely irrelevant answer with a **few valid points**.
(3 – 5)	• **Some knowledge** of how market power in different markets affects firms' performance but there may be conceptual errors or lack of development. • **Little or no** attempt to compare across market structures. • **No consideration** of how market power is not the only factor that determines the performance of firms in a market.
L2 **(6 – 8)**	• **Accurate explanation** of how market power in different markets affects firms' performance with adequate development. • Considers performance of firms in terms of impact of **at least 2 criteria** (firms' profitability **and/or** society's concerns of **efficiency** (productive or allocative or dynamic) **and/or** consumer's welfare (variety or product innovation).) • **Some** attempt to compare across market structures. Answer mentions at least 2 market

	• **For 8m there must be consideration of at least 1 other factor** of how market power is not the only factor that determines the performance of firms in a market.
L3 **(9)**	• **Well-developed explanation** of how market power in different markets affects firms' performance. • Considers performance of firms in terms impact on at least **3 different criteria** (firms' profitability **and** society's concerns of efficiency (productive or allocative) **and** consumer's welfare (variety or product innovation).) Including **at least 1 type of efficiency.** • **Good comparison** of how degree of market power across market structures affects the performance of firms. • **Good consideration of at least 1 other factor** of how competition is not the only factor that determines the performance of firms in a market.
(10 – 11)	• **Excellent explanation** of how market power in different markets affects firms' performance. • Considers performance of firms in terms impact on **all 3 different criteria** (firms' profitability **and** society's concerns of efficiency (productive **or** allocative) **and** consumer's welfare (variety **or** product innovation).) • **Excellent comparison** of how market power across all 4 market structures affects the performance of firms. • **Excellent consideration (at least 2 factors)** of how competition is not the only factor that determines the performance of firms in a market.
Evaluation	
E1 (1–2)	Mainly unexplained judgment.
E2 (3–4)	Well-explained judgment on whether competition is the only factor that affects the performance

3 Shisha smoking was banned in Singapore in 2014 because smokers were at risk of developing the same health problems as cigarette smokers, such as cancer and heart disease.

(a) Explain why government intervention is advocated in the markets for both merit and demerit goods. [10]

(b) Discuss whether a ban is the best response in addressing the market failure arising from shisha smoking. [15]

Suggested Answers:

(a)

Command Word: Explain why
Content: Merit good, demerit good, sources of market failure (positive externality, negative externality, imperfect info)
Context: Examples based on merit and demerit good

Synopsis: To give reasons why government intervention is advocated in the markets for both merit and demerit goods making reference to externalities and imperfect information in explanation.

INTRODUCTION

- Define merit good and demerit goods
- Government intervention is advocated because…
  - Market fails (define market failure)
  - Issues: underconsumption/production, overconsumption/production
  - Inefficient allocation of resources → deadweight loss

BODY

Merit Good → Vaccination

<u>Positive Externality</u>

- Define positive externality
- In deciding how much medical products to consume → consumers only consider their private benefits → protection from diseases when they receive the vaccination, but do not take into account the positive impact on the health of close family members and friends around them (third party) as they are protected from contracting diseases too and therefore can save on medical expenses (external benefit)
- Existence of positive externality → divergence between private benefit and social benefit
- Figure 1 → assuming that there are no external costs, the level of vaccination taken is at Q_p where MPC=MPB where consumers satisfy their self-interest

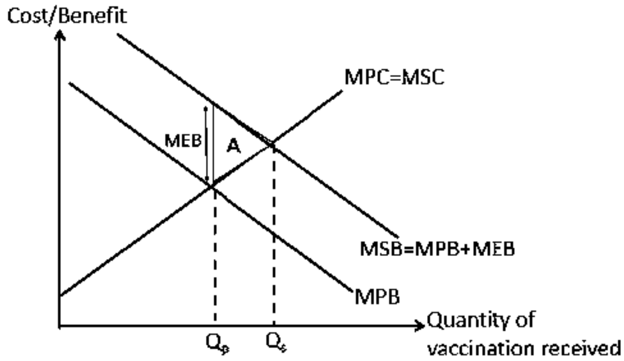


Figure 1

- However, the socially optimal level of consumption of vaccination is at Q_S where MSC=MSB where society is better off.
- Qp < Qs → under-consumption of vaccination which leads to welfare loss to society shown by the shaded area A
- Government intervention is advocated due to…
  - Under-consumption of vaccination that generates positive externality which therefore should be consumed more
  - Free market fails to allocate resources in a way that maximizes society's welfare → deadweight loss → government intervening to increase consumption will reduce this deadweight loss

Demerit Good → Shisha tobacco products

Negative Externality

- Define negative externality
- In deciding how much shisha to smoke → smokers only consider their private costs → price of shisha, but do not take into account the negative impact on the health of the passive smokers around them → external cost accrued to the second-hand smokers due to the action of shisha smokers smoking → includes the healthcare cost (external cost) that second-hand smokers (third party) have to incur from potential health risks of having to inhale smoke from shisha smokers smoking
- Existence of negative externality in shisha smoking → divergence between private cost and social cost
- Figure 2 → assuming that there are no external benefits, the level of shisha smoked is at Q_P where MPC=MPB where smokers satisfy their self-interest

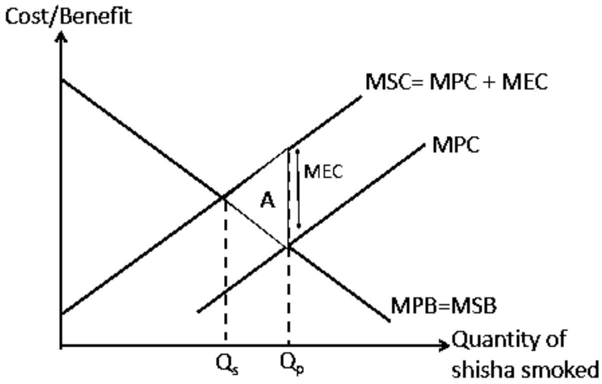


Figure 2

- However, the socially optimal level of consumption of cigarettes is at Q_S where MSC=MSB where society is better off.
- Qp > Qs → over-smoking shisha which leads to welfare loss to society shown by the shaded area A
- Government intervention is advocated due to…
  - Over-consumption of shisha tobacco products that generate negative externality which therefore should be consumed less
  - Free market fails to allocate resources in a way that maximizes society's welfare → deadweight loss → government intervening to reduce consumption will reduce this deadweight loss

Imperfect information
- Define imperfect information
- Imperfect information due to the ignorance of the actual private cost → under-estimation of private costs
  - Actual private cost → healthcare cost associated with the increased probability of contracting lung cancer and heart disease due to smoking shisha as well as additional healthcare cost from contracting influenza or tuberculosis due to unhygienic sharing of mouthpieces attached to shisha smoking equipment
  - Perceived private cost → price of smoking shisha

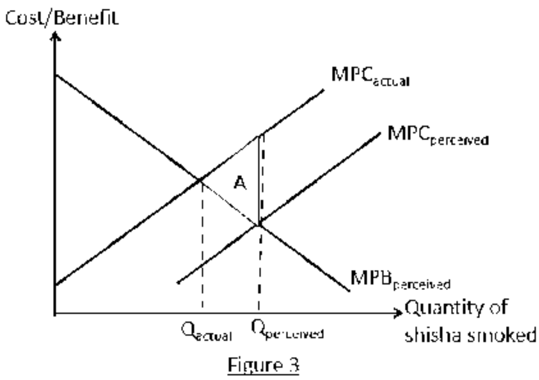


Figure 3

- Figure 3 → MPCactual > MPCperceived → over-smoking of shisha by QactualQperceived

- Government intervention is advocated due to…
  - Over-consumption of shisha tobacco products that brings about greater healthcare costs and risks in the future and therefore should be consumed less

- Free market fails to allocate resources in a way that maximizes society's welfare → deadweight loss → government intervening to reduce consumption will reduce this deadweight loss

CONCLUSION

- Government intervention is advocated in the markets for both merit and demerit goods due to the issues of under and over-consumption as well as deadweight loss.
- Policies are therefore required to address the market failure arising from the consumption of merit and demerit goods.

Level	Descriptor	Marks
L3	A clear and developed explanation of how the market fails for both merit and demerit goods (externalities and imperfect information) with links to why government intervention is advocated.	7-10
L2	Undeveloped explanation of market failure due to both merit and demerit goods. Answer does not explain on imperfect information but has examples of negative and positive externalities. (max 6 marks)	5-6
L1	Generally descriptive in nature, limited reference to economic framework.	1-4

(b)

Command Word: Discuss whether (2-sided)
Content: Ban, alternative policies, evaluate policies
Context: Shisha smoking

Synopsis: To look at the effectiveness of ban in addressing the market failures associated with shisha smoking (negative externality and imperfect information) and after which providing alternative policies. Assessment on the policies given as well as deducing if ban is the best are required.

INTRODUCTION

- Define market failure
- Source of market failure
  - Negative externality in smoking shisha
  - Imperfect information (difference between perceived cost and actual cost of shisha smoking)
- Policies → Ban, Tax, Education

BODY

THESIS: Ban is the best response in addressing the market failure arising from shisha smoking

- Ban – legal prohibition on the smoking of shisha → output consumed = 0 → $Q_S = 0$ (Figure 4)

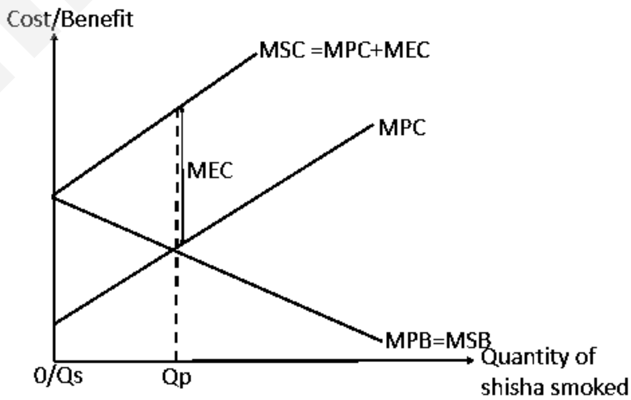


Figure 4

- Ban is the best way → no external cost will incur on third party since smoking shisha generates extremely high external cost → addresses market failure due to over-smoking of shisha by reducing consumption to 0=Qs

ANTI-THESIS: Ban is not the best response in addressing the market failure arising from shisha smoking as there are limitations to banning and therefore, alternative policies are required to address the market failure

Limitation of Banning Shisha Smoking

- Government failure → banning shisha results in greater deadweight loss compared to before

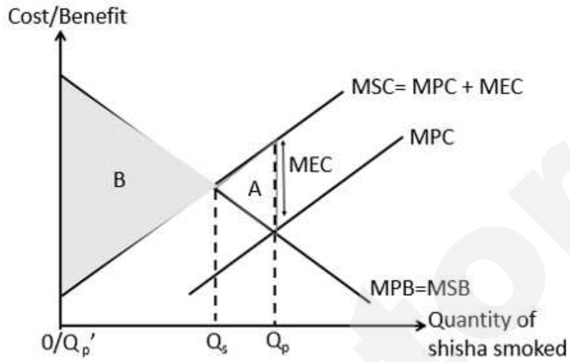


Figure 5

- Figure 5 → Shisha smoking is banned at Q_p' → banning does not reach socially optimal output Q_S → deadweight loss after ban is imposed, Area B, is larger than not intervening at all, Area A → banning is ineffective in addressing the market failure due to shisha smoking since deadweight loss still exist
- Retailers selling shisha tobacco → loss in revenue

Alternative Policy 1: Tax

- Tax imposed → increases price of shisha → increases cost of smoking shisha → increases MPC

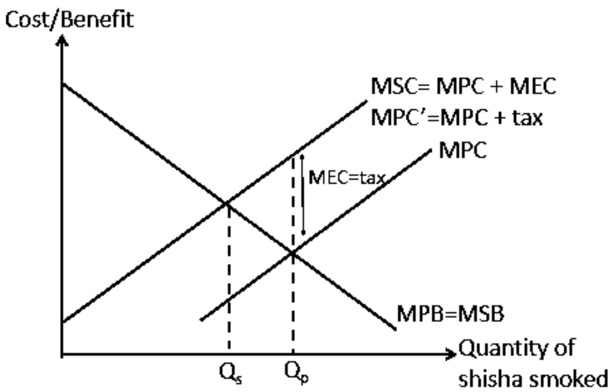


Figure 6

- Figure 6 → assuming amount of tax = MEC → shisha smoking reduced from Qp to Qs → deadweight loss is eliminated → efficient allocation of resources → market failure from shisha smoking addressed
- Taxation is a better way than banning

- Forces smokes to be responsible for the external costs accrued to second-hand smokers → smokers will then have to reduce the quantity of shisha smoked
  - Flexibility → tax according to MEC
- Limitations of taxation
  - Government failure → underestimation of MEC → under-taxing → shisha smoking not reduced to socially optimal output Qs → deadweight loss still exist
  - PED < 1 → due to addiction → less than proportionate increase in quantity demanded when price of shisha smoking rises due to taxation → negligible effect in reducing shisha smoking
  - Taxation is not able to address market failure due to imperfect information → require alternative policy

<u>Alternative Policy 2: Education</u>

- Educational campaigns by Health Promotion Board in Singapore → keep shisha smokers more informed of the actual private costs of smoking → e.g. Singtel mobile phone subscribers who come within 1km of shisha hot spot at Kampong Glam received multimedia message in the form of an 18-second video informing them about the actual costs of smoking shisha which is not just the health risks from smoking tobacco products but also the possibility of contracting other diseases such as tuberculosis or other viruses left behind by the previous shisha smokers via the mouthpiece as not all shisha retailers wash their equipment regularly → informing shisha smokers of such facts → increases their perceived private cost of shisha smoking

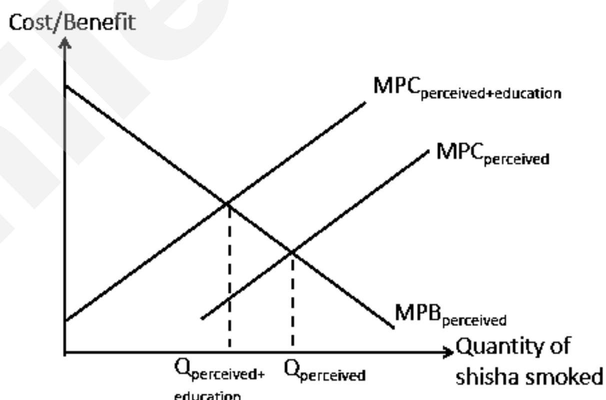


Figure 7

- Figure 7 → educating shisha smokers increase their perceived costs of smoking from $MPC_{perceived}$ to $MPC_{perceived+education}$ → shisha smoking up till quantity $Q_{perceived+education}$ where this is the socially optimal level of output
- Limitation of educational campaigns
  - Whether or not quantity of shisha smoked is reduced because of the campaigns are voluntary → might only have minimum impact on the level of consumption
  - Opportunity costs involved in implementing educational campaigns → resources could be better used to finance other programmes that could have a more certain impact

CONCLUSION

- Shisha was banned due to large health risks associated with the smoker as well as external costs accrued to passive smokers. Although it does reduce smokers' smoking of shisha in Singapore, shisha smokers could still seek alternative methods to satisfy their addiction → smoking cigarettes or smoking shisha overseas → defeats the intention of banning and health risks to smokers sustains
- Although banning does not address the root cause of market failure due to imperfect information and therefore other policies are required, it allows for quantity of shisha smoking to be at socially optimal level (Qs) = 0
- Banning is the best response in addressing the market failure due to shisha smoking but there must be monitoring and enforcement in place to ensure that retailers oblige to the policy of banning. Banning could also be about banning shisha smoking for those who are of a certain age and banning the activity of shisha smoking in some places instead of a complete ban.

Level	**Descriptor**	**Marks**
L3	3 (Ban & 2 others) well-explained policies with limitations to address the market failure (negative externality and imperfect information) in context.	9 - 11
L2	2 (Ban & 1 other) well-explained policies with limitations. (attempts to answer according to context) 2 (Ban & 1 other) well-explained policies without limitations. (max 6 marks)	7 – 8 6
L1	For an answer that shows some knowledge on policies taken by the government to address market failure.	1 – 5
E2	For an evaluative assessment based on economic analysis.	3-4
E1	For an unexplained assessment or one that is not supported by analysis.	1-2

4.	**Amid the slowest GDP growth in six years and the flattest employment growth in more than a decade, Finance Minister Heng Swee Keat announced a Budget with a strong focus on economic restructuring such as tightening the foreign labour market to raise productivity.** Source: channelnewsasia.com/news/singapore/budget-2016 **(a) Explain the key determinants of sustained economic growth. [10]** **(b) How far do you agree that the Singapore government should focus on raising productivity to achieve sustained economic growth? [15]**
a)	**Intro:** – Define 'economic growth' (actual and potential). – Outline the 2 primary sources of growth, higher AD and higher AS. – Address the 'sustained' nature of the growth in question. **Body 1 (AD)** – Show how an increase in AD will lead to an increase in RNY (diag). – Explain the 'key' factors that can increase AD. – Explain what influences the levels of C, I, G and (X-M) individually (using illustrative examples of different economies). – Identify which of these factors are most important. **Body 2 (SRAS)** – Show how an increase in SRAS (downward shift) will increase RNY (diag). – Explain the 'key' factors that can shift AS downward (CoP). – Explain the key components of CoP (i.e. wages, interest, rents). – Comment on the viability of this as a source of 'sustained' growth. **Body 3 (LRAS)** – Show how an increase in LRAS (rightward shift) will increase RNY (diag). – Explain the key factors that can shift AS rightward (quantity & quality of FoP). – Explain how an increase in the quantity & quality of land, labour and capital can increase RNY (using illustrative examples). **Conclusion: (Summative)** – Although summative in nature, the conclusion here must be agglomerative in that it sums up the key factors (AD, LRAS and LRAS. Comment on the relative importance of the different factors.

	MARK SCHEME	
L1	Shows a cursory knowledge of the factors affecting economic growth. Little or no use of the AD/AS framework.	1-4m
L2	– Shows good knowledge of the factors affecting economic growth. – Is able to categorise these factors into the framework: → Actual growth (AD and SRAS factors) → Potential growth (LRAS factors) – Able to recognise that to achieve sustained growth, BOTH SR and LR factors must be present. [Students who leave out SRAS factors should not be penalized]	5-6m
L3	– Able to explain 3 key determinants involving actual and potential growth with the use of real-world examples. – Analysis considers the context of different economies (e.g. Developing, developed, emerging etc.)	7m

(b)

Intro:

- Outline the different ways to achieve sustained growth → increasing productive capacity (increasing the quantity & quality of FoPs) whilst maintaining AD growth.
- Outline the context of the Singapore economy
  - → Constraints: small geographical size, shrinking size of the domestic work force, lacking in natural resources etc.
  - → Condition: slow GDP growth, flat employment growth (pre-amble)
- Need for policies that increase LRAS while addressing the need to boost weak AD.
- Productivity affects quality of FoPs → raises LRAS (and subsequently SRAS).

Body

Thesis: Government should focus on raising productivity to achieve sustained EG

- Explain how the Singapore government raises productivity (e.g. tightening of foreign labour market (pre-amble), use of technology etc.)
- Explain how raising productivity affects the LRAS curve (diag).

Anti-Thesis 1: Limitations of raising productivity to achieve sustained EG

- Explain the limitations and potential difficulties of raising productivity.
  - → Resistance of firms to use technology (when cheap alternatives are available)**
  - → Resistance of workers to new methods and re-training.
  - → Results will take time to be reaped.

Anti-Thesis 2: Use of other policies to achieve sustained EG

(a) DD-management policies (highlight urgency given weak economic conditions)

- Using the Singapore context, show how DD-management policies (either FP or ERP) can increase RNY (diag).
- Explain the limitations.
  - → Singapore has a small K
  - → Implications on the government budget

(b) Other SS-side policies

<u>Infrastructure development (e.g. MRT lines, airport terminals etc.)</u>

- Use illustrative example to explain how SS-side policies can affect the AS curve (diag)
- Explain the limitations and potential difficulties of SS-side policies
  - → Adds a strain on the govt budget.
  - → Long run approach which only offer rewards in the very long term.
  - → If not properly chosen some projects may turn into 'white elephants'.

<u>SS-side measures to raise quantity of FoP (e.g. easing PR and labour requirements)</u>

- Use illustrative example from the Singapore context to explain how the increase foreign labour affects the AS cure (diag).
- Explain the limitations and potential difficulties of increasing foreign labour.
  - → Worsens income inequality.
  - → Reduces the incentive to improve production methods (productivity)**
  - → Only increases productive capacity in the SR.
  - → Social problems.

(Compare the effectiveness of raising productivity with other approaches)

Criterion	↑ Productivity	↑Population (Foreign)	Infrastructure	AD mgt policies
Effectiveness	Effective	Reduces costs; increases productive capacity in the SR	Can be ineffective if not well chosen	Effective but insufficient.
Costs (Time frame)	Cost of education and retraining. Difficult to do LT.	Low costs to the govt. Social costs are high. -ve effects on Y-distrn	Cost of infrastructure projects can be high.	Budget implications.
Sustainability	Can be sustainable if a productivity 'culture' is	Not sustainable	Not very sustainable (limit to infrastructure projects).	

	developed.			

Conclusion: (Evaluative)

- A comment should be made on the need for the government to manage AD in order to achieve sustained growth.
- A summary of the results from the above comparison should be made.
- A judgement must be made wrt the extent to which increasing productivity should be the government's primary focus. (Time period, prevailing macro threats)

(Example: "Although increasing productivity would be the most desirable approach, DD management policies should also be considered in times of imminent economic slowdown.")

	MARK SCHEME	
L1	Shows knowledge of how productivity can affect growth. No application of theoretical framework to support analysis.	1-5m
L2	– Able to explain how sustained economic growth can be achieved by raising productivity and one other policy (AD or LRAS) using ADAS framework. – Able to explain the limitations of the chosen measures. [Max 7m for explanation of supply-side policy as the alternative measure.]	6-8m
L3	– Able to explain how sustained economic growth can be achieved by raising productivity and two other policies (AD and LRAS) using ADAS framework. – Able to illustrate the policy approach and its limitations in the Singapore context. (Other economies could be used to illustrate the limitations). – Able to compare the different policy approaches.	9-11m
E1	Makes a judgement but lacking in economic justification	1-2m
E2	Well substantiated judgement based on economic analysis and application to the Singapore context.	3-4m

a) Explain the different types of unemployment an economy can face? (10)

<u>Introduction</u>

- Define unemployment - Refers to people who are registered as able, available and willing to work at the going wage rate in a suitable job but who cannot find paid unemployment despite an active search for work.
- Introduce the 3 main types of unemployment – structural, cyclical and frictional unemployment.

<u>Body</u>

<u>i.</u> <u>Structural unemployment</u>

- Structural unemployment refers to the mismatch between the skills possessed by the retrenched workers and those required by new industries. It is part of the natural rate of unemployment and exists even when the economy is at full employment as mentioned at the start of the essay.

- Results mainly from immobility of resources (e.g. geographical and occupational immobility) when the structure of the economy changes or when there are permanent changes in demand and supply conditions.

- Explain occupational and geographical immobility.

- Example: Singapore moved from manufacturing (especially in the areas of chemical, electronics and engineering) in the 1990s to R&D (especially in the areas of environmental & water technology, biomedical sciences and interactive & digital media) in the millennium.

<u>ii.</u> <u>Cyclical unemployment</u>

- Cyclical unemployment: occurs when the economy is at the recessionary phase of the trade cycle. It is caused by a decrease in aggregate demand (from either internal or external problems). Internal → Recession → C & I fall → AD fall → real output fall → demand for FOP fall → demand deficient unemployment. External → Global downturn → X fall → AD fall → real output fall → demand for FOP fall → demand deficient unemployment.

- Example: Singapore experienced cyclical unemployment during the global financial crisis in 2008 which caused decrease in demand for Singapore's exports. When X falls, demand for labour would fall; bringing about cyclical unemployment

iii. Frictional unemployment

- Frictional unemployment is associated with normal labour turnover and aggravated imperfect market knowledge (due to ignorance of job opportunities). It is part of the natural rate of unemployment.

- Example: Job hopping in Singapore especially in the finance and accounting sector due to better remuneration, promotion, a new challenge, an overseas posting or more flexible work arrangements.

Conclusion

Singapore's unemployment level is very much caused by internal and external factors. Structural unemployment is the most significant problem in Singapore as it restructures in the face of globalisation.

Marking scheme

Level	Descriptors	Marks
1	Answer is largely vague in definition. Only few valid points made incidentally.	1-2
	Answer shows some knowledge of unemployment but the focus predominantly on the types of unemployment rather than the causes.	3-4
2	• Evidence of ability: a. Identify the appropriate types of unemployment (structural, cyclical, frictional) b. Explain the causes to these types of unemployment although underdeveloped explanation • No or weak examples given.	5-6
3	• Evidence of ability: a. Identify the appropriate types of unemployment (structural, cyclical, frictional) b. Good explanation of the causes to these types of unemployment • Some good examples were given.	7-8
	• A thorough knowledge of the 3 main types of unemployment.	9-10

	• Demonstrate a good ability to describe and explain in a precise, logical and reasoned manner. • Good examples were given throughout the answer. • Conclusion is stated.	

b) **Discuss the view that structural unemployment is the most significant macroeconomic problem faced by open economies. (15)**

Introduction

- Define open economy

– An open economy is one with no barriers to free market activity which is characterized by the absence of tariffs, taxes, licensing requirements, subsidies, unionization and any other regulations or practices that interfere with the natural functioning of the free market.

- State the macroeconomic problems faced by open economies.

Body

Thesis: Structural unemployment is the most significant macroeconomic problem faced by open economies.

i. Effects of structural unemployment in comparison with frictional and cyclical unemployment

- **Workers might not obtain a job when the economy recovers** as their skills are irrelevant to the new industries or they could even be displaced when the economy is growing due to changes in comparative advantages and globalisation.

- This could **go on for a longer period of time compared to the other two types of unemployment** which could have detrimental effects on the individual, economy, government and society.

- Due to prolonged periods of joblessness, **workers become de-skilled** as their skills become increasingly dated in a rapidly changing job market which further reduces their chances of gaining employment in the future. This **adds additional burden to the government** as more unemployment benefits need to be given out.

- Coupled with increased spending by the government in terms of benefit payments and lesser tax revenue, **government would be experiencing a budget deficit.**

- Such prolonged structural unemployment would also cause the **economy to slow down** as peoples' disposable income is reduced -> decrease consumption -> decrease AD -> decrease GPL and RNY. **Unemployment problem** would worsen as less labour is demanded given that it is in derived demand.

- The effects of structural unemployment would be most significant for **open economies** given the **mobility of labour**. Workers who lack the skills needed in the industries are able to move to other economies where their skills are needed hence leading to the problem of **'brain drain'** -> decrease in productive capacity -> decrease in potential growth.

- In addition, prolonged periods of structural unemployment would result in the **lack of confidence amongst investors**. Open economies would be impacted more significantly due to **free flow of capital**. Hence, I decrease -> decrease AD -> decrease GPL and RNY.

ii. Effects of structural unemployment in comparison with other macroeconomic problems

- It takes a shorter time to address the other macroeconomic problems (such as slow economic growth, recession, inflation) compared to structural unemployment as it takes time to train and/or re-educate workers and the success depends very much on the capacity of workers to learn and apply their new found skills and knowledge and prove that they could value-add to firms which are using technology in their production processes.

- Given the openness of the economy, prolonged structural unemployment could result in decrease productive capacity -> increase GPL -> decrease price competitiveness of Xs -> decrease in (X-M) -> decrease AD -> decrease GPL and RNY and BOP deficit due to trade and capital deficits.

Anti-thesis: Structural unemployment is not the most significant macroeconomic problem faced by open economies.

i. **Structural unemployment might not be the most serious type of unemployment**

- For example, during the 2008-2009 sub-prime crisis in USA, there was decrease in consumption expenditure due to decreasing income and decrease in investment expenditure due to declining profits and poor business sentiments. Hence, cyclical unemployment arises.

- It may affect a few industries at first but as business pessimism grows, unemployment will spread from one industry to another. This fall in unemployment is expected to affect all industries in the economy at the same time, leading to mass unemployment. In comparison, structural unemployment usually only affects specific industries thus only specific groups of workers will be affected which is less detrimental than cyclical unemployment.

- Developed small open economies such as Singapore is affected through trade with the large open economies such as USA. On the other hand, emerging open economies in general are affected through trade with the developed economies.

ii. **Structural unemployment is not the most significant macroeconomic problem**

- Macroeconomic problems such as inflation, deflation, recession and unfavourable BOP might be more significant **as each of them are interlinked with each other and are more widespread in their effects for open economies.**

- Slow economic growth

– The more significant macroeconomic problems faced by developing open economies such as Bangladesh would most likely be slow economic growth given widespread poverty which affects consumption levels, lack of foreign direct investments given investors' lack of confidence in the infrastructure and political stability. The effects of slow economic growth are as follows:

- Decrease in real national income -> reduced output of goods and services -> decrease demand for labour -> increase in unemployment rate -> decrease disposable income and purchasing power -> decrease consumption -> decrease AD and problems are worsened.
- Investors' confidence affected -> decrease investment -> decrease AD and capital outflow.

- <u>High rates of inflation</u>

– High rates of inflation is a more significant problem for emerging open economies such as China and India given their large domestic market which increased consumption, undervalued Yuan which increase demand for exports and investments -> demand-pull inflation. The effects of high rates of inflation are as follows:
    - Loss of confidence in currency
    - Decrease in investment

– High rates of inflation causes unfavourable BOP (i.e. deterioration of trade balance and long-term capital outflow).

- <u>Unsustainable economic growth</u>

– Emerging open economies such as China faced a more significant macroeconomic problem of unsustainable economic growth due to export-led growth model and rapid industrialisation which caused pollution and waste problems.

- <u>Deflation</u>

– Developed open economies such as EU face deflation due to decrease in demand for goods and services by emerging economies such as China and increase in supply of goods due to improvement in technology and falling oil prices.

– With decreasing general price levels, producers will not be incentivised to produce hence output decreases. This leads to a decrease in demand for labour as it is in derived demand hence increasing unemployment. As unemployment increases, disposable income decreases leading to lower purchasing power hence consumption decreases. This leads to decrease in aggregate demand and hence real national income which further worsens the problem of unemployment and growth.

<u>Conclusion</u>

Whether or not structural unemployment is the most significant macroeconomic problem depends on the type of open economy (i.e. developed / developing / emerging, small / large), situations in the economy (e.g. political situation, government objectives, government policies) and preparedness of the government in managing structural unemployment.

Marking scheme

Level	Descriptors	Marks
L3	Well developed and excellent two-sided discussion in the context of the open economy.	9 - 11
L2	Under-developed two-sided discussion with no links to open economy. Developed one-sided answer with some links to the open economy. Under-developed two-sided discussion with some links to the open economy.	6 7 8
L1	For an answer that demonstrates limited knowledge about open economies (i.e. characteristics), structural unemployment and macroeconomic problems. Several misconceptions / errors were present.	1 – 5
E2	Judgment based on analysis. The evaluative comments are well-explained.	3-4
E1	Mainly unexplained judgment.	1-2

Globalisation has made the planet more equal. As communication gets cheaper and transport gets faster, developing countries have closed the gap with their rich-world counterparts. But within many developing economies, inequality has worsened.

Discuss the effects of globalisation on the standard of living in the different economies.
[25]

Synopsis: This question requires candidates to recognize the effects of globalization on standard of living comprising material and non-material SOL. Answers should also recognise that different countries are affected differently with some examples to illustrate. The extent to which economies are affected by globalisation depends on the nature of these economies, the size of the economy, the current state in which they are in and the policy options available to the governments.

Introduction

- Globalisation refers to the increasing integration of world economies leading to greater interdependence arising from freer flow of goods and services, labour, capital and technology and ideas. This is made possible due to the lowering of transport costs, enhanced communications and technological advancement.

- There are benefits and costs arising from globalisation affecting material and non-material SOL. Material SOL refers to the amount of goods and services available for consumption to each person in the country while non-material SOL refers to the quality of life in terms of health, literacy, social aspects etc.

- The impact of globalisation on SOL varies with different economies, depending on the nature of economy, size of the economy, the current state of development and policy tools available to the government.

Body

A) Globalisation can lead to higher SOL in an economy

a) Benefits of free trade arising from globalisation leading to higher material SOL
- Globalisation facilitates free trade which according to the Theory of Comparative Advantage (CA) can benefit all countries if each country specialises in producing the goods in which they have CA.
- A country enjoys CA when it is able to produce a good with a lower opportunity cost in terms of other goods foregone. Difference in opportunity cost arises from differences in factor endowments. For example:
    - China has abundance of low-cost labour → CA in labour-intensive goods such as shoes and clothing.
    - Singapore has abundance of skilled labour and high-end capital → CA in knowledge-based or capital-intensive industries such as pharmaceutical products or semi-conductor chips.
- Specialisation and trade leads to increased world output and allows economies to consume outside their PPC [illustrate using the PPC diagram].
- Due to the greater trade volume and hence greater quantity of goods and services produced / consumed, material SOL rises.

- Consumers also benefit from a wider variety of goods and services from other countries and better product quality due to intense foreign competition, of all which further raises material SOL.

Application:

- ***Developing economies*** like China with CA in labour-intensive industries will experience greater employment gains leading to improved living standards. This lifts millions of low-income Chinese citizens out of poverty.
- ***Developed economies*** like the US would experience a greater rise in RNY. Capital-intensive products tend to be high value-added suggesting that the rise in net exports and hence RNY would be significantly greater for developed economies.
- Economies with ***small domestic markets*** such as Singapore would benefit from access to global markets leading to increased output and lower prices through EOS. This leads to price competitiveness of exports, generating more income and jobs. However open economies are more vulnerable to the contagion effects of a global recession. When incomes of trading partners fall, demand for foreign goods and services fall. This lowers the net exports of the economy which leads to falling RNY and employment. Need for policies to mitigate the effects of external shocks.

b) Globalisation facilitates economic growth & employment improving material SOL

- Globalisation also brings about greater investments leading to a rise in FDI and increasing AD. Assuming the economy is below full employment, the rise in AD will lead to a multiplied increase in RNY and rise in employment. Hence, there are more goods and services available for consumption and greater accessibility to them, leading to a rise in material SOL [AD/AS diagram showing □AD].
- In the LR, rising investment on capital goods and technology transfer also leads to a rise in productive capacity and a rise in LRAS which increases the potential growth of the economy and hence future SOL [AD/AS diagram showing □LRAS].

Application:

- ***Developing economies*** gain from an inflow of FDI due to their cheaper cost of production. This aids in job creation and helps developing economies accumulate capital and technological transfer enhancing potential growth and future SOL.
- ***Developed economies*** benefit from outsourcing thereby lowering cost of production and enhancing competitiveness of their goods and services.

c) Globalisation enhances price stability improving material SOL

- Globalisation provides more opportunities to source for cheaper and better quality imports. With the removal of trade barriers such as import tariffs through the signing of FTAs, prices of imported raw material fall, lowering cost of production.
- With the free movement of labour, foreign worker inflow helps to keep labour cost low.
- When cost of production falls, SRAS rises leading to rising RNY and employment and hence an improvement in material SOL [AD/AS diagram showing rise in SRAS].

Application:

- ***Small countries with limited resources*** such as Singapore benefit from inflow of cheaper raw material and factors of production such as cheap foreign workers. However, these economies are also more susceptible to external shocks such as droughts in the US and Middle-East crisis leading to spikes in food and oil prices. Need for policies to mitigate the effects of external shocks.

d) Globalisation improves non-material SOL

- Higher growth will generate greater tax revenue due to rising incomes (□ income tax) and profitability (□ corporate tax) while sales tax will also increase.

- Tax revenue can be spent on infrastructure development, increased access and quality of education and healthcare etc. which improves non-material SOL.
- This is especially felt in ***undeveloped economies*** especially in rural areas that lack basic infrastructure and amenities.

B) Globalisation may result in lower SOL

a) Structural unemployment due to loss of CA leads to a fall in material SOL

- With globalisation, there can be a loss of CA arising from technology and skills transfer, allowing other countries to compete more effectively. For example, China has been moving up the value chain in recent years and is increasingly producing mid to high-end electronic products such as telecommunications equipment (e.g. Xiaomi smart phones).
- Higher cost countries may lose CA as firms relocate to economies with lower cost of production leading to job losses. When retrenched workers in declining industries do not have the skills needed for the expanding industries, structural unemployment will occur. Material SOL will fall due to loss of incomes.

Application:

- ***Developed economies*** like US are more susceptible to losing their CA to cheaper production destinations from developing economies as they move up the value chain. This could potentially lead to structural unemployment but the impact depends on the ability of the government to pre-empt potential job losses by looking into new areas of growth and training their workforce for these jobs.

b) Globalisation worsens income inequality leading to a fall in SOL

- With greater labour mobility, low-skilled workers in a country need to compete with the influx of cheaper foreign workers, depressing their wages. Conversely, higher FDI inflows raise demand for higher-skilled workers who are limited in supply, causing their wages to rise. This widens the income gap. In addition, workers in export sectors tend to benefit more from globalisation than those in the domestic sectors.
- As income inequality worsens, material SOL falls especially for the lower income group. A widening income gap also generates social unrest and discontent leading to a fall in non-material SOL.

Application:

- Globalisation has been linked to rising income inequalities in ***developing countries*** evidenced by the growing rural-urban divide in countries such as China, India and Brazil. A report by OECD showed that average wages paid by foreign MNCs were 40% higher than those paid by local firms pointing to the uneven benefits of globalisation especially for lower-skilled workers or poor ones in rural areas. Hence the need for redistributive policies to raise SOL of this group.

c) Increased production causes environmental damage → fall in non-material SOL

- Increased production of goods and services for trade and rising FDI leads to greater use of resources. This gives rise to negative externalities like pollution, global warming arising from greenhouse emissions and environmental degradation, thereby lowering non-material SOL.

Application:

- FDI in ***developing economies*** such as those in sub-Saharan Africa tend to depend on natural resource use and extraction (e.g. agriculture, mineral, fuel production, coal, oil and gas etc.). This leads to depletion of natural resources limiting potential growth and future SOL of these countries. Increased FDI also leads to environmental pollution arising from excessive production especially in developing countries where environmental standards and policies tend to be more lenient.

Conclusion and Evaluation

- The benefits of globalisation arising from increased trade generally outweigh the costs, bringing about an overall improvement in SOL to world economies.
- However, the benefits are uneven and gains from globalization tend to vary with different economies. Even for similar economies, the outcome tends to vary depending on factors such as the state of economy, factor endowments, government policies etc.
    - Economies with small domestic markets and limited resources gain substantially from globalisation. Export-led growth driven by access to world markets and imported raw materials would significantly raise material SOL of the economy. However, such economies are susceptible to external shocks.
    - Developing economies also benefit greatly from globalisation which drives their development needs through technological and skills transfers, and provides jobs through inward FDI raising material SOL. However, this comes at the expense of environmental concerns which lower non-material SOL.
    - Developed economies could experience improved SOL if the economy is able to meet the changing demands and dynamism of globalisation in terms of dealing with structural rigidities leading to job losses.
- The overall impact of globalisation on SOL depends on the ability of the governments to implement policies that would maximise the benefits and minimise the costs of globalisations on their economies.

Mark Scheme: **(Consider the approach that uses the different kinds of economies or one uses the SoL approach)**

Knowledge, Application, Understanding, and Analysis		
L3	For a well-developed answer that gives an explanation of both positive and negative effects of globalisation on SOL. Analysis is supported with real life examples in context of the different economies. For a well-developed answer that considers the effects of globalisation on SOL within the context of different economies.	18 – 21 15 – 17
L2	(Must consider the different economies to distinguish) For an undeveloped answer that gives an explanation of both positive and negative effects of globalisation on SOL to the different kinds of economies. The use of economic framework. Some application to different economies. For a well-developed one-sided answer with some use of economic framework to support the analysis.	12 – 14 10 – 11
L1	For an answer that shows descriptive knowledge of the effects of globalisation with limited attempts to link them to SOL A smattering of valid points on globalisation.	6 – 9 1 – 5
Evaluation		

E2	For an evaluative judgement based on economic analysis.	3 – 4
E1	For an unexplained evaluative judgement or one that is not supported by economic analysis.	1 – 2

Name:____________________ Centre No. / Index No.:_ / Class: _______

PIONEER JUNIOR COLLEGE, SINGAPORE
JC2 PRELIMINARY EXAMINATION 2016
Higher 2

ECONOMICS

Paper 1

Additional Materials: Answer Paper

9732/01

15 September 2016

2 hours 15 minutes

READ THESE INSTRUCTIONS FIRST

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

Answer **all** questions.

At the end of the examination, fasten all your work securely together.
Fasten your answers to each question SEPARATELY.

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

This document consists of **7** printed pages and **3** blank pages.

Pioneer Junior College

Ministry of Education

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Answer **all** questions.

Question 1 **Supermarket Shake Up**

Extract 1: How Aldi's price plan shook up Tesco, Morrisons, Asda and Sainsbury's

The message that Aldi is getting cheaper and bigger will be welcomed by British shoppers battered by years of austerity. But for Aldi's rivals, this is bad news. A steely focus on price and simplicity, against a backdrop of falling living standards that has sharpened customers' eye for a bargain, has seen Aldi grab market share from its rivals. With a 15% basket discount to the UK's major chains, Aldi is a serious player in the cut-throat world of British retail. Sales at Aldi's rose 36% last year to £5.3bn, and pre-tax profits soared 65% to £260.9m. The success is driving Aldi to plan a £600m expansion to add 120 stores over the next two years.

Tesco, Morrisons, Asda and Sainsbury's have been forced to cut prices in a bid to stop shoppers leaking away. Yet Aldi has only echoed those price drops to maintain its lead on price. Competing on price is difficult for the large supermarkets, which can stock more than 40,000 different products in their largest stores, but are up against the limited range of goods of budget stores like Aldi. By sourcing large amounts of only 2,500 products, Aldi is able to keep costs low and pass on the benefit to shoppers. In addition, more than 90% of its goods are own-label, thus packaging can be designed to fit the maximum amount onto shelves so no space is wasted. Efficiency, simplicity and cost savings help deliver prices that tempt a growing number of shoppers to buy grocery from Aldi.

Price may be an important factor in Aldi's recent success, but it is not the whole story. Aldi had widened their product range to include more fresh fruit, vegetables and meat and worked more closely with British suppliers. Sales of fresh meat has risen 60% a year in the last three years. And its Specially Selected range of premium foods, from brioche buns to specialty coffees, increased sales by 90% last year. Aldi increased its product range from about 900 to more than 2,500 regular lines to broaden its appeal. Shoppers' tastes have also swung their way, with more cynicism about the major grocer's promotions and discounts compared to Aldi's tactic of permanently low prices.

The economic downturn has helped Aldi and its fellow discounter, Lidl. With shoppers short of spare cash, they have been more willing to seek alternatives to save money. Aldi has attracted upper and middle-class shoppers in Britian with deals on treats like champagne and fine wines. Now that the economy is improving, Aldi wants to hold on to those big spenders. Aldi's growth has slowed down and it remains to be seen whether Aldi can hold shoppers' attention once they have more spare cash in their pockets.

Source: Adapted from www.theguardian.com, 29 September 2014

Extract 2: Online shopping changing the economics of supermarkets

Online shopping is changing the economics of supermarkets in a fundamental way that does not bode well for conventional stores. The costs of a store are relatively fixed, in the form of wages and rent, so additional sales will generate progressively bigger profits. On the flipside, when store sales fall, profits will fall faster than sales as many of the costs are set in stone. Yet, investing to sell online may undermine profits of stores by cannibalising sales. This revolution in food retailing may benefit shoppers by offering lower prices and more choices in what and how to purchase, but the large supermarkets still seem to be struggling.

Morrisons' profits have crumbled from £901m two years ago to about £350m this year due to the squeeze on customers' incomes, consumers migrating to cheaper rivals (like Aldi), and consumers shifting to online shopping. Now Morrisons is trying to develop an online sales presence. Tesco has also lost more than 1 million customer visits a week, worth £25m in sales revenue. Tesco's and Morrisons' falling sales and market share despite huge investment, contrasts with the rise of discount grocers Aldi and Lidl, whose sales revenue surged by 36% and 23% respectively.

Source: Adapted from www.bbc.com, 13 March 2014

Extract 3: Asda announces £1bn price-cutting plan

Asda has declared a new price war in the UK supermarket industry where they will effectively cut prices by £1bn over the next five years. Price remains a fierce battleground among the leading supermarkets, with Tesco and Sainsbury's battling over the validity of their price-matching schemes, which pledge to match the price of products at rival retailers or refund customers with a voucher. Asda pledged to be 10 percent cheaper on everyday food items.

In addition to reducing prices, Asda will spend £250m on improving the quality of its own-brand food and will revamp its supermarkets. Asda also intends to tap into the growth in online food sales by opening 1,000 click and collect points around the UK, meaning that customers may be able to collect their shopping from train stations and petrol stations.

Source: www.telegraph.co.uk, 14 Nov 2013

Extract 4: The Impact of the Supermarket Price War

The first food price deflation since 2006 will come as a relief to hard-pressed shoppers in the runup to Christmas. But it puts more pressure on retailers' profits. Falling prices of many agricultural commodities such as sugar and wheat had fed through to shops, while competition between supermarkets looks set to remain intense. In addition, the fall in oil prices was also having a knock-on effect on food prices due to its impact on the costs of producing food from the cost of feed to transport. The strong pound has also helped keep prices low as UK imports roughly a quarter of its food. Given the intensity of competition in the food sector, these savings have been passed on to consumers in the form of lower prices.

Food producers have become cannon fodder in the bitter supermarket price war with 28% more specialist manufacturers shutting down this year than last. The 146 food producers that shut down affect employment in industry and they include wholesale bakeries, pasta makers, fish processors and ready meal manufacturers. In one of the larger cases, 170 jobs were lost when fresh pasta maker Pasta Reale had to shut down in August after it lost three major supermarket contracts.

UK supermarkets are trying to compete on price with Aldi and Lidl but to maintain profit margins, the big supermarkets are putting food producers under so much pressure that we have seen a sharp rise in the number of food producers failing. The rise in bankrupcies among food suppliers is in stark contrast to the reduction in bankrupcies among all firms in the economy as a whole over the same period. The rising popularity of discounters such as Aldi and Lidl are forcing major supermarkets to find ways to reduce the cost of goods through greater efficiencies and that means relying on fewer larger food suppliers, pushing smaller and less efficient firms out of business.

In a bid to protect suppliers from bullying by supermarkets, the government last year appointed a grocery code adjudicator, Christine Tacon, with the power to fine the UK's biggest retailers millions of pounds if they are found to have abused their power. But the adjudicator's remit is limited to examining whether retailers have broken the terms of contracts. She cannot interfere in the original price negotiation that forms the basis of a contract and that leaves suppliers vulnerable.

Given the transformation in the UK grocery industry, analysts believe that major supermarkets have to close down one in five stores in order to reduce their cost base, compete on price with discounters Aldi and Lidl, and grow profits. Current trends suggest that sales in large supermarkets will fall 18 percent over the next six years and store closure is the only viable option. As supermarkets close their stores, one possibility is to redevelop the land into residential property.

Source: Adapted from www.theguardian.com, 24 November 2014

Table 1: Selected Economic Indicators, UK

Indicator	**2011**	**2012**	**2013**	**2014**
Nominal GDP growth (annual %)	2.0	1.2	2.2	2.9
Inflation Rate (annual %)	2.1	1.6	2.0	1.8
Employment in services (% of total)	79.0	79.0	79.3	79.1
Employment in industry* & agriculture (% of total)	20.3	12.0	19.7	20.0
Unemployment Rate (% of total labor force)	8.0	7.9	7.5	6.1
Youth Unemployment Rate (% of total labor force ages 15-24)	21.3	21.2	20.7	16.9

**industry: includes food producers*

Source: www.worldbank.org, accessed 30 August 2016

Figure 1: UK Supermarket Market Share (%) November 1994

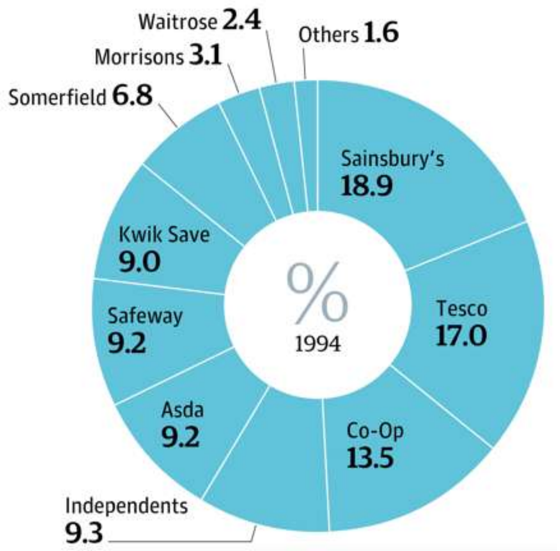
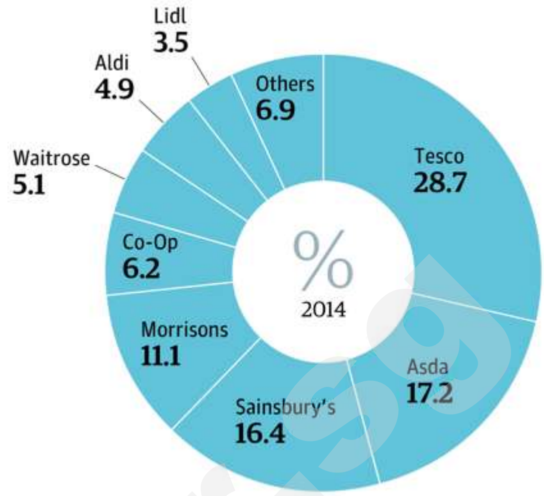


Figure 2: UK Supermarket Market Share (



%) November 2014

Source: Kantar Worldpanel, November 1994 and November 2014

Questions

1 **(a)** **(i)** Explain how real GDP growth can be calculated from the data in Table 1. [1]

(ii) State how the level of real GDP has changed from 2011 to 2013. [1]

(b) Account for the surge in Aldi's sales revenue using the concepts of price and income elasticity of demand. [4]

(c) Comment on whether the pricing behavior of firms in the supermarket price war is in alignment to traditional economic theory. [6]

(d) Discuss the factors that supermarkets should consider in deciding whether to develop their online sales presence. [8]

(e) Discuss whether the UK government should be concerned about the supermarket price

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[Total: 30 Marks]

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Question 2 **Troubles in Brazil and Russia**

Extract 5: End of Quantitative Easing

The Federal Reserve announced the end of its Quantitative Easing (QE) Program on Wednesday, marking the close of a six-year effort to stimulate the economy. The decision reflects how much the economy has improved since the recession. The Federal Reserve has also given indications that with the end of QE, it will likely raise the interest rate in 2015.

The Fed's relatively optimistic language about inflation and the labor market was a "hawkish," or positive, move. Many economists and traders expect the Federal Reserve to begin raising rates in the summer of 2015.

Source: CNN Money, Patrick Gillespie, 29 October 2014

Extract 6: Wake up call for emerging economies

The OECD Friday said the end of US Quantitative Easing Program should be a "wake-up call" for emerging economies to accelerate reforms. Emerging economies have suffered sharp capital outflows and losses to their currencies as a by-product of Federal Reserve ending its mammoth Quantitative Easing program.

Yellen said in the Feb 12 testimony that the Fed was keeping a close eye on market volatility, but offered little sympathy for the plight of emerging economies. On Thursday, IMF chief Christine Lagarde cautioned the US to be "mindful" of the impact of ending its QE on emerging economies, although she also said that emerging economies should "mind the shop at home".

Source: The Straits Times, 21 February 2014

Extract 7: Hard times ahead of Brazil and Russia

Nearly 20 years on, two members of the "BRICs" (Brazil, Russia, India and China) responsible for propping up global growth in 2010, are now close to recession. The mixture Brazil and Russia face—falling currencies, high inflation and slow growth—could make 2015 a very bad year.

The largest emerging economies after China, together Brazil and Russia have the heft of Germany. In both countries the currency is sliding. The Brazilian Real hit new lows in November after data revealed the budget deficit reached a record in September. The Russian Rouble is dropping faster, down 27% in a year and 10% in the past month. Both face stagflation: bubbly prices coupled with growth rates likely to be below 1% this year.

Some of their pain comes from abroad. Brazil's main trading partners are slowing (China) and stagnant (the Euro area). Not only are export volumes down; the prices of things Brazil sells—iron ore, petroleum, sugar and soyabeans—are dropping as global demand falters. Russia is feeling the slowdown too, as energy prices fall. It is one of the world's biggest producers of oil and natural gas. Its big five energy firms employ close to 1m workers. Exports worth $350 billion flowed through pipelines to Europe and Asia in 2013.

For Russia, her self-inflicted wounds are even more severe. Vladimir Putin's invasion of Ukraine led to American and European sanctions that have been gradually tightened since they were imposed in July. The rules ban American firms from selling kit or advice to Russia's energy giants. This prevents Western oil firms from helping Russian ones develop oil- and gasfields. Mr Putin's retaliation—import tariffs on Western goods—has pushed up domestic prices further.

There could be worse to come. The drop in commodity prices looks set to last. Meanwhile, in order to crimp inflation and stem the slide in their currencies the central banks in both countries raised their interest rates last month. At the same time, worried finance ministries are rushing to reduce burgeoning budget deficit. In Brazil, fuel-tax hikes are being put forward in discussion, and tax breaks on car purchases may be scrapped. In Russia, a rule that caps the budget deficit at 1% of GDP may require tightening of the fiscal policy.

This frugality will hurt. Banks could prove vulnerable as public-sector spending cuts hit incomes and high interest rates make loans hard to service. In Russia things are particularly bad: non-performing loans are rising, and savers are draining the banks of Roubles.

Source: The Economist, 8 November 2014

Extract 8: Why Brazil needs to change

The troubled world economy and the end of the great commodity boom have hurt Brazil. But it has fared worse than its Latin American neighbours. President Rousseff's constant meddling in macroeconomic policies have resulted in falling investments and few efforts were made to tackle Brazil's structural problems: its poor infrastructure, high costs, high and burdesome tax systems, mountains of red tape and a rigid labour laws.

Moving forward, President Rousseff should strive to cut bureaucracy and implement sound macroeconomic policies such as simplifying the tax system, greater trade liberalisation to allow its domestic firms benefit from significant economies of scale with lower barriers to export. The Brazilian government should also work on boosting its productivity performance, curb rising wages to enhance its competitiveness and encourage private investment in infrastructure. It should also strive to trim government expentiture and hopefully to boost confidence by demonstrating a strong commitment to balance the government budget.

Source: The Economist, 14 October 2014

Table 2: GDP Growth Rates (Annual % change at constant prices in local currency)

	2010	2011	2012	2013	2014
Brazil	7.5	3.9	1.9	3.0	0.1
Russia Federation	4.5	4.3	3.5	1.3	0.7

Table 3: Inflation, consumer prices (annual %)

	2010	2011	2012	2013	2014
Brazil	5.0	6.6	5.4	6.2	6.3
Russia Federation	6.8	8.4	5.0	6.8	7.8

Table 4: Current Account Balance (in Billions US$)

	2010	2011	2012	2013	2014
Brazil	-75.8	-77	-74.1	-74.8	-104.2
Russian Federation	67.5	97.3	71.3	33.4	58.3

Table 5: Exchange rates (National currency units/US dollar)

	2010	2011	2012	2013	2014
Brazil (Real)	1.76	1.67	1.95	2.16	

Russia Federation (Rouble)	30.37	29.38	30.84	31.84	38.38

Source: World Bank and OECD

Questions

2 **(a)** **(i)** Compare the change in Brazil's current account balance with that of Russia Federation between 2010 and 2014. [2]

(ii) Explain how the change in Brazil's current account balance might affect its growth rate as shown in Table 2. [2]

(b) Explain how raising interest rates would 'crimp inflation'. [3]

(c) **(i)** How does the value of the Russian Rouble in 2014 compare with its value in 2010? [1]

(ii) With the help of a supply and demand diagram, explain how the end of Quantitative Easing in US would account for the change in the value of Russia Rouble. [4]

(d) IMF chief Christine Lagarde cautioned the US to be "mindful" of the impact of ending its QE on emerging economies, although she also said that emerging economies should "mind the shop at home".

To what extent is the end of QE accountable for the economic performance of Brazil and Russia? [8]

(e) As an economic advisor to Brazil, what options would you recommend to the government as possible responses to achieve sustained economic growth? Justify your answer.

[Total: 30 Marks]

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PJC 2016 H2 Paper 1 Prelim Exam Suggested Answers

Question 1: Supermarket Shake Up

(a)	**(i)**	Explain how real GDP growth can be calculated from the data in Table 1.	**[1]**
	Suggested answer**:** Real GDP growth is calculated by subtracting the inflation rate from nominal GDP growth. **Real GDP growth = Nominal GDP growth – Inflation Rate**		
(a)	**(ii)**	State how the level of real GDP has changed from 2011 to 2013.	**[1]**
	Suggested answer**:** The level of real GDP has **fallen / decreased** from 2011 to 2013.		
(b)	Account for the surge in Aldi's sales revenue using the concepts of price and income elasticity of demand.		**[4]**
	Suggested answer**:** **Explanation of how PED accounts for rising Revenue 2 marks** Aldi's groceries (own label, etc) are price elastic in demand (PED>1) due to the availability substitutes / high proportion of income spent on groceries as many consumers have low income during recession / austerity. As Aldi cuts prices, quantity demanded rises more than proportionately thus total revenue (PXQ) rises and surges. **Explanation of how YED accounts for rising Revenue 2 marks** The economic downturn shows incomes are falling, and Aldi's goods are inferior goods (own label), thus YED<0 and fall in income leads to rise in demand/Qty demanded, this boosts total revenue too (assuming price remains constant).		
(c)	Comment on whether the pricing behavior of firms in the supermarket price war is in alignment to traditional economic theory.		**[6]**
	Suggested answer: The firms in the supermarket industry operate in a competitive oligopolistic market structure. There are few dominant firms in the market and each is interdependence in their behavior to the other. According to the traditional economic theory on price rigidity, prices in the market tend to be rigid. As a result, firms in a competitive oligopoly market tend to compete via non-price competition than price competition. According to the theory of price rigidity, when a firm increases his price, his rival firms will not follow suit. This will cause the firm to have a fall in quantity demanded by more than proportionate and his total revenue will fall. Thus, the profit maximizing firm will choose not increase his price. In the same way, if the firm lowers his price, his rival firms will also reduce their prices. Consequently, the firm will have a rise in his quantity demanded by less than proportionate and his total revenue will fall. Thus, the firm will again choose not to reduce his price. This interdependence behavior of the competitive oligopoly explains why firms in this industry do not usually compete via prices. However, as seen in the extract 1, when Aldi reduced its price, the other supermarkets like Tesco, Morrisons, Asda and Sainsbury also cut their prices. This is not aligned with price rigidity as espouses in the theory.		

However, <u>in the short run</u>, firms may occasionally choose to compete using price as they are maximizing market share (for long term gain) at the expense of their short term profits. The firms may be willing to earn subnormal profits in the short run as long as they are able to protect / expand their customer base. Overtime, the smaller supermarkets that are not able to survive the price competition will exit the industry, leaving the entire market to the few surviving supermarkets. By then, the supermarket can raise their prices and make supernormal profits again. The price war can be considered to be short term adjustments by firms. In the long run, the behavior of the firm <u>is still in alignment</u> with the price rigidity theory as price war is unsustainable. Price will remain rigid in the long run.

(d)	Discuss the factors that supermarkets should consider in deciding whether to develop their online sales presence.	**[8]**

Suggested Answer

All supermarkets seek to maximize their profits (i.e. total revenue - total costs). When deciding whether to develop their online sale presence, the supermarkets will weigh their revenue gain against the cost incurred, taking into account any constraints they may face (eg in terms of fundings) and any unintended consequence from the external environment of the firm.

By having an online sales presence, supermarkets can increase their market share by reaching out to customers not in the proximity of their brick-and-motor stores. Sales demand can also be from overseas, allowing potential for rapid growth, rising the supermarket's demand in the future. AR and MR both shift rightwards, increase total revenue. In addition, by leveraging on technology, supermarket gain insights into their customer's needs and better cater their product ranges to the customers. Customers can select their groceries anytime at any place and compare prices for different brands. This improved shopping experience can increase customers' loyalty to the supermarket involved, reducing the supermarket's price elasticity of demand(PED), reducing its cross elasticity of demand (CED)with respect to a rival supermarket and increase demand for the supermarket. When PED is reduced, the supermarket can increase the prices of its groceries, quantity demanded will fall less than proportionately and total revenue can rise. With a fall in CED, the supermarket will experience a smaller fall in the demand for its groceries by less than proportionate when the rival supermarket reduces its price. This is especially important in times of future price war situations.

In the context of falling income, customers in UK are shifting to online stores in an attempt to buy possible cheaper goods available. The revolution in food retailing has seen shifted taste and preference of customers towards shopping online. Supermarket that fail to develop their online sale presence may lose these customers that have shift their shopping online eventually. Thus, in an attempt to protect their market share and reduce the potential fall in total revenue, supermarkets have little choice but to start an online presence.

However, there is uncertainty that the investment to build an online presence can increase total revenue. Online presence intensify competition for the supermarket as their competitors now stretch to any online grocery stores in the world or even the third parties selling groceries. In addition, the increase in sales revenue from the online stores can stem from a fall sales from the same group of customers from the brick-and-motor stores. Thus, demand and total revenue may not rise with an additional channel for sales. By having online presence, the supermarkets can reduce their fixed and variable costs as supermarkets can reduce their fixed and variable costs from expensive retail premises and customer-facing staff. In addition, supermarket can utilise its existing warehouse, logistic systems and related personnel to enjoy technical economies of scale and reduce its average cost of production. This allows the supermarket to move along the falling arm of its LRAC.

	With an addition sales channel, there could be problems arising in communication and overstaffing problem in some departments. This will cause diseconomies of scale and increase the average cost. The eventual impact on the average costs depends largely on how the supermarket reorganizes itself with the new department on online sales. In addition, supermarket will incur additional costs related to having a new online sale platform. Some of these may include costs in starting an internet platform and security systems etc. In the context of falling profits for many years, supermarket like Morrison may have problem coming up with these additional funds to invest in the online presence. In deciding if the supermarket should develop their online sales presence, each supermarket has to weigh its revenue and cost advantages and disadvantages of this decision against the constraints and unintended consequences. The failure to move in tandem with the online shopping trend will mean a huge fall in the supermarket demand in the long run. The possible reaction from rival firms to develop their online platforms can also intensify the overall competition online, reducing profitability of the move to invest online overtime. These factors with long term repercussion tend to be more important. In addition, the development of online sales platform should be seen in the overall larger non-price strategy of the supermarket. There are other strategies that the firm can employ in the short run to increase their profits while slowly develop their online sale platform when their funding improve.		
(e)	Discuss whether the UK government should be concerned about the supermarket price war.		**[10]**
	<u>Suggested answer</u>**:** The UK government has microeconomic aims of equity and efficiency as well as macroeconomic aims of sustained economic growth, low unemployment, low inflation and healthy balance of payments. In this context, the price war has impacts on <u>**equity**</u>, <u>**efficiency**</u>, <u>**employment**</u> and <u>**inflation**</u> and it may be a concern in some areas. In terms of <u>**equity**</u> and <u>**inflation**</u>, the supermarket price war would bring about benefits to UK consumers, thus it is not a concern. The price war results in falling prices as Aldi cuts prices, and her rivals follow. Overall, the prices of groceries in UK will fall, and this reduces the **cost of living**, making groceries more affordable for everyone in the UK, especially benefitting the **low income groups** or unemployed who spend a large proportion of income on groceries / food which is a basic necessity. The fall in prices increase consumer welfare and material standard of living for all UK residents as they will now be able to afford more groceries with their income. The **inflation rate** can be kept low as food price inflation is controlled, and this is beneficial especially since the economy is starting to have economic recovery and rising national incomes from 2014 onward and inflation rates are likely to rise in future. In the long run, this may be of concern to the government. The price war causes the large supermarkets to face subnormal profits. If Aldi and Lidi manage to drive out all other supermarkets, the market will become a duopoly or monopoly. Aldi might then be able to raise prices and exploit consumers as this scenario means they have no competitors to offer alternatives to consumers. The grocery market would become more allocative inefficient as prices rise (higher than MC) and quantity falls under a monopoly. With less supermarkets in the UK, there would be less choices for consumers as well since the variety of products in Aldi is much less than the variety of products in large supermarkets (2500 vs 40000).		

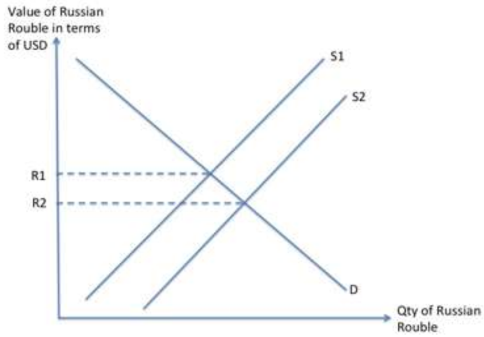
The price war is a concern as it may cause rising **unemployment**.
Large supermarkets are closing down numerous supermarket stores due to **subnormal profits** as a result of the price war. This means many supermarket workers will become unemployed. Also, large supermarkets are reducing costs by forcing food producers to sell their food products more cheaply and some food producers who are unable to do so lose sales and **shut down**, resulting in rising unemployment too. The **unemployment rate** is quite high in the UK and it would be a concern as more people would need **unemployment benefits** and this puts a strain on the **government budget**. This is why the UK government appointed a grocery code adjudicator to manage the behavior of supermarkets to ensure food producers can survive.

However, this may not be a concern as the **overall UK unemployment rate actually fell (7.5% to 6.1%)** and across the country, less firms have been shutting down overall. Furthermore, food producers are just a **small proportion of the whole UK employment (20% employment in industry and agriculture**). The alternative perspective to consider is that this market (food producers) may have several **productive inefficient** firms, with higher **average costs** than the efficient firms, thus the supermarket price war forces inefficient firms to shut down, and only the efficient firms that produce on the **LRAC** and produce with large scale at lowest average costs can survive. This frees up land and labour resources to be channeled to other sectors and this is beneficial to the UK as it improves overall levels of **efficiency**.

The price war improves equity and inflation in the short run, but in the long run, the government must monitor the behavior of Aldi to ensure prices are not raised. Unemployment as a whole (youth and overall) is falling even with some food producers and supermarkets shutting down. If the economy continues to grow and jobs are created in other sectors to take the unemployed workers from supermarkets and food producers, it may, overall be beneficial to the UK instead. Hence, overall, the UK government should not be concerned, as the benefits currently outweigh the costs.

Question 2: Troubles in Brazil and Russia

(a)	**(i)**	**Compare the change in Brazil's current account balance with that of Russia Federation between 2010 and 2014.**	**[2]**
	Suggested answer: Current account balance for both Brazil and Russia Federation worsen from 2010 to 2014. However, Russia's current account balance remained in surplus while Brazil was in deficit.		
(a)	**(ii)**	**Explain how the change in Brazil's current account balance might affect its growth rate as shown in Table 2.**	**[2]**
	Suggested answer: As Brazil's current account balance worsens during the period, it might indicate that net exports fell. As net export is a component of AD, AD would decrease. At the same time, other components of AD (such as C, I or G) might have risen during this period hence real NY would increase at a decreasing rate, resulting in falling growth rates from 2010 to 2014.		
(b)	**Explain how raising interest rates would 'crimp inflation'.**		**[3]**
	Suggested answer: Raising interest rate means a higher cost of borrowing and at the same expected rate of returns, investment projects will appear less profitable. Hence investment falls. Higher interest rates mean higher returns to savings. The opportunity cost of current consumption increases and households increase savings and reduce consumption. When the economy is facing demand-pull inflation, a fall in AD caused by a fall in C and I and thus decreases GPL. Hence, an increase in interest rates can control demand-pull inflation.		
(c)	**(i)**	**How does the value of the Russian Rouble in 2014 compare with its value in 2010?**	**[1]**
	Suggested answer: The Russian Rouble depreciated.		
(c)	**(ii)**	**With the help of a supply and demand diagram, explain how the end of Quantitative Easing in US would account for the change in the value of Russia Rouble.**	**[4]**
	Suggested answer: Due to the end of quantitative easing, interest rates in US would increase (extract 5). Due to rise in IR in the US, it would attract inflow of short-term capital. This would meant an outflow of short-term capital from Emerging Economies such as Russia as IR in emerging economies are lower and thus deemed to have lower returns from the short term capital investments. As short-term capital move out of Russia, it would lead to a rise in SS of Russian Rouble.		



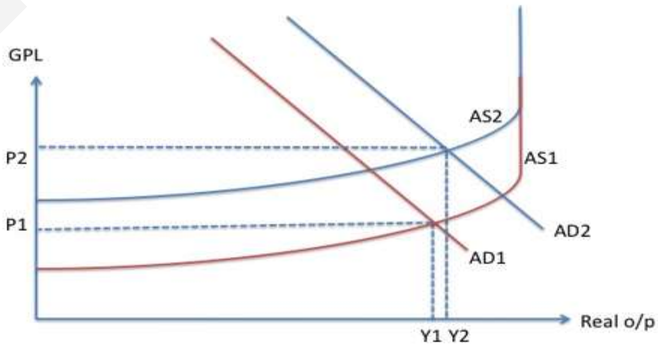
As shown in the diagram above, increase in SS of Russian Rouble from S1 to S2 would lead to a fall in value of Russian Rouble from R1 to R2. Thus end of Quantitative easing in US would cause a depreciation of the Russian Rouble.

(d) **IMF chief Christine Lagarde cautioned the US to be "mindful" of the impact of ending its QE on emerging economies, although she also said that emerging economies should "mind the shop at home".**

To what extent is the end of QE accountable for the economic performance of Brazil and Russia? **[8]**

Suggested answer**:**
The end of QE has caused currencies of both Brazil and Russia to depreciate. This has thus resulted in problems such as high inflation and slow economic growth in both Brazil and Russia.

With a weaker currency, prices of imports increases causing cost of production to increase sharply. As emerging economies such as Brazil and Russia relies on import of capital goods and consumer goods to a large extent, the impact on cost of living and and cost of production for firms would be significant.



As such, the AS curve shift upwards from AS1 to AS2, resulting in cost-push inflation as GPL increase from P1 to P2. This is as shown in table 3 where inflation rates for both countries rose to 6.3% and 7.8% respectively in 2014.

Furthermore, items exported by Brazil and Russia are largely raw materials or commodities *(extract 7: …Brazil sells—iron ore, petroleum, sugar and soyabean…It*

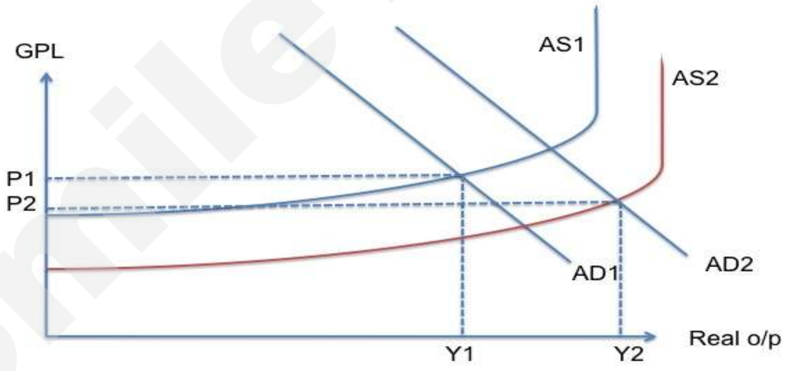
	inelastic in demand. Hence when Real and Rouble depreciated due to end of QE, fall in price of exports will cause a less than proportionate fall in quantity demand for exports. As such, the value of X for both Russia and Brazil decreases. As demand for imports are price elastic, fall in price of imports will cause a more than proportionate rise in quantity demanded for imports. As such, value of M for both Russia and Brazil increases. This would thus account for the deteriorating current account balance for both Russia and Brazil as shown in table 4 and possibly a deteriorating BOP assuming other factors remains unchanged. Furthermore, assuming that other components of AD rose which supersedes the effects of falling X by a small extent, AD would rose from AD1 to AD2 and thus resulting in slow growth from Y1 to Y2. This is also as shown in table 2 where growth for both Brazil and Russia fell to 0.1% and 0.7% respectively in 2014. Hence, end of QE could be accountable for the economic performance of Brazil and Russia. However, end of QE should not be solely responsible for the economic performance for Brazil and Russia. There were other factors as detailed in extract 7 and 8 that suggest that other reasons were more prominent in causing poor economic performance. In extract 7 *(Some of their pain comes from abroad. Brazil's main trading partners are slowing (China) and stagnant (the Euro area). Not only are export volumes down… global demand falters. Russia is feeling the slowdown too)*, it was mentioned that demand for X from Brazil and Russia are falling due to falling NY of trading partners. Brazil's main trading partner such as China and Euro area are suffering with slow and stagnant growth thus demand for commodities and raw materials in manufacturing goods and services would fall. Furthermore, demand for crude oil would also fall as production slows down. As such, demand for Brazil's and Russia's X fall, assuming that other components of AD rose which supersedes the effects of falling X by a small extent, AD would rose by small extent, resulting in slow growth. Furthermore, retaliation by Russia after sanctions by US and EU has caused rising inflation in Russia. Due to import tariffs on import goods of US and EU, cost of production rose as Russia depends on these developed countries for import of machineries and other raw materials for production. This would thus result in AS curve to shift upwards, increasing cost-push inflation. Lastly, efforts by both Brazil and Russia government to prevent further depreciation in the currency values and inflation have resulted in rising interest rates which further slows down economic growth. While rising interest rates will reduce outflow of short term capital which thus reduce rise in SS of Real and Rouble currencies and hence reducing further depreciation of currency values and cost-push inflation, rising interest rates would also reduce C and I. As rising interest rates would increase cost of borrowing for both consumers and firms, Consumers and firms are less willing and able to borrow from banks to spend on big-ticket items or invest in capital goods. As such, C and I would fall, reducing the rise in AD which thus slows down growth. In conclusion, the end of QE should not be accountable for the economic performance of both Russia and Brazil. While end of QE have resulted in depreciation of currencies in both economies, there were other reasons that were more compelling in accounting for the economic performance of both countries. In fact, falling GDP growth rates, trend of rising inflation, worsening of the current account balance and exchange rates started in 2010 which was 4 years before the announcement of an end of QE. This suggest that there were other issues that Brazil and Russia are suffering from that causes the poor economic performances.	
(e)	**As an economic advisor to Brazil, what options would you recommend to the**	**[10**

government as possible responses to achieve sustained economic growth? Justify your answer.]

Suggested answer:

From extract 7, Brazil is currently suffering from slow growth due to falling demand for raw materials and commodities from its major trading partners. The country is also suffering from internal structural issues such as poor infrastructure, high and burdensome tax systems, red tape and rigid labour laws as stated in extract 8. Furthermore, Brazil is laden with rising budget deficit which therefore limits that use of expansionary fiscal policy and in efforts to prevent further depreciation of its currency and rising inflation, have raised interest rates.

While there is little that the government can do in boosting economic growth through demand management policies, the Brazil government should deployment market oriented supply side policies to achieve sustained economic growth. Through market oriented supply side policies such as relaxing the rules and regulations on investments. Such methods of deregulation would open up market to allow more private investments to be able to invest easily in the Brazil. Reducing corporate taxes would encourage greater investments due to greater retained profits. This would also encourage inflow of FDI in view of the higher after tax profits. Furthermore, such efforts would also encourage private investments on infrastructure development which would boost efficiency in transportation networks and reduce cost of production for firms. Market oriented supply side policies through relaxation of labour laws enable the labour market to work freely and thus keeps wages low. This would thus reduce cost of production for firms, attracting investments into the economy.



As shown above, AS curve would shift out from AS1 and AS2 as increase in investments would raise both the production capacity as well as the productivity of workers. AD would also increase from AD1 to AD2. Hence with both AD and AS shifting out, sustained economic growth can be achieved.

Though reducing taxation might worsen the budget deficit which erodes confidence in the economy, Brazil may choose to cut government expenditures on areas that does not boost growth such as spending on defense and grants or subsidies on inefficient and incompetent firms. Furthermore, with rising investments from domestic and foreign firms, government might be able to collect greater tax revenues eventually assuming that rise in profit made by firms supersedes the fall in corporate tax rates. Thus, budget deficit might not worsen after all.

	Furthermore, Brazil can adopt trade policies that would enable freer trade and to also diversify the trading partners that it have to gain greater stability and growth via its external sector. Greater trade liberalization will allow its domestic firms to trade sell more of its exports easily to the world. The increase in production would also mean domestic firms are able to reap economies of scale which thus lower cost of production, enhancing its cost competitiveness. This would lead to a rise in X from Brazil, increasing AD from AD1 to AD2. In addition, diversification of trading partners through negotiation of FTAs with other economies would help to reduce impact of fall in X of one nation/region on Brazil's exports. In conclusion, due to the multiple problems that Brazil is facing, there is limited scope in which Brazil can use its demand management policies. Instead, Brazil should focus in resolving the internal structural issues through Market oriented supply side policies in order

H

PIONEER JUNIOR COLLEGE, SINGAPORE
JC2 PRELIMINARY EXAMINATION 2016
for students taking the
General Certificate of Education Advanced Level
Higher 2

ECONOMICS
9732/02

Paper 2
19 September 2016

Additional Materials: Writing Paper
2 hours 15 minutes

9732/ 02 / PJC

READ THESE INSTRUCTIONS FIRST

Write your index number, 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.

Answer each question on a fresh sheet of paper.
At the end of the examination, fasten your answers to each question SEPARATELY.
The number of marks is given in brackets [ ] at the end of each question or part question.

If there are part questions you did not attempt, please write the question number and part in the margins before you submit your answers. *(i.e. if you did Q1 and Q2, but you did not complete 2b, indicate 2b in the margin of the answer script that you submit for question 2.)*

You are advised to spend several minutes reading the question and planning your answers before you begin writing.

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.

Pioneer Junior College

Ministry of Education

Answer three questions in total.

Section A

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

1 Global warming has reduced the harvest of high quality coffee beans. This has affected many independent boutique cafes in Singapore which have grown in recent years due to rising affluence and more sophisticated taste for specialty coffee. In addition, these cafes are also facing soaring rents, alongside labour shortages and stiff competition.

Using economic analysis, discuss the impact these events are likely to have on farmers of coffee beans, consumers of specialty coffee and owners of boutique cafes. [25]

2 Profit maximising firms make price and output decisions based on the marginalist principle.

Explain how the marginalist principle helps monopolistic competitive firms to maximise profits and discuss the extent to which such firms are likely to be beneficial to society. [25]

3 All societies face the problem of scarcity arising from limited resources and unlimited wants.

(a) Explain how price mechanism allocates scarce resources among competing needs in an economy. [10]

[10]

(b) Discuss whether it is necessary for the government to intervene in order to achieve an efficient allocation of resources. [15]

[15]

Section B

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

4 Governments have a range of different macroeconomic objectives and there are conflicts between the objectives.

(a) Explain how conflicts might arise between the various macroeconomic objectives. [10]

(b) Discuss the view that the government's fiscal and monetary policies should be focused primarily on achieving a low unemployment rate. [15]

[15]

5 We have made skills, innovation and productivity the basis for economic growth and rising real incomes. This is key to keeping our economy vibrant, with a strong core of Singapore-based companies and with every working Singaporean in well-paying, meaningful jobs.

Source: *Singapore Budget Statement 2014*

(a) Explain how economists assess the economic performance of an economy. [10]

(b) Discuss whether further progress in a country's living standards depends on higher productivity. [15]

6 The world's economies have developed ever-closer links since 1950, in trade, investment and production. Known as globalisation, this process is not new, but its pace and scope has accelerated in recent years, to embrace more industries and more countries.

Source: BBC News, Globalisation, Key Facts: The Global Economy
http://news.bbc.co.uk/2/shared/spl/hi/guides/457000/457022/html/

Discuss the view that globalisation tends to benefit some countries more than others. [25]

End of Paper

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H

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JC2 PRELIMINARY EXAMINATION 2016
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Pioneer Junior College

Ministry of Education

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Discuss the view that globalisation tends to benefit some countries more than others. [25]

End of Paper

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PJC 2016 H2 Prelim Exam Paper 2: Question 1

Question:

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Using economic analysis, discuss the impact these events are likely to have on farmers of coffee beans, consumers of specialty coffee and owners of boutique cafes. [25]

Introduction

These events that are mentioned in the preamble will affect the demand and supply hence affecting the consumers and producers differently through changing the market equilibrium price, quantity, total expenditure and total revenue.

Body Para 1

The farmers of high quality coffee beans are likely to be badly affected by the experience rising total revenue due to the effects of growing taste for high quality coffee beans and global warming. However, the impact on their profits is less certain.

With growing taste for high quality coffee beans, there will be higher demand for high quality coffee beans causing the demand curve to shift rightwards from D1 to D2 as shown in Figure 1. At the same time, global warming reduces the harvest of high quality coffee beans causing the supply of high quality coffee beans to fall, thus the supply curve shift leftwards from S1 to S2 in Figure 1.

The combined effect of a rise in demand and a fall in supply will lead to a sharp rise in the equilibrium price of high quality coffee beans from P_1 to P_2. However, the change in equilibrium quantity is uncertain as a rise in demand will lead to a rise in equilibrium quantity while a fall in supply will lead to a fall in equilibrium quantity. Thus, the effect on equilibrium quantity depends on the extent of change in demand and supply.

Figure 1 Fall in Supply > Rise in Demand for high quality coffee beans

E

If demand for high quality coffee beans were to rise more than the fall in supply, the equilibrium quantity will rise. This is favourable for the coffee bean farmers as both the rise in equilibrium price and quantity will cause the total revenue to rise for the farmers.

However, if the supply of high quality beans were to fall more than the rise in demand, then the equilibrium quantity will fall from Q_1 to Q_2 as shown in Figure 1. In this case, since equilibrium price rise but equilibrium quantity falls, the effect on total revenue is uncertain.

<u>Evaluation</u>
In this case, the effect on total revenue will depend on the size of price elasticity of demand (PED). Since the demand for coffee beans is a derived demand, meaning coffee beans is a raw material that is demanded to produce the final product, specialty coffee, thus the demand is likely to be price inelastic. Even if the price were to rise, café owners will still have to pay for it as they have no other better substitute. Hence, when the price of high quality beans rise, the quantity demanded will fall less than proportionately. Thus, total revenue for the coffee beans farmers is likely to rise from $0P_1E_1Q_1$ to $0P_2E_2Q_2$.

However, the impact on profits may be less certain because coffee beans farmers may have to incur higher cost in reducing the negative effects of global warming. For example, they may have to water the plants more frequently or replace plants that are affected by global warming. Thus, if the total cost rise faster than total revenue, profits of the farmers need not rise.

In the short run, coffee beans farmers are likely to experience higher total revenue given a price inelastic demand but the impact on their profits is uncertain.

In the long run, if the farmers can engage in research and development and develop coffee seeds that are more resistant to the effects of poor weather, there are likely to experience higher revenue and profits if the taste for high quality beans continues to grow.

Body Para 2

Consumers of specialty coffee will tend to benefit from the growing number of independent boutique café and stiff competition in the market while owners of the café may tend to lose out given rising cost of production and the stiff competition.

With rising affluence, there has been a rise in demand for specialty coffee, the extent of increase depending on the size of YED. Since specialty coffee is likely to be a luxury good with +YED > 1, the demand will rise more than proportionately from D1 to D2 with a rise in the level of income as shown in Figure 2.

The effect on supply of specialty coffee is less certain. With the rising cost of coffee beans, wage cost and cost of rental, this will reduce the ability and willingness of cafe owners to supply specialty coffee. Some café owners who cannot survive the high cost may close down resulting in a fall in supply of specialty coffee.

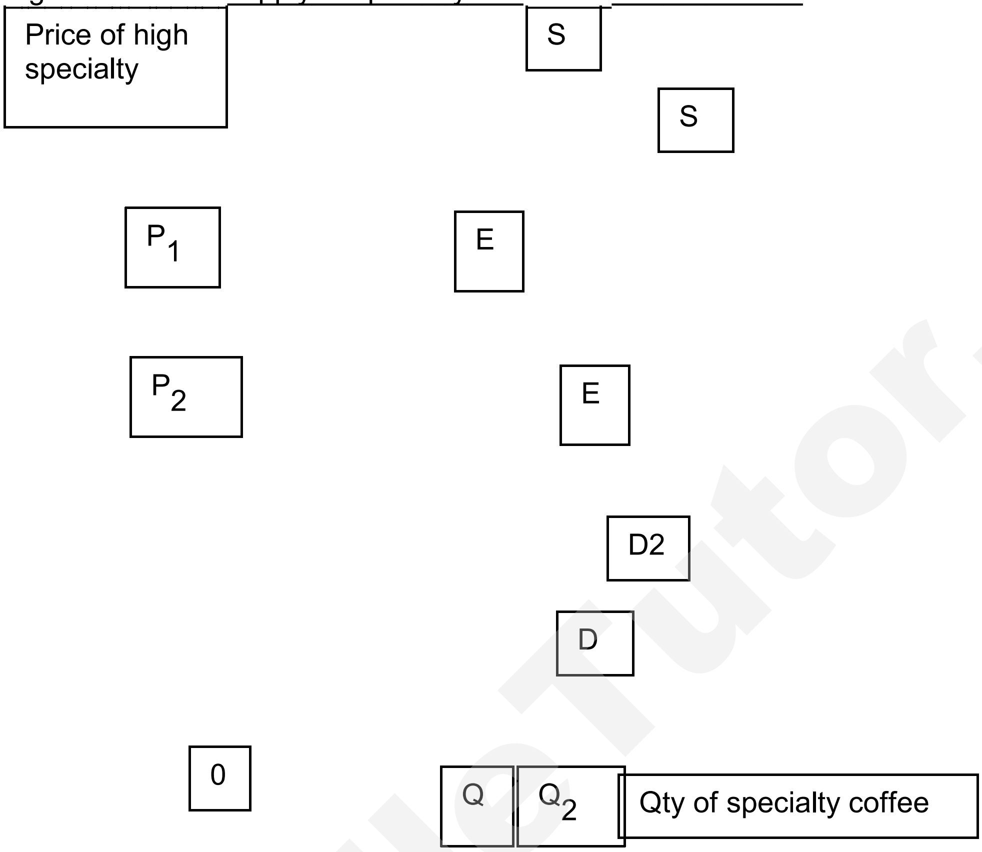
However, in recent years, there has been a growth of new independent boutique cafes as many young Singaporeans aspire to set up their own businesses. Coupled with stiff competition which may force the café owners to increase efficiency and lower their cost of production to stay competitive, supply of specialty coffee will continue to rise.

Overall, if the effect of new café opening up and stiff competition is larger than the rise in cost of production, supply of specialty coffee will still rise from S1 to S2 as shown in Figure 2.

The combined effect of a rise in demand and a rise in supply for specialty coffee will result in an overall rise in equilibrium quantity of specialty coffee while the equilibrium price remains uncertain.

If the demand rises more than the supply, overall equilibrium quantity and price of specialty coffee will rise and this will lead to a rise in total expenditure (TE) of specialty coffee by consumers and a rise in total revenue (TR) of specialty coffee for the café owners. However, if the supply rises more than the demand, overall equilibrium quantity will rise but the equilibrium price of specialty coffee will fall. Thus the effect on TE and TR is uncertain.

Figure 2: Rise in supply of specialty coffee > Rise in demand



<u>Evaluation</u>

1. The effect on TE and TR depends on the PED of specialty coffee. The PED varies for different groups of consumers. Specialty coffee lovers and middle/high income consumers may have relatively more price inelastic demand due to higher ‘addiction’ to specialty coffee and they may find the price of a cup of specialty coffee to be a small proportion of Y. Thus when equilibrium price falls, quantity demanded rise less than proportionately and hence their total expenditure falls. On the other hand, consumers who are sensitive to price of specialty coffee e.g. lower income consumers who do not mind the lower quality but cheaper coffee from the neighbourhood coffee shops may have more price elastic demand and hence when equilibrium price falls, quantity demand rises more than proportionately and their total expenditure rises.

2. The effect on the café owners depends on their ability to differentiate their products and adopt efficient methods of production to cut cost. Given stiff competition, close substitutes are available, and hence the café owners face high positive cross price elasticity (CED) for the specialty coffee that they sell. If the competitor café lowers price, the quantity demanded for their coffee will fall more than proportionately causing their total revenue to fall by large extent. To increase TR, café owners will need to differentiate its product to lower the PED so that it can charge higher price than its competitors and quantity demanded fall less than prop causing their TR to rise. Furthermore, with higher efficiency, café owners can cut cost by reducing the number of workers (e.g. waiters) needed, thus enabling them to raise their profits.

competition among them as it leads to lower price enabling them to enjoy higher consumer surplus. However, café owners may lose out unless they are able to differentiate themselves from their competitors and adopt more efficient methods of production to cut cost.

Conclusion

Hence, in conclusion, the events affect the demand and supply in the markets for coffee beans and specialty coffee. The events are likely to be beneficial to all the parties if they can overcome the effects of the negative events such as the reduction of harvest due to global warming, the rising cost

PJC 2016 H2 Prelim Exam Paper 2: Question 2

Question:

Profit maximising firms make price and output decisions based on the marginalist principle.

Explain how the marginalist principle helps monopolistic competitive firms to maximise profits and discuss the extent to which such firms are likely to be beneficial to society. **[25]**

Introduction

Monopolistic competition is a market structure characterized by many small firms, each with a small market share, selling similar, highly substitutable, differentiated products in a market with low barriers to entry. Firms in theory make decisions using the marginalist principle, considering incremental costs and incremental benefits in their price and output decisions. Firms' decisions and competitive behavior impact consumers and society in terms of allocative, productive and dynamic efficiency, as well as on variety and choice of products to the benefit or detriment of society.

Body Para 1

These firms consider marginal costs and marginal revenues to make decision on price and output for profit maximization.

P

A monopolistically competitive firm such as a cafe is a price setter with a downward sloping, price elastic demand (DD=AR) for its product due to the many close, differentiated substitutes available. The marginal revenue (MR) lies below the AR curve as shown in the figure 1. The firm also faces an upward sloping marginal cost (MC) curve.

The profit maximizing output is at Q* = 4, where MR = MC.

Should the firm produces at output lesser than profit maximizing Q*, for example at Q = 3, where MR > MC. Hence, the firm enjoys additional revenue more than additional cost from the last unit of output. Hence, it can increase profits by increasing output. Thus, there is incentive for a profit-maximising firm to increase output to Q*.

Should the firm produces at output higher than profit maximizing Q*, for example at Q' = 5, where MC > MR. Hence, the firm faces additional cost greater than additional revenue from the last unit of output. Hence, it can reduces the fall in profits from the last unit of output, and hence increase profits by reducing output. Thus, there is incentive for a profit-maximising firm to reduce output to

Hence, firms could adjust the output until the profit maximizing output at Q*, where MC = MR, where additional revenue is equal to additional cost at the last unit of output. At this output, there is no incentive for firms to change output any further. Hence, the profit-maximising equilibrium is at Q*, where MC = MR, as illustrated using the marginalist principle.

Body Para 2

Firms in monopolistic competition are allocative inefficient.

As explained, they profit maximize where MC=MR and set price P_E and output Q_E. The MC at output Q_E is MC_E, which is below price, P_E. Thus price exceeds marginal cost and there is allocative inefficiency.

P

A

MC_{PC}=P

B

C

Allocative efficiency occurs at output QPC where the curves MC=AR intersect and $MC_{PC}=P_{PC}$, the price, output and marginal cost that would be achieved in a perfectly competitive market. There is a deadweight loss area of ABC and society's welfare is not maximized as a result of this higher price and lower output compared to the socially optimum Q_{PC}.

Thus monopolistically competitive firms may not benefit society in allocative efficiency compared to perfect competition as P>MC.
However, compared to oligopoly and monopoly, which are also allocative inefficient, the many sellers in monopolistic competition means firms have low market power, and in reality, they tend to set prices only slightly (small extent) higher than MC. Thus, for this reason, between these three more realistic market structures, MC tends to be the least allocative inefficient and is generally regarded to be more equitable in its pricing behavior.

Body Para 3

Also, these firms are beneficial in that they provide more variety and choice to consumers compared to other market structures.

While prices may be slightly higher than MC, the many small firms selling differentiated products offer consumers a wide variety of choices, which benefit consumer welfare. For example, in the hawker food industry, people can choose between chicken rice, noodle soup, pasta, chicken chop, porridge, etc, as small hawker food stalls sell differentiated food products, allowing consumers to eat different types of food that suits their tastes and preferences for each meal. The perfect competition market has a homogeneous product where consumers do not have any choice, while an oligopoly has few large firms for example the 3 telcos of Singtel, Starhub and M1 in Singapore – and there is not that much of a choice / variety. In a monopoly, there is only 1 firm, and again, consumers have no choice and variety.

Thus, monopolistically competitive firms offer consumers the greatest variety and choice, hence bringing great benefit to consumer welfare
The industries where monopolistically competitive firms are most beneficial tends to be those where consumers place a strong value in having choice and variety, such as personalized services like hairdressing, food, fashion etc.

Body Para 4

Monopolistically Competitive firms tend to be productive efficient

Due to the low barriers to entry, when there are supernormal profits made in the short run, new firms will enter the market to erode the market share of current firms until there are only normal profits made again. This intense competition forces firms in such industries to be productive efficient because if they do not keep their costs under control, it causes their average costs to rise, resulting in subnormal profits and they will then have to shut down. This is in contrast with monopoly and oligopoly, where large firms may be X-inefficient because long run supernormal profits and high barriers to entry allow them to continue making supernormal profits even if they are producing with higher average costs as they can just pass on the higher costs to consumers by raising prices without worry of entry of new competitors in the market. This means monopolistic competitive firms tend to produce on the long run average cost curves (LRAC).

Thus, monopolistically competitive firms tend to be productive efficient, benefitting society by ensuring that scarce resources are utilized efficiently.

Body Para 5

However, large firms may be more beneficial with economies of scale (EOS).

Large firms can operate on large-scale production, and reap internal EOS -cost savings like technical EOS or bulk buying EOS which result in lower average costs. For example, a large supermarket can bulk order food products from suppliers and secure cheaper meat and eggs, reducing average costs and this allows them to pass on cost savings to consumers, which would benefit from lower prices compared to small monopolistically competitive firms that operate on a small scale and hence do not have the bargaining power to enjoy lower average costs from bulk buying.

While firms in monopolistic competition are productive efficient, large firms may enjoy internal EOS, which would be more beneficial to consumers if they pass on cost savings and there are lower prices in the market.
Whether larger firms are more beneficial also depends on the presence and scale of internal EOS to be reaped in that industry.

Body Para 6

Firms in monopolistic competition tend not to be dynamic efficient.

Dynamic efficiency involves innovation and research and development (R&D) to develop new products with improvements in quality over time, or technological improvements in the production process to reduce average costs over time. Innovation and R&D requires that firms have the willingness and ability to invest in R&D. The ability to R&D depends on long run supernormal profits, which are present only in an oligopoly or monopoly where there are high barriers to entry. The willingness to R&D depends on the payoff after successful R&D, which tends to be present in oligopolies and monopolies, where imperfect information and patents allow firms to have exclusive ability to produce their product, like Apple / Samsung (smartphones) or Pharmaceutical firms producing medicines. Patents allow them to set high prices to earn supernormal profits as an incentive for R&D.

Since monopolistic competitive firms tend not to have the above two aspects, innovation and R&D will be unlikely and thus, society does not benefit from dynamic efficiency in such markets.
In some industries where innovation is important (tech-firms / medicines), oligopolies would be more beneficial to society than monopolistic competitive firms.

Conclusion

Thus, monopolistically competitive firms in theory use the marginalist principle setting price and output where MC=MR to maximize profits, and the nature of the industry causes them to behave in certain ways resulting in them being unable to achieve allocative efficiency and dynamic efficiency. However, despite that, they do benefit society in terms of choices, variety, productive efficiency and generally low, equitable prices. For products where choice and variety is important to consumers, and where there is limited scope for EOS, it is more beneficial to society to have monopolistically competitive firms.

PJC 2016 H2 Prelim Exam Paper 2: Question 3

Question:

All societies face the problem of scarcity arising from limited resources and unlimited wants.

(a) Explain how price mechanism allocates scarce resources among competing needs in an economy. [10]

(b) Discuss whether it is necessary for the government to intervene in order to achieve an efficient allocation of resources. [15]

a) Explain how price mechanism allocates scarce resources among competing needs in an economy. [10]

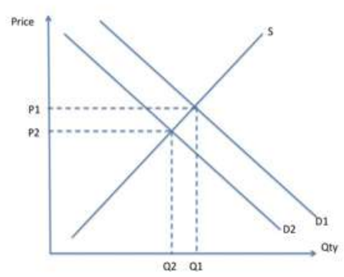
Introduction

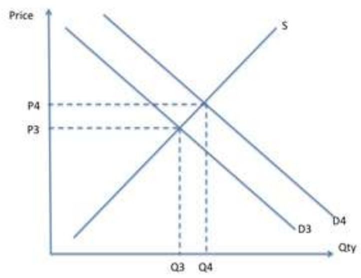
Every economy faces the problem of limited resources and unlimited wants. Price mechanism addresses this problem of scarcity by allocating the economy's resources through answering the three economic questions of what to produce, how to produce and for whom to produce. In the process, consumers and producer interact through forces of demand and supply which brought about the allocation of limited resources to the production of various goods and distributing it to those whom are willing and able to pay – fulfilling some of the unlimited wants of society.

Body Para 1

Due to self-interest, consumers seek to maximise their consumer satisfaction. Consumers signal their choice via the price they are willing and able to pay for different goods and services in the market. Consumers are more willing and able to pay for goods which bring them high satisfaction. Hence the demand for such goods tend to be higher than goods which consumers do not value. Producers, on the other hand, want to maximise profits. They will divert the resources towards production of goods that reap them the highest profits.

For example, with the development of technology and the emergence of 3rd generation (3G)of mobile phones, consumers demand for 2nd generation (2G)of mobile phones fell sharply (D_1 to D_2), and the demand for 3G mobile phones rose sharply (D_3 to D_4) as it now give consumers a higher satisfaction than 2G mobile phones. For 2G mobile phones, at the original price, there would be a surplus, creating a downward pressure on price and equilibruim price would fall to P_2. For 3G mobile phones, the rise in demand would create a shortage at the original price, and the equilibrium price would rise to P_4. Prices signal to profit maximizing electronics producers that they should divert resources from producing 2G mobile phones to produce 3G mobile phones so they can receive a higher price, sell a higher quantity, and receive a higher total revenue. Assuming constant costs –





Thus, price mechanism, through forces demand and supply, allocate scarce limited resources among competing needs in the economy towards the production of goods the society wants – answering the question of “what to produce”.

Body Para 2

Profit maximising producers will combine resources in the most efficient way to produce the good so as to minimize costs and maximize profits.
This answers the second economic question of ‘How to produce’ to fulfill unlimited wants as producers maximize the returns from their limited resources in each market.
In deciding between capital or labor intensive production methods, producers will look at the relative cost of production between the methods. If the price of capital intensive method of production fell due to improvement of technology, the producers will produce switch from labour intensive methods of production to capital intensive methods of production as labour intensive methods of production will not be deemed as more expensive and thus higher cost for the producers.
Thus, price mechanism allocate factors of production to meet the competing wants of the economy through their factor costs. The factor with the lower cost factors will be used to bring about the maximum profits for the producers.

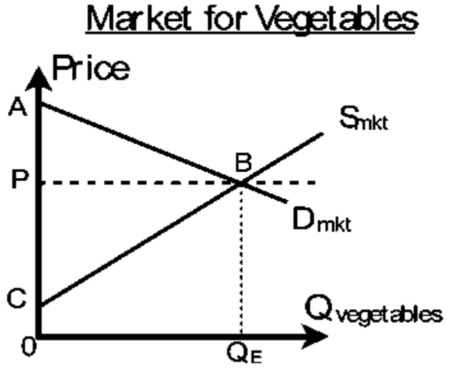
Body Para 3

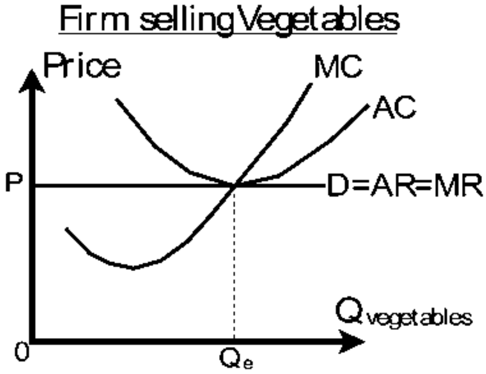
In answering the economic question of ‘for whom to produce’, price mechanism distributes resources to those with ability to pay.
Producers, being profit oriented, will only divert resources to produce for consumers with the ‘money votes’. It is only when consumers have the willingness and ability to pay for the good at the equilibrium price, will they be able to purchase the good to meet their wants. Consumers without the ability to pay for the goods will not have any resources diverted towards the goods they desire to have.
Thus, under the allocation of price mechanism, resources only go to those who can pay.

Conclusion

Price mechanism allocates resources in the economy among competing wants by answering the economic questions of what, how and for whom to produce. It is through the interaction of consumers and producers that the resources are diverted to fulfil some of the unlimited wants.
However, In the real world, price mechanism may not always bring about the most efficient allocation. There are instances of misallocations and these situation render the need for government

b) Discuss whether it is necessary for the government to intervene in order to achieve an efficient allocation of resources. [15]
Introduction
Efficiency is achieved when the markets produce an outcome such that it is impossible to make anyone better off without making someone else worse off. In other words, it is a situation with pareto optimality where there is allocative and productive efficiency. Allocative efficiency is achieved when combinations of goods and services produced maximises society welfare where conditions of MSB=MSC or P=MC are met. Productive efficiency is achieved when there is minimum wastage and firms produce at any point on the LRAC. Price mechanism can ensure efficiency under the assumptions of perfect competition in all markets, no externalities, private good (the good is not a public good) and perfect information. However, in the real world, these assumptions are never fully present, and government often intervene to correct the misallocation of resources. On the other hand, even though price mechanism may fails, government intervention may still not be always necessary due to possible government failures trade-offs with other government aims and given time, market can often correct themselves.
Body Para 1 – perfect competitive mkt
In perfect competitive markets of a private good with no externalities, the price mechanism can achieves allocative efficiency and no government intervention is necessary.





With perfect information and no barriers to entry, firms in the market for vegetables are price takers, and take the market price which occurs where demand cuts supply in the market (D_{mkt}=S_{mkt}) at P. They then maximize profits where MC=MR and produce at Q_e. At equilibrium – the price (P) paid by the consumer is equal to marginal cost (MC) of the firm. Welfare to society is maximized (area ABC) and since P=MC, consumers value (P) the last unit of the good the same as it costs (MC) to produce it.

Hence under the assumption of perfect competition of a private good with no externalities and perfect information, no government intervention is necessary to achieve an efficient allocation of resources.

Body Para 2 – public goods

The price mechanism does not allocate resources to produce public goods and government should provide these goods.

Public goods such as national defence are non-rivalry and non-excludable in consumption. Non-rivalry means that the consumption of national defence by an individual does not reduce the quantity available for others. As such the additional cost of providing national defence to another user is zero. Since the allocative efficient condition is P=MC, the efficient price for national defence is 0. This indicates that efficient output level under price mechanism will be zero. National defence is non-excludable which means that it is impossible to exclude non payers from enjoying the good. This leads to a free-rider problem where no one is willing to pay for national defence, and as such, no profit seeking firm would have any incentive to produce national defence since they will not be able to charge a price for the good. This results in a missing market where there is non-provision of public goods.

Given that national defence also confers large positive externalities such as stability, security and increased investment and attractiveness to FDI, these benefits are lost if no resources are allocated to produce this public good.

Despite the huge benefits public goods confer on the economy, it is not produced under free market mechanism. Thus, the government should provide public goods by nationalizing the provision of such goods.

However, nationalization is often plague with the problem of x-inefficiency as the production is not profit driven. When civil servants take over the provision of public good (eg national defence), they may not reduce cost of production to the lowest possible as there is no other firms competing against them. Their bottom line in production is usually not to bring about the maximum profits but to produce a certain quantity with the national budget provided.

In addition, this problem is compounded by the government, like the free market, lacking the necessary information to provide the correct quantity of public goods. Thus, under government provision, society's welfare will still not be maximize. In weighing the benefits and costs of government provision of public goods, government provision may only be necessary for pure public goods.

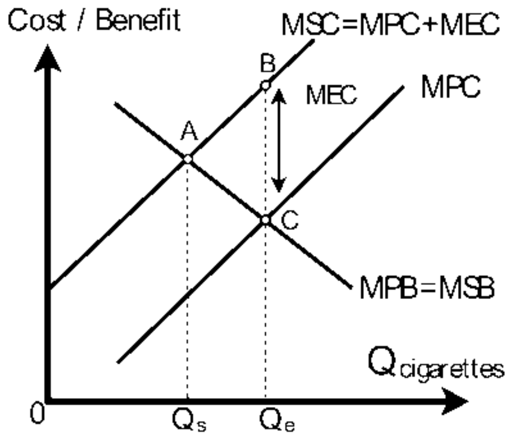
Body Para 3 -externalities

The price mechanism also fails in the presence of externalities and government intervention is often needed to correct that.

Externalities are spill-over costs or benefits on third parties who are not directly involved in the production or consumption of a good and these costs or benefits are not compensated for. For example, in the consumption of cigarettes, consumers consider their own marginal private costs (MPC) which is the price they pay for cigarettes and their own health costs, and marginal private benefits (MPB) which is the ability to relax and focus after a smoke. They ignore the marginal external costs (MPC) which are the health costs faced by 2^{nd} hand smokers around them.

In the free market, to maximize their own welfare, consumers consume cigarettes where MPC=MPB at Q_e. This results in a deadweight loss to society of area ABC because the socially optimal (allocative efficient) level of cigarette consumption is at Q_s where MSC=MSB. For every additional cigarette consumed from Q_s to Q_e, there is a higher cost imposed on society than the benefit gained. The free market results in an overconsumption of cigarettes. For goods with positive externalities, the free market results in underproduction / underconsumption due to consumers /

the good.

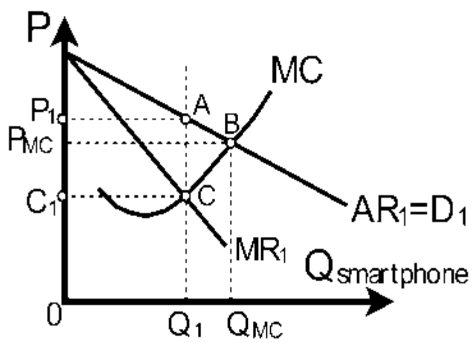


With externalities, the price mechanism fails to allocate resources efficiently and government intervention is often necessary. For goods with negative externalities in consumption (like cigarette consumption), government can intervene with market-based taxes or regulation (like designated zones for smoking). For goods with positive externalities in consumption, market-based subsidy or direct provision can be imposed.

However, government intervention may not be necessary as if the externalities are not significant, the cost of intervention may outweigh the welfare gain. Some of these costs include the monitoring cost for people to follow the rules imposed. This is especially so for a huge country like China as more personnel and thus costs are needed to ensure rules are complied with.
In addition, when the government cannot ascertain the correct amount of tax, it can also lead a tax that is too high, an underproduction of demerit goods and more welfare loss than if no intervention was made. Such intervention can also bring about other unintended consequences like worsening equity as the poor will be paying a larger proportion of their income on tax than the rich. Thus, not all market failure requires government intervention. Degree of necessity in intervention depends largely on how much the costs of intervention outweighs the benefits of intervention.

Body Para 4

When there is market dominance, the price mechanism fails to achieve allocative efficiency and government intervention is often necessary.
Firms with market power face downward sloping demand curves and are price setters. They set price where MC=MR to maximize profits and hence produce at Q_1 and set price at P_1.There is a higher price and a lower quantity as compared to a perfectly competitive market. At Q_1, the marginal cost is C_1. Since P_1>C_1, there is allocative inefficiency. The deadweight loss to society is at area ABC and society's welfare can be improved if more resources are allocated to the production of smartphones at price P_{MC} and quantity Q_{MC} where perfectly competitive market will produce.



With market dominance, market fails to be efficient and government intervention is often necessary. Government can intervene with MC-pricing, AC-pricing or impose an anti-trust law.

However, such intervention may involves tradeoffs with the other aims of the government. For example, anti-trust law can hinder the growth of firms which can contribute significantly to the economic growth and employment of the economy. MC-pricing / AC-pricing can reduce the profits earned and hinder the ability and cut off the incentive of large firms to innovate.

In addition, intervention in monopoly may not be necessary as there is often potential competition. This will ensure the monopoly trim their wastage (nearer to achieving productive efficiency) and not exploit the consumers with an overly high price so as to stay competitive.

Thus, government intervention is not always necessary when market fails with imperfect markets.

Conclusion

Overall, the price mechanism seldom achieves allocative efficiency in the real world since most markets are imperfect and / or possess some form of externalities. The price mechanism also fails in the case of public goods.

In some of these situations, there is a need for government intervention. That said, there are merits to letting the markets decide how resources get allocated in an economy as there is the possibility of government failure or tradeoff of other government aims with too much intervention in the market. The benefits should be weighed against the costs of intervention before government decided if they should intervene or how much they should intervene when free market mechanism fails.

PJC 2016 H2 Prelim Exam Paper 2: Question 4

Governments have a range of different macroeconomic objectives and there are conflicts between the objectives.

(a) Explain how conflicts might arise between the various macroeconomic objectives. [10]
(b) Discuss the view that the government's fiscal and monetary policies should be focused primarily on achieving a low unemployment rate. [15]

a) Explain how conflicts might arise between the various macroeconomic objectives. [10]

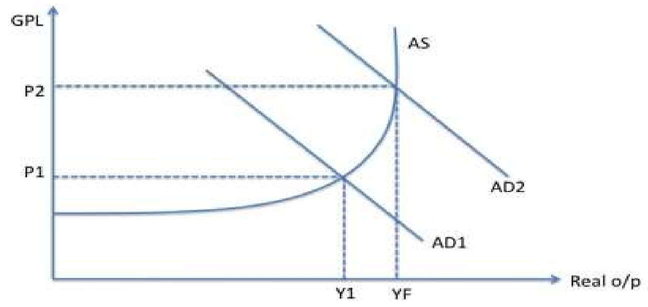
Introduction

Governments around the world aim to achieve the 4 major macroeconomic objects – sustained economic growth, full employment, price stability and long term healthy balance of payment. These aims are important as they promote economic stability within the economy. However, there are conflicts arising between the various macro objectives and thus achieving one aim might result in compromising on other aim.

Body Para 1

If government strives to achieve full employment, it will result in conflict with the aim of low and stable inflation. This is so as in achieving full employment, economy may suffer with rising demand-pull inflation.

such as fiscal policy or monetary policy. As such expansionary policies would increase components of AD such as consumption, investment and government expenditure.



At the original price level P1, resources are not fully employed within the economy. As AD increase from AD1 to AD2, real output would increase and firms will hire more factors of production such as labour. As such, unemployment would fall. However if government continue to pursue for full employment at YF. AD would continue to rise and eventually result in demand-pull inflation as GPL increase from P1 to P2.

Thus there is a conflict between the macro aims of full employment and inflation.

Body Para 2

If government strives to achieve economic growth, it will result in conflict with the aim healthy balance of payment.

Through expansionary policies, higher economy growth will result rising national income. When citizens of an economy experience higher purchasing power, some of these increases in purchasing power could be directed to greater consumption of imported final goods and services, assuming they are normal goods. This increase in import expenditure will lead to a worsening of the balance of trade, and subsequently worsening the current account and hence resulting in BOP to deteriorate.

This is especially so for countries during the early stages of economic development as she has to spend heavily on imports of capital goods. Hence it might only be a short run phenomenon as in the long run when the economy matures and develop, it would not depend heavily on import of capital goods for economic development. Hence it is important to consider the type of imports that are purchased by the economy.

Body Para 3

In achieving high and sustained economic growth, a country may experience greater structural changes as businesses and firms adapt to changing comparative advantages worldwide to remain competitive.

As the economy matures strive to achieve sustained economic growth, it would need to shift towards greater capital-intensive or technology-intensive production. The shift towards greater capital-intensive production could possibly lower the demand for manual labour as firms will choose to replace manual assembling work with mechanization to reduce the need for workers to work on the task. This causes structural unemployment to occur as these workers with low skills get displaced by use of machinery/technology and are unable to find similar jobs elsewhere. Furthermore, as the economy shifts towards technology-intensive productions may lead to some workers' skills and knowledge becoming obsolete, as they no longer have the relevant skills to be employed in the economy.

As such, there is a conflict between the aims of sustained economic growth and unemployment.

Conclusion

These potential trade-offs occur in the short run and are likely to occur depending on the choice of policy tools chosen by the govt and whether the economy is operating very close to full capacity. For example, if the economy is working with a lot of spare capacity then there is not likely to be any conflict with inflation goal since additional resources can be diverted into production without bidding up the prices of these resources.

Interpret the Question – Part (b)

b) Discuss the view that the government's fiscal and monetary policies should be focused primarily on achieving a low unemployment rate. [15]

Introduction

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. Governments try to ensure that unemployment is as low as possible to minimise the negative economic, social and political costs associated with high unemployment. However, it is important for governments to be aware that fiscal and monetary policies should not primarily focus on achieving low unemployment rate as there are limitations to the usage of both policies and policies may be ineffective depending on the root cause of unemployment. Furthermore, low unemployment may not be the most important macroeconomic objective a government is targeting currently as there are other macro problems for the government to manage.

Body Para 1

Fiscal and monetary policies should focus on achieving a low unemployment rate as it has negative effect on the economy.

Firstly, high unemployment can put a strain on government finances. With high unemployment, there is increased spending on unemployment benefits and other welfare payments. Furthermore, as more and more workers remained unemployed, government would experience falling tax revenues from income tax and GST collection. This is so as rising unemployment meant more workers losing their source of income and thus unable to contribute towards income taxes. As tax revenue falls, this can be at the expense of government expenditure in other areas.

Secondly, high unemployment also affects consumer spending adversely. As high unemployment erodes consumer confidence, the willingness of people to spend declines. Households would build up their savings rather than to spend, as they perceived the future expectations to be bleak. Thus aggregate demand falls causing national income to fall thus recession.

Lastly, prevalent unemployment can also lead to social and political unrest. This will destabilize the economy and deter foreign investment, negatively affecting the economic growth. BOP may also worsen as foreign firms pulls out their investments in the economy. Capital account may worsen which thus leads to BOP to deteriorate.

For all these reasons having a low unemployment is instrumental to achieving the other macro aims.

Body Para 2

Typically, the main policy tools to address any macroeconomic problem are fiscal and monetary policies. This applies to the problem of high unemployment only if the root cause to unemployment is cyclical in nature.

To combat internal causes to cyclical unemployment, central banks can adopt expansionary monetary policy to lower interest rate which would raise consumption (C) and investment (I), as cost of borrowing falls, and AD can shift right and demand for labor increases, reducing cyclical unemployment. This policy is often used by developed countries (US, UK, EU, Japan) due to the relative ease and timeliness for implementation. Another way to address high employment would be to adopt expansionary fiscal policy to shift AD to the right. This can be done by increasing govt spending (G) and reducing taxes (T). However if cyclical unemployment arises from external causes such as falling exports, central banks should instead weaken its currency. Price of exports will fall and price of imports would rise. Assuming Marshal-Lerner condition holds where sum of PEDx and PEDm is greater than one, depreciation would cause net exports to rise. As net export is a component of AD, rise in AD would increase real output and thus rise in demand for workers.

Thus fiscal and monetary policies are effective in achieving low cyclical unemployment.

Body Para 3

However, the above policies have their limitations and may not be effective in lowering unemployment rate.

The implementation of fiscal policy requires substantial amount of funds which have to come from reserves, taxpayers' pockets and/or borrowing either internally or from abroad. If the funds are derived from increased taxes, then there will be welfare implications as inefficiency is likely to result when increased taxes result in a disincentive to work, save and invest. If it comes from borrowed money, it will mean a debt burden which has to be shouldered by future generations via higher taxes too.

Furthermore, when business conditions are bleak, a fall in interest rates may be a necessary but definitely not a sufficient condition in bringing about a higher level of investment spending. Business confidence has to return before investors are willing to launch new businesses. Similarly for consumers who might not want to spend at the lower interest rates when their jobs are at stake in a bleak economy.

As such, the much anticipated increase in C and I will only rise to a limited extent. This renders the desired shift in AD unattainable. Hence the output may not increase substantially to necessitate the employment of more workers.

Body Para 4

Furthermore, high unemployment might not be due to cyclical reasons but structural problems.

activities, manufacturers continue to outsource their production and shift their operations overseas to take advantage of the cheaper labour and business costs elsewhere. However, with occupational immobility of such workers due to a lack of educational attainment and skills training, these workers could not find jobs in the high-skilled jobs which Singapore has a comparative advantage in. Hence, there is a skill-mismatch between lower educated job seekers and the new jobs created as a result of the shift towards higher quality or value-added jobs As such, fiscal and monetary policies would be ineffective in dealing with structural unemployment. Supply side policies would be more relevant.
Body Para 5
On the other hand, low unemployment may not be the most important macroeconomic objective a government is targeting. Cost-push inflation was one of the most significant problems for Singapore during 2013 when government announced reduction in reliance of foreign labour via a change in the immigration policies. This has caused significant rise in cost of production for many firms in Singapore resulting in rising cost-push inflation. And currently, many European countries are suffering from rising government debt and are adopting austerity measures in the form of contractionary FP. As such, it can be seen that government's fiscal and monetary policies are not always focus on reducing unemployment but more to tackle economic problems that are most pressing to the economy.
Conclusion
Therefore, fiscal and monetary policies are not solely used to achieve low unemployment rates. They are also used to address the other macroeconomic problems. Whether the government should focus its fiscal and monetary policies primarily on achieving low unemployment rate depends on the most pressing problem and need of the economy currently. As discussed above, in the year 2013, in the context of Singapore, the most pressing concern was high cost push inflation, hence low unemployment rate should not be the primary focus. Also, whether the government should focus its fiscal and monetary policies primarily on achieving low unemployment rate also depends on the effectiveness of such policies in solving unemployment, and this depends on the nature of the economy and the root cause of the unemployment. In a small open economy such as Singapore which has a high marginal propensity to withdraw (mpw) due to its high marginal propensity to save (as a result of the CPF scheme) and its high marginal propensity to import (because of its lack of resources), the multiplier tends to be very small. This would severely restrict the effectiveness of such policies. Even for reducing unemployment, a government need not only rely on fiscal and/or monetary policies, other policies such as supply side policies should be used when high unemployment is due to structural reasons. Most importantly, what matters is the effectiveness in correcting the high unemployment by considering the root causes of it.

PJC 2016 H2 Prelim Exam Paper 2: Question 5
Question: We have made skills, innovation and productivity the basis for economic growth and rising real incomes. This is key to keeping our economy vibrant, with a strong core of Singapore-based companies and with every working Singaporean in well-paying, meaningful jobs. Source: *Singapore Budget Statement 2014* (a) Explain how economists assess the economic performance of an economy. [10] (b) Discuss whether further progress in a country's living standards depends on higher productivity. [15]
Introduction
Economists usually assess the economic performance of an economy in terms of how well an economy meets its four macroeconomic aims, namely sustained economic growth, low unemployment, low and stable inflation, and favourable balance of payment in the long run. To measure how well each aim is attained, economists make use of indicators such as real Gross Domestic Product (GDP), unemployment rate, inflation rate, and balance of payment statement for

Body Para 1
One way to assess the economic performance of an economy is to examine whether it experiences sustained real economic growth over time. Sustained economic growth refers to positive and stable growth over the long term. Economists can track this by examining its real GDP and real GDP growth rate over time. Real GDP is the total value of output produced by factors of production (FOP) within the geographical boundaries of a country, regardless of ownership, before depreciation, at base year prices. Hence, a sustained increase in real GDP over time suggests that more goods and services are produced and available for consumption, with higher real national income (as national output = national income = aggregate expenditure), and thereby enjoy a higher material standard of living. Hence, one way to assess the economic performance of an economy is to examine whether it experiences sustained economic growth by looking at its GDP statistics over time.
Body Para 2
Another way to assess the economic performance of an economy is to examine whether it experiences non-zero low rate of unemployment compatible with price stability over time. Labour is one of the factors of production. Low unemployment as measured by the unemployment rate would indicate high degree of resource utilisation in the economy, signaling that the economy is producing efficiently and near its full productive capacity, thereby experiencing less wastage of idle resources. Hence, one way to assess the economic performance of an economy is to examine whether it experiences non-zero low rate of unemployment compatible with price stability over time
Body Para 3
Another way to assess the economic performance of an economy is to examine whether it experiences low inflation over time. Inflation refers to the sustained inordinate increase in general price level of goods and services in an economy year-on-year, usually by comparing consumer price index (CPI) over time. Too high an inflation rate would cause deterioration of purchasing power and deterioration of the material standard of living. Small and relatively stable increases in the general price level over time are desirable as that means the cost of living increases at an acceptable rate over time and induces consumers to save and firms to invest. With the low inflation, price increase is slight, and if lower than nominal GDP growth, the economy can enjoy real GDP growth (nominal growth less inflation rate) and thus, with more goods and services for all to enjoy and hence improvement in material SOL. In addition, slight & stable price increase may be beneficial for the economy, suggesting that there is healthy demand growth, with slight increase in income, which would spur job creation (as demand for labour is the derived demand for output) and healthy increase in real wage growth and material SOL. Hence, one way to assess the economic performance of an economy is to examine whether it experiences low inflation over time.
Body Para 4
Finally, the last way to assess the economic performance of an economy is to examine whether it experiences favourable balance of payments over the long term. Balance of payment (BOP) is the record of all economic transactions between the residents of the country and the rest of the world in a particular period, usually a year. A favourable BOP refers to the

of the current account and capital account.

A persistent BOP deficit could be caused by a deficit in either account or both. A current account deficit would indicate that residents of the country are consuming more imports than the country is exporting to the rest of the world, in the long run, this would lead to unintended consequences, such as a depreciation of its currency and depletion of its foreign currency reserves.

Similarly, a persistent BOP surplus would also lead to unintended consequences such as appreciation of currency or retaliation by its major trading partners, causing a fall in net exports.
Hence, one way to assess the economic performance of an economy is to examine whether it experiences favourable balance of payments over the long term.

Conclusion

In conclusion, economists assess the economic performance of an economy in terms of its attainment of the four macroeconomic aims, namely sustained economic growth, low unemployment, low and stable inflation, and favourable balance of payment in the long run, through the use of indicators such as GDP, unemployment rate, inflation rate, and balance of payment statements. An economy which is able to attain the four macroeconomic aims successfully would generally be able to enjoy a higher level of living standards compared to another which does not.

b) Discuss whether further progress in a country's living standards depends on higher productivity. [15]

Introduction

A country's living standards refer to the standard of living (SOL) experienced by its residents; it consists of two components – material SOL and non-material SOL. Material SOL is measured by the quantity and quality of goods and services consumed, while non-material SOL refers to the quality of life in general, including the state of the environmental conditions. Further progress means to enjoy a higher living standard than what is experienced currently.

While higher productivity could increase a country's productivity capacity and make more goods and services available for consumption, thereby improving the material SOL, whether there is further progress in living standards depends on its current level of resource utilisation, and willingness and ability of government to use the extra tax revenue gained to provide more and better quality public and merit goods to improve the non-material SOL.

Body Para 1

Higher productivity could lead to further progress in a country's living standards.
Labour productivity is defined as output per man hour. Through training and re-training, workers could be equipped with the relevant skills to operate more sophisticated machineries and therefore be able to produce more output per man hour, thereby increasing labour productivity.

Assuming the economy is currently near or at full employment output level, Y_f, the economy is

capacity, via an increase in the LRAS. This means that the amount of goods and services produced would stay the same and there could be no further progress in terms of enjoying a higher material SOL. As such, in order to enjoy higher material SOL, the economy has to increase its productivity so as to increase its LRAS and attain a higher productive capacity to increase the maximum amount of good and services which could be produced and therefore consumed. At the same time, workers need to have higher wages so as to purchase and consume more goods and services. As firms are profit maximisers, they are unlikely to increase wages without first experiencing an increase in labour productivity. Hence, higher productivity is needed to ensure wage growth and hence the higher purchasing power to enjoy the larger amount of goods and services produced. Therefore, higher productivity could lead to further progress in a country's living standards.
Body Para 2
However, higher productivity might not be the most effective way to bring about further progress in a country's living standards. Assuming the country has a low degree of resource utilisation, for example if it is currently recovering from recession, there would be a lot of resources which are unemployed and under-employed, including labour. Many households would have members who are able and willing to work at the current wage rate who are unemployed. The most effective way to bring about further progress in the country's living standards would be for the government to implement demand management policies, such as fiscal policy and monetary policy, to stimulate the economy and increase the aggregate demand (AD) for goods and services in the economy. As firms seeks to meet the increased demand for goods and services, they would demand more labour and employ many of the currently unemployed and under-utilised labour. As such, these previously unemployed workers will now earn an income, correspondingly the income of these households will increase. With higher purchasing power, they would be more willing and able to consume more goods and services, thereby rapidly improving their material SOL. Hence, higher productivity might not be the most effective way to bring about further progress in a country's living standards for a country with a low degree of resource utilisation at the moment.
Body Para 3
While higher productivity could bring about higher material SOL, it does not ensure better living environment conditions or quality of life. With higher productivity, more goods & services would be produced which also meant that more waste would be generated. If these wastes are not properly disposed, it may lead to a degradation of the environment and living conditions. With higher productivity, workers are likely to receive higher wages and firms are likely to earn higher profits. These mean that the government is likely to receive higher tax revenues from income tax and corporate tax. Improvement of the country's non-material SOL would depend on whether the government uses the extra tax revenue gained to provide more and better quality public and merit goods. For instance, for a country which has enjoyed higher productivity in some sectors such as Singapore, the non-material SOL has been impacted in recent years by frequent floods at Orchard Road and many incidences of HDB flat lifts breaking down. These could be improved if the government used the extra tax revenue gained to provide more and better quality public and merit goods, such as widening the Stamford Canal to reduce flooding in Orchard Road. Hence, higher productivity might not ensure higher living standards in the non-material aspect and this would depend on the willingness and ability of the government to use the extra tax revenue gained to provide more and better quality public and merit goods.
Conclusion
While higher productivity could increase a country's productivity capacity and make more goods and

progress in living standards depends on its current level of resource utilisation, and willingness and ability of government to use the extra tax revenue gained to provide more and better quality public and merit goods to improve the non-material SOL.

PJC 2016 H2 Prelim Exam Paper 2: Question 6
Question: **The world's economies have developed ever-closer links since 1950, in trade, investment and production. Known as globalisation, this process is not new, but its pace and scope has accelerated in recent years, to embrace more industries and more countries.** **Source: BBC News, Globalisation, Key Facts: The Global Economy http://news.bbc.co.uk/2/shared/spl/hi/guides/457000/457022/html/** **Discuss the view that globalisation tends to benefit some countries more than others. [25]**
<u>Introduction</u>
Globalisation refers to the increased economic integration of economies around the world via increased trade and capital flows and international movement of labor. Globalisation might lead to benefits to an economy in terms of the four macroeconomic objectives, consumer welfare and standard of living (both material and non-material well-being). While globalisation has seemed to benefit some countries more than others in the short-run, it ought to benefit all countries in the long-run based on the theory of comparative advantage.
Body Para 1

Globalisation tends to benefit some countries more than others via increased trade flows.
Increasing trade activities due to globalization can help an economy to sustain economic growth, lowers unemployment rate and improve balance of payment. If +X>+M, the increase in current account surplus → +net exports i.e. (X-M), a component of AD → Rising AD and multiplier process → higher level of GDP. More jobs are created in the export sector and spillover effects in other sectors.

- Some countries benefit more than others because of the nature of the economy. The factor is the degree of openness of an economy (as measured by the trade flow as a % of GDP) which affects the relative impact on AD and NY. A more open economy such as Singapore where exports makes up a larger % of GDP (Singapore's exports is 200% of GDP) is likely to benefit more from globalisation as it leads to +X>+M.
  However, it also makes it more vulnerable to the unstable economic growth of the member country. Fall in NY of main trading partners. E.g. subprime crisis in US → fall in US NY → US consumers -p.p → less ability to buy g&s, including M from its trading partners → -demand for X for US's trading partners (for all countries that trade with US, e.g. Singapore) → -current a/c bal → -AD, neg growth, +unN. Also –FDI inflows → so fall in (X-M) and FDIs → -ADsg → neg ec growth, +cyclical unN.

  [Evaln] Nevertheless, the Singapore government showed that by implemented effective and appropriate policies, it can mitigate the negative effects of globalisation in the short-run. For instance, Sg government implemented sort-term supply-policies such as Jobs Credit Scheme which subsidises wages and thus reduce firms' costs of production. SRAS shift downwards and real output rises. Firms are more willing to retain the workers to enjoy the wage subsidies thus minimizing unemployment.

- Some developed countries suffer a loss of comparative advantage (CA) due to a decrease in the internal efficiency in the country or improved efficiency of the country's competitors. For example, due to higher labor cost, many developed countries suffer loss of CA in L-intensive manufactured goods (e.g. textile and toys) to emerging low-cost developing countries (e.g. China, Vietnam) -> industries in developed countries produce at higher COP and thus P -> -X competitiveness -> -X earnings, +M spending -> +M>+X → increase current a/c deficit. On the other hand, China and Vietnam would enjoy +X>+M and thus gain more in terms of better macroeconomic performance.

  [Evaln] Even for developed countries which are losing CA in labor-intensive goods and which have CA capital-intensive goods can benefit from globalisation if their governments are able to implement market interventionist supply-side policies in the long-term to grow new comparative advantages in new industries and to pursue product innovation / improvement. After all, CA is dynamic and changes over time when the key factors determining the relative costs of production are improved. For instance, this could stem from investment in research and development which develop cost-cutting innovations. Investment in physical and human capital (government spending on education and retraining) also leads to higher productivity and competitiveness because of higher quality of its labor force and capital goods, and thus falling cost of per unit of output. Countries which governments enjoying budget surplus would thus benefit from increased trade flows and capital flows. For example, the Chinese government provide subsidies and grants to develop its capital-intensive solar panel industry, even though China's CA dos not lie in capital-intensive production.

Body Para 2

Rise in foreign direct investments
→ rise in AD in the short-run due to rise I which is part of AD
→ higher AS in the long-run as inflow of FDI increases productive capacity

Foreign investors invest production plants → goods produced are exported to foreign markets → rising X → rising AD

Both rising AD and rising AS → + impact on sustained economic growth with low unemployment rate and low inflation rate.

- Due to increased competition from low cost economies, many labour-intensive FDI flows out of developed countries (e.g. US, Singapore) to these low-cost economies with CA in L-intensive goods (e.g. China).

→ Countries with CA in L-intensive prodn e.g. China benefit from net FDI inflows → +FDI, foreign investors invest production plants so more goods produced are exported to foreign markets → +I and +X → +AD, via k, +++real NY. Moreover +FDI → more new capital goods, more transfer of new technology, +productive capacity, +LRAS. Both +AD and +LRAS would lead to sustained ec growth with low unemployment rate and low inflation rate.

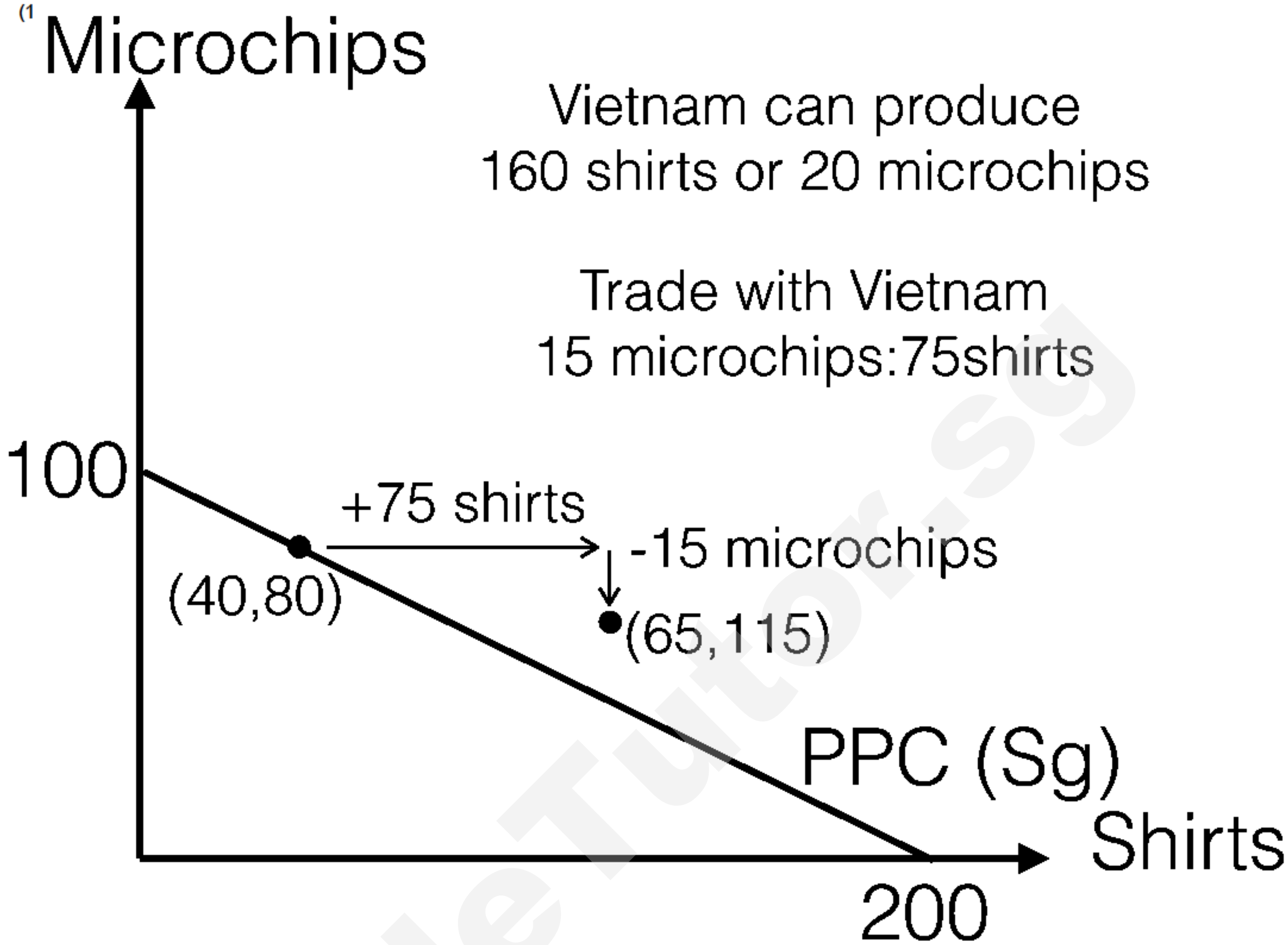
→ Developed countries, countries with CA in capital intensive goods would see a fall in the demand for low skilled workers → rising unN of low skilled workers → in reality, factor mobility is not perfect in the short-run → low-skilled workers are unable to take up jobs in the capital and technology-intensive industries such as the multi-media as these countries restructure from the traditional industries to knowledge-based industries → rising structural unN. Retrenched workers from low skilled sectors increases the supply of low skilled labour in Singapore and this drives down domestic wages for low skilled workers. On the other hand, exports (sunrise) industries that sell to the global market would increase the demand for highly skilled workers as the need to produce more output for exports increases. This causes high skilled workers to enjoy higher wages, leading to the income gap between the high and low skilled workers to widen. This can lead to increased income inequality and social and political issues.

[Evaln] The governments in the developed countries could spend on retraining which is effective to reduce structural unemployment. With retraining workers for future jobs → equip workers with relevant skills for the knowledge-intensive industries such as IT and multi-media → reduce job mismatch → improve employability → reduce structural unN. Moreover, retraining workers → increase labour productivity and the quality of the workforce → reduce unit labour cost → increase productive capacity of economy → LRAS shift outwards → COP falls → attract FDI and increase export competitiveness → Px falls → DDx price elastic, Qx rise more than prop → Value of X rise → AD rise → real output rise → higher demand for labour → fall in unN

Body Para 3

Globalisation benefits all countries based on the CA theory, and not just some countries.
The theory of comparative advantage (CA) states that all countries can benefit from trade if they specialise in producing goods where they have a lower opportunity cost. Assume Singapore has resources to produce 200 shirts OR 100 microchips, and factors of production are perfectly mobile, if Singapore produces 40 shirts and 80 microchips, and trades with Vietnam who can produce 160 shirts OR 20 microchips, trading at a mutually beneficial exchange ratio to get 75 shirts for 15 microchips, Singapore can consume 115 shirts and 65 microchips, beyond her production possibility curve (PPC). Singapore specializes in microchips (her CA) while Vietnam specializes in producing shirts (Vietnam has CA). Hence this shows that trade benefits all countries allowing them to consume beyond their PPC. World output is higher with specialization boosting national income,

(1



Microchips
Vietnam can produce
160 shirts or 20 microchips
Trade with Vietnam
15 microchips:75shirts
100
+75 shirts
-15 microchips
(40,80)
(65,115)
PPC (Sg)
Shirts
200

[Evaln] Other benefits of trade besides those of CA theory can be enjoyed by all countries. For example, with globalisation, there will also be an increase in intra-industry trade which is not based on comparative advantage. This type of trade would lead to a greater variety of the same consumer goods and services and thus would cater to the different taste and preference of consumers, hence improving consumer welfare and higher standard of living.

[Evaln] Another benefit of trade is the increased production and economies of scale. With specialization and trade, export industries with CA produce for world markets and hence produce a larger output. Firms can enjoy economies of scale – cost savings from large-scale output. With lower costs, firms can pass on cost savings to consumers and also earn higher levels of profits from increased revenues from sales to other nations. Hence, all firms and countries tend to benefit from increased trade.

[Evaln] Nonetheless, a limitation of the CA theory is that it assumes there are no barriers to trade. In reality, countries do not always trade freely and fairly with one another. Trade restrictions or protectionism can raise the prices of imported goods, making local goods appear cheaper and thus can limit the gains from trade of other countries. Protectionism can also cause other countries to be negatively affected when it leads to beggar-thy-neighbour effects, hence leading to some countries to not benefit from globalisation.

Conclusion

It is true that globalisation has led to some countries tend to benefit more from others, at least in the short run. It is evident that many developed countries are losing out in the globalisation to developing countries because of the loss of CA and lack of competitiveness in labor-intensive production. However, developed countries' governments should respond with appropriate demand and supply policies to grow new CA in new industries in capital-intensive production. This is because based on

RIVER VALLEY HIGH SCHOOL
YEAR 6 Preliminary Examination II
in preparation for General Certificate of Education Advanced Level
Higher 2

ECONOMICS 9732/01

Paper 1 Case Study **14 September 2016**

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.
Start each case study on a new sheet of paper.

At the end of the examination, fasten your work securely together.
Your answers for each case study are to be handed in **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

Answer **all** questions.

Question 1 **Issues in the pharmaceutical industry**

Figure 1: Sales of Indian generic drug companies

Source: *Pharmabiz*

Extract 1: India's New Drug-Price Controls: Unintended Consequences?

The new price controls on diabetes and heart drugs are bad news for Indian pharmaceutical companies. According to research, the total value of diabetes and heart-medicine sales in India could decline around 12%.

India's National Pharmaceutical Pricing Authority, which regulates drug prices, says the prices of these medicines will be capped as the current large price differences between different brands of the same drug were "indicative of a severe market failure."

Some companies may face a smaller hit. Market researchers expects the effect on earnings to be less than 1% for Sun Pharmaceutical Industries Ltd. despite 30% of its India sales coming from diabetes and heart medicines. This is probably because the company's prices are nearer to the price cap imposed. Overall, the actual effect on earnings will be minimal for many companies.

On the other hand, the price control could have negative consequences on the availability of some drugs. That is because, when other medications have had price caps set in the past, sales have declined because some companies cut back on production of the drugs for domestic use. As a result, India has begun importing some older antibiotics from China.

Ultimately, price caps at home could lead the pharmaceutical industry to look elsewhere for growth. If price controls are expanded further, the industry could move production elsewhere. Most of India's largest drug makers already have plants outside India, particularly in the U.S. and Europe. But they are increasingly expanding into Africa, Southeast Asia and China where, like in India, labor is cheaper and the cost of running a plant is lower.

Source: *The Wall Street Journal*, 15 July 2014

Extract 2: Debates on pricing practices

Of all the goods and services traded in the market economy, pharmaceuticals are perhaps the most contentious. There is a widespread belief that people have a right to health care. Yet, the price of drugs is much higher than their cost of production, making them unaffordable to many poor people.

However, pharmaceuticals have argued that prices of drugs are high as they need to recover the high cost of innovation. Moreover, they have been trying to make drugs more affordable in emerging markets. By varying their prices more—charging Americans more than others—firms can pep up their profits and at the same time expand their markets, making both shareholders and the sick better off. Some companies are trying this by creating new brands and packaging for lower-priced drugs in India.

Nonetheless, there are also critics who said that emerging markets are gradually making bigger contribution to pharmaceutical company revenues. As such countries get more prosperous, their elites get richer and it is not fair that the Americans should subsidise the cost of research and development for drugs while rich Indians benefit from the lower prices.

Source: *The Economist*, 4 January 2014

Extract 3: Rapid price increases of generic drugs

In recent years, generics have curbed the rise of drug prices. This is because generic medicines are far cheaper to produce than brand-name drugs because they involve little research and development and they are also priced lower because generics typically face intense competition. After the patent for Ambien (a sleeping pill) expired in the last few years, generics entered the market and prices plummeted.

But increasingly, experts say, the price of some generic drugs are going the other way. The prices of some generic drugs have more than doubled since last year. In late 2013, one of the three companies producing digoxin, one of the oldest known heart medicines, increased its price, and the others soon followed. There was no drug shortage that might explain the increase. There were no new patents and it is also not hard to make. Though there are many newer types of drugs to treat heart disease, for some patients there are no effective substitutes for digoxin.

One of the companies cited higher costs of acquiring raw material, increased costs of ensuring quality of the drugs and manufacturers exiting the market as reasons for the increase in price. The Federal Trade Commission has been examining anticompetitive practices in the generic drug industry, but there is often little which the agency can do if businesses take advantage of the market power they gain if it happens naturally through companies leaving the market.

Source: *The New York Times*, 8 July 2014

Extract 4: Firms face more threats on India patents

The pharmaceutical industry relies on patent that give them the exclusive right to sell a drug. The rationale is that they need these patents to recover their high capital expenditure in researching the drug. India's government is looking to study more than 20 drugs and recommend that compulsory licenses be issued to allow local firms to make low-priced copies in India. These licenses are needed as the drugs are protected by patents. Compulsory licensing, a form of relaxation of patent laws, occurs when a government allows someone else to produce a patented product without the consent of the patent owner.

The heightened scrutiny illustrates how emerging markets are becoming harder to navigate for global drugmakers. "Moves by policymakers like compulsory licensing results in the feeling that you're not very comfortable investing," a consultant said. "You can't build predictability, and pharmaceutical companies don't like that." Moreover, any award of compulsory licenses will take time because the process is fraught with bureaucracy.

Source: *Bloomberg*, 28 January 2014

Questions

(a) [1] **(i)** Compare the foreign sales relative to the total sales of Indian generic drugs from 2004 to 2014.

[2] **(ii)** Identify and explain **one** factor that could account for the observation noted in (a)(i).

(b) [4] Using a diagram, explain how the expiry of a patent of a drug like Ambien will affect the profitability of a firm.

(c) [5] Extract 2 mentions that Americans are charged higher prices than consumers in the emerging markets for pharmaceutical drugs. Explain how this might be a form of price discrimination.

(d) [8] With reference to Extract 2 and 3, discuss the factors that can affect the price and output decisions of drug-makers for digoxin.

(e) [10] Extract 2 says that "there is a widespread belief that people have a right to health care. Yet, the price of drugs is much higher than their cost of production, making them unaffordable to many poor people." Using evidence from the data, discuss whether a price control would be the most appropriate way to make drugs more affordable to consumers in India.

[Total: 30]

Question 2 Economic Rebalancing in China and the UK

Table 1: GDP growth rates (Annual % change at constant prices)

	2009	2010	2011	2012	2013	2014
China	9.2	10.6	9.5	7.8	7.7	7.3
UK	-4.2	1.5	2.0	1.2	2.2	2.9

Table 2: Balances on current account (US$ billion)

	2009	2010	2011	2012	2013	2014
China	243.3	237.9	136.1	215.4	148.3	219.7
UK	-69.5	-67.7	-43.7	-86.5	-122.3	-151.9

Source of Tables 1 and 2: World Bank

Table 3: Government budget balance (% of GDP)

	2009	2010	2011	2012	2013	2014
China	-1.1	-0.7	0.1	-0.3	-0.7	-1.2
UK	-11.2	-10.0	-7.9	-6.3	-5.9	-5.3

Source: OECD

Extract 5: China Approaching the End of Export-Led Growth Story?

Over the last three decades China has experienced a remarkable transformation. Strong and relentless economic growth was achieved on the back of productive investment, an ample and industrious labour force, relatively low wages resulting in a parabolic rise in exports.

China's growth strategy proved highly successful but its weaknesses became more evident around the time when the global financial crisis erupted and international trade suffered a sudden collapse. Subdued export demand was to a large extent offset by huge domestic stimulus measures and a credit-driven construction boom. The credit-fuelled investment boom helped to maintain economic growth rates close to pre-crisis levels. The flip side of this was a worrying rise in debt levels, inefficient capital allocation, industrial overcapacity and a housing bubble. Moreover, relatively high food price inflation against the backdrop of high income inequality and slowing income growth indicates that a large part of the less well-off population remains vulnerable to price rises.

With prospects for export growth weakening, Chinese optimists hoped for a seamless transition to a sustainable domestic consumption-led growth model. In 2012, the share of household consumption in GDP stood at 36%, which is extremely low by global standards, with a global average of around 60%.

In a bid to encourage consumption-led growth and push the economy to shift away from low-cost manufacturing which is polluting, the government is driving wage growth by gradually increasing minimum wages. The downside of these developments is that wage growth is outpacing labour productivity growth. This is leading to rising real labour costs and a decline in the international competitiveness of Chinese companies, thus affecting employment.

Source: *Euromonitor Research,* 16 March 2014

Extract 6: For China, a Shift from Exports to Consumption

China is in the midst of a major overhaul aimed at weaning its economy off its decades-long reliance on often inefficient state-driven investment and a manufacturing sector that has been highly geared to exporting to the rest of the world. The government has made it clear that it is now prioritising economic rebalancing over short term growth.

Data released underlined just how rapidly the overall economy has been cooling as Beijing has sought, over the past two years, to rein in often poorly allocated lending and close down inefficient or polluting industries. Many analysts expect the pace to cool further this year as Beijing's "tough love" approach to overhauling the economy continues to crimp lending and industrial activity.

Wages have risen as millions of Chinese have moved from the countryside into the cities. And because China is rapidly aging, this means it is gradually getting harder for employers to find and retain workers. That has made life harder for many exporters, who are finding it difficult to deliver goods inexpensively.

For China to generate more domestic consumption, said Richard Ho, who recently founded Athenee, a boutique advisory firm in Shanghai, it needs to foster a more vibrant private sector.

"If you can unleash the power of private enterprise and create a level playing field for private and state-owned businesses," he said, "employment and wage growth can continue — supporting domestic consumption."

Source: *The New York Times*, 20 January 2014

Extract 7: There's Something Very Wrong with UK's Recovery

Britain's economic recovery is leaving the country's manufacturers behind, according to new European Commission figures. The stats show UK investment in equipment has fallen, even as the economy has picked up. Recovery is being driven by the services sector and domestic consumption rather than by manufacturing, business investment and exports. Weak investment in the sector will concern British policymakers who have been looking to rebalance the economy toward exports.

The manufacturing sector has performed particularly poorly despite a shift towards high-tech, advanced manufacturing with global supply chains. What should concern the government is that the Commission's figures show investment in new technology falling well behind international peers. Failure to keep pace could result in the UK becoming less competitive and ultimately impact the future prospects for the sector. This threatens to exacerbate the trend of its declining importance.

The worst news for policymakers is that the traditional currency devaluation for manufacturing no longer appears to have the intended effect. Despite a 20-25% decline in the value of sterling, the cheaper relative prices of their goods did not appear to benefit manufacturers much. Globalisation has turned lots of countries into stopping-points in the manufacture of individual products. Components are imported, augmented and re-exported. This suggests the shift in the manufacturing sector has weakened the impact of currency devaluation.

Source: *Business Insider*, 12 September 2014

Extract 8: UK Policies and Economic Growth

The IMF says that growth has rebounded more strongly than anticipated in the UK on the back of easier credit conditions and increased confidence. But it cautions that the recovery has been unbalanced, with business investment and exports still disappointing. Furthermore, an external shock involving further growth disappointment in emerging market economies could spill over to the euro area and the UK.

In the UK, monetary policy should stay accommodative, and recent modifications by the Bank of England to the forward-guidance framework are therefore welcome. Forward guidance is the term used by central banks to communicate to consumers and investors what their future monetary policy will be and allow them to manage their expectations.

Similarly, the government's efforts to raise capital spending while staying within the budget limit in the medium term should help bolster recovery and long-term growth.

Source: *BBC News*, 8 April 2014

Questions

(a) **(i)** Compare the change in China's current account balance with that of the UK between 2009 and 2014. [2]

(ii) With reference to the data, suggest the reason for the improvement in the UK's budget balance from 2009 to 2014. [1]

(b) Explain why China's growth is one that is referred to as investment and export driven. [2]

(c) Explain how creating a level playing field for private and state owned businesses can increase employment. [2]

(d) Explain why "the traditional currency devaluation for manufacturing no longer appears to have the intended effect." [5]

(e) Discuss the effectiveness of the policies the UK government has implemented to shift away from consumption-driven to investment-driven growth. [8]

(f) The data provides an explanation of two different policy approaches to generating economic growth. Assess the economic case for these two different approaches. [10]

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Question 1

Answers

(a)(i) **Compare the foreign sales relative to the total sales of Indian generic drugs from 2004 to 2014.** **[1]**

Difference: Foreign sales have increased more than the increase in total sales. (as shown by increasing "foreign sales as % of total sales")

(ii) **Identify and explain 1 factor that could account for the observation noted in (a)(i).** **[2]**

Sales of generic drugs refer to total revenue which is the total receipts or total earnings received by generic drug makers from the sale of generic drugs. Total revenue can be calculated by multiplying the price of the good (P) with the quantity sold (Q) at that price.

The price control in India may have contributed to the higher increase in foreign sales relative to the total sales. Firms are subjected to a price cap if they were to sell in the domestic market, whereas they are not subjected to price cap if they were to sell it overseas. Price in other countries would be higher than prices in India. [1]

Moreover, Extract 1 says that the price control has caused some producers to "cut back on production of drugs for domestic use", therefore, the quantity of drugs sold in foreign countries would be higher than the quantity sold within India [1]. As such, the sales from other countries would be higher than the sales within India. Therefore, foreign sales would take up a large proportion of the total sales.

Or

The foreign sales of Indian generic drugs have increased.

This could be due to India's comparative advantage in making generic drugs as labour is cheaper and cost of running a plant is lower as compared to countries like U.S. and Europe (Extract 1). [1]

According to the Theory of Comparative Advantage, the country with a lower opportunity cost of producing a good relative to its trade partner will specialize and export the good, hence the increase in foreign sales. [1]

(b) **[4]**

Price/ Revenue/ Cost
MC
A
P_0
D
P_1
AC
C_0
C_1
B
E
AR_0
MR_0
MR_1
AR_1
Q
$Q_1 Q_0$

Using a diagram, explain how the expiry of a patent of a drug like Ambien

will affect the profitability of a firm.

Figure 1: A drug firm's profits after expiry of patents

A firm's profit is determined by its price and average cost curve. With reference to Figure 1, assume that the firm initially charges a price P_0 while producing at Q_0. The supernormal profit earned by the firm is represented by the area C_0P_0AB. [1]

With the expiry of drug patents such as Ambien, the legal barriers to entry will be lowered and generic drug firms will enter the industry and produce the drugs as well. This implies that there will now be an increase in the number of competitors in the industry. [1]

As a result, it is likely that the firm will see a fall in its market share and a fall in demand. This is represented by a fall in the firm's AR from AR_0 to AR_1, and in turn, a fall in its MR from MR_0 to MR_1. [1]

With the expiry of the patents, the firm produces at a lower output level (Q_1) and at a lower price (P_1). The supernormal profit earned would then fall from area C_0P_0AB to C_1P_1DE, where AC is now equal to C_1. [1] As even more firms enter the market, the firm's profits may even fall to zero.

(c) Extract 2 mentions that Americans are charged higher prices than consumers in the emerging markets for pharmaceutical drugs. Explain how this might be a form of price discrimination. [5]

Price discrimination occurs when different groups of consumers are charged different prices for the same goods or services that are not due to cost differences. [1] For firms to be able to price discriminate the following 3 conditions must be satisfied.

Pharmaceutical firms have the ability to price discriminate

Market power

Pharmaceutical drugs are usually covered under patents which are the exclusive rights to sell a drug. With the high barrier to entry, a firm is likely to have few or no substitutes suggesting that demand is relatively price inelastic. Hence pharmaceutical firms can increase price without losing too much sales. [1]

Ability to segment the markets according to different PED

The US market is charged higher prices as compared to emerging markets like the Indian market because the demand for it is more price inelastic. [0.5]

This might be because US enjoys higher purchasing power as compared to India. As such, the proportion of income spent on drugs in US is lower as compared to India (3rd degree price discrimination). [0.5]

Since the demand for drugs is more price inelastic in the US than India, charging higher prices in the US will lead to a less than proportionate decrease in quantity demanded. Therefore, prices in the US are higher than prices in emerging markets. [1]

Resale is not possible

Some drugs might require prescriptions which mean that the access to the drugs would be controlled by the hospital or the physician according to the needs of the patient. It might be difficult for people looking to resell the cheaper-priced drug to have access to the drugs in the first place. [1]

(d) With reference to Extract 2 and 3, discuss the factors that can affect the price and output decisions of drug-makers for digoxin. **[8]**

Assuming that the drug-makers for digoxin seeks to maximise profits, there are several factors that can affect their price and output decisions.

The type of market structure can affect the price and output decisions of drug-makers of digoxin. Extract 3 mentioned that there are 3 drug-makers of digoxin, thereby suggesting that each drug-maker is an oligopoly. Due to the small number of drug-makers prevalent in the market, the drug-makers are mutually interdependent where each oligopolistic drug-maker makes its decision based on the reactions of other drug makers in the same industry. In this case it was mentioned in Extract 3 that when one of the three companies producing digoxin increased their price, the others soon followed. This could be an example of price leadership model whereby the dominant drug-maker will set its price and the rest of the drug-makers will take this price as given.

Also, it was mentioned in Extract 2 that when the emerging markets get more prosperous and the elites become richer, this means that in time to come, as income level increases in these countries, their ability to pay for drugs which is a normal good will increase. This meant that income level could also be a factor that can affect price and output decisions of a drug-maker. When income rises, AR & MR of a firm will shift to the right as shown in Figure 2, thereby resulting in a new set of equilibrium price and quantity at P_1 and Q_1.

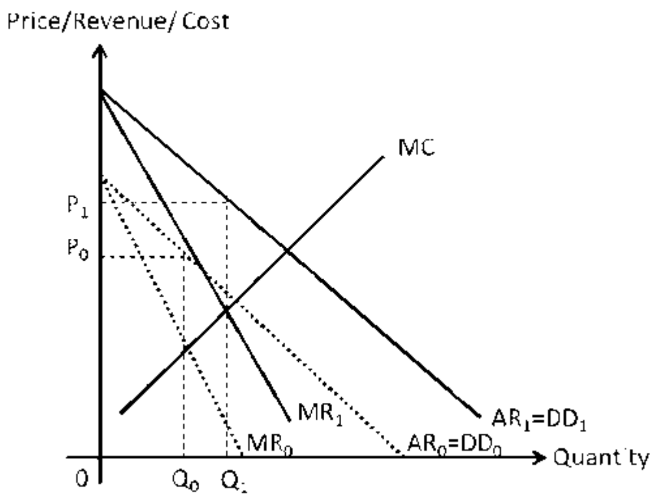

Figure 2

Another factor that could affect the price and output decisions of drug-makers for Digoxin is cost. In Extract 3, it was mentioned that there are higher costs of acquiring raw material and increase in cost to ensure quality of drugs. Marginal cost is defined as the additional cost of producing an additional unit of output. Given that the higher costs of acquiring raw materials and increase in cost to ensure quality of drugs will cause the additional cost of producing an additional unit of output to increase, this will shift MC to the left from MC_0 to MC_1 as shown in Figure 3 and this will result in a new equilibrium price and quantity at P_1 and Q_1.

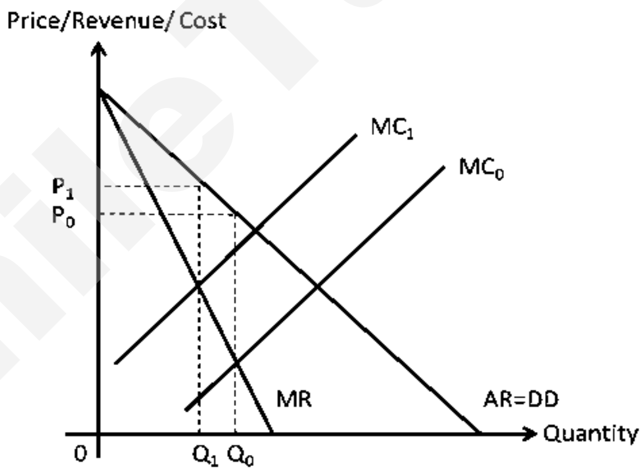

Figure 3

The above analysis assumes that the drug-makers seek to maximise profit. If the drug makers has alternative objective such as revenue maximization in mind, they will produce at a point where MR=0 where quantity will be higher than the profit-maximisation level and at a price lower than the profit-maximisation level.

L2	For a developed discussion on how 2 factors can affect price and output decisions for the drug-makers of digoxin.	4-6
L1	For a undeveloped discussion on how 2 factors can affect price and output decisions for the drug-makers of digoxin.	1-3

	Or For a developed explanation on how a factor can affect price and output decisions for the drug-makers of digoxin.	
E1	For an evaluative discussion on the significance of the factors in affecting price and output decisions for the drug-makers for digoxin.	1-2

(e) Discuss whether a price control would be the most appropriate way to achieve higher equity in the drug industry. **[10]**

Thesis: Price control is appropriate

Price controls are government regulations that established either a maximum price or a minimum price to be charged for specific goods and services. In the case of pharmaceutical goods, India used a price ceiling, which is a maximum price, to lower the prices of pharmaceuticals. This is to make drugs more affordable for the poor, increasing the level of equity in society.

Q_S Q

Figure 4: Price ceiling in the market for drugs

A price ceiling would establish a maximum price, for example, at price P_C in Figure 4. Drug makers will be legally bound to charge only a maximum price of P_C and not above it. The price ceiling would only be effective if it is placed below the equilibrium price. This would increase the affordability of pharmaceuticals and increase the level of equity in society as more of the poor have access to drugs.

Anti-thesis: Price control is not appropriate

However, the immediate impact of a price ceiling is that quantity demanded will be higher and quantity supplied will be lower, thereby causing a shortage (Qd – Qs). While some of the poor are able to buy the drug at a lower price, the rest are unable to do so due to the shortage. Moreover, there are some consumers who are able to pay a higher price but are unable to obtain the drug. This may lead to the emergence of a black market where consumers resort to buying drug at higher (than legal) prices. Hence, most of the poor may not be made better off.

Also, due to the shortage, some mechanisms for rationing the good will naturally develop. For example, buyers who are willing to arrive early and wait in line can get the good, while those unwilling are unable to get the good. These long queues are inefficient because they waste buyers' time and this can be troublesome to the elderly, disabled or other groups of people who cannot afford to queue for a long time. As such, in view of the shortage, there needs to be a good administrative system to deal with the shortage in order for price ceiling to be effective.

In addition, the price control might also cause some consumers to seek alternative avenue to obtain the drugs like "importing older [drugs] from China" (Extract 3).The "older [drugs]" could be less effective as compared to the drugs that is in shortage and might result in drug resistance which would worsen healthcare outcome.

The artificially low prices of drugs from the implementation of a price ceiling may also have unintended consequences. For example, the price ceiling may send the wrong signals to drug makers as they will have less incentive to produce given the low prices and will divert fewer resources to produce drugs, resulting in a misallocation of resources. Some drug makers may even choose to move production elsewhere (Extract 1) if the price control is permanent, leading to a fall in SS. The shortage may worsen if demand continues to increase or the supply continues to fall.

Synthesis

In view of the limitations of the price control, compulsory licensing, a form of relaxation of patent laws (Extract 4) could be a more appropriate measure as it reduces the barrier to entry which leads to an increase in the level of competition in the pharmaceutical drugs industry as competitors will enter and produce drugs as generics (Extract 2). This would lead to a fall in demand for individual firms and a decrease in price, making drugs more affordable for the poor, thereby increasing the level of equity in the society.

Conclusion

As such, a free market solution in the form of compulsory incensing would be more appropriate than a price control, which is a form of government intervention that is more overt.

Marking scheme

L2	For a developed discussion on how price control is the most appropriate way to make drugs more affordable to consumers in India <u>Developed discussion</u> • Explain how price control can help to make drugs more	**5-7**

	affordable • Explain limitations of price control • Explain how compulsory licensing can help to make drugs more affordable • Explain limitations of compulsory licensing	
L1	For an undeveloped discussion on how price control is the most appropriate way to make drugs more affordable to consumers in India OR For a developed explanation on how price control is the most appropriate way to make drugs more affordable to consumers in India.	**1-4**

Evaluation (1-3 marks):

Evaluative comment could be made about the effectiveness of both a price ceiling and the relaxation of patent laws in the context of India and the pharmaceutical industry.

Economic Rebalancing in China and the UK

Table 1: GDP growth rates (Annual % change at constant prices)

	2009	2010	2011	2012	2013	2014
China	9.2	10.6	9.5	7.8	7.7	7.3
UK	-4.2	1.5	2.0	1.2	2.2	2.9

Table 2: Balances on current account (US$ billion)

	2009	2010	2011	2012	2013	2014
China	243.3	237.9	136.1	215.4	148.3	219.7
UK	-69.5	-67.7	-43.7	-86.5	-122.3	-151.9

Source of Tables 1 and 2: World Bank

Table 3: Government budget balance (% of GDP)

	2009	2010	2011	2012	2013	2014
China	-1.1	-0.7	0.1	-0.3	-0.7	-1.2
UK	-11.2	-10.0	-7.9	-6.3	-5.9	-5.3

Source: OECD

Extract 1: China Approaching the End of Export-Led Growth Story?

Over the last three decades China has experienced a remarkable transformation. Strong and relentless economic growth was achieved on the back of productive investment, an ample and industrious labour force, relatively low wages resulting in a parabolic rise in exports.

China's growth strategy proved highly successful but its weaknesses became more evident around the time when the global financial crisis erupted and international trade suffered a sudden collapse. Subdued export demand was to a large extent offset by huge domestic stimulus measures and a credit-driven construction boom. The credit-fuelled investment boom helped to maintain economic growth rates close to pre-crisis levels. The flip side of this was a worrying rise in debt levels, inefficient capital allocation, industrial overcapacity and a housing bubble. Moreover, relatively high food price inflation against the backdrop of high income inequality and slowing income growth indicates that a large part of the less well-off population remains vulnerable to price rises.

With prospects for export growth weakening, Chinese optimists hoped for a seamless transition to a sustainable domestic consumption-led growth model. In 2012, the share of household consumption in GDP stood at 36%, which is extremely low by global standards, with a global average of around 60%.

In a bid to encourage consumption-led growth and push the economy to shift away from low-cost manufacturing which is polluting, the government is driving wage growth by gradually increasing minimum wages. The downside of these developments is that wage growth is outpacing labour productivity growth. This is leading to rising real labour costs and a decline in the international competitiveness of Chinese companies, thus affecting employment.

Source: *Euromonitor Research,* 16th March 2014

Extract 2: For China, a Shift from Exports to Consumption

China is in the midst of a major overhaul aimed at weaning its economy off its decades-long reliance on often inefficient state-driven investment and a manufacturing sector that has been highly geared to exporting to the rest of the world. The government has made it clear that it is now prioritising economic rebalancing over short term growth.

Data released underlined just how rapidly the overall economy has been cooling as Beijing has sought, over the past two years, to rein in often poorly allocated lending and close down inefficient or polluting industries. Many analysts expect the pace to cool further this year as Beijing's "tough love" approach to overhauling the economy continues to crimp lending and industrial activity.

Wages have risen as millions of Chinese have moved from the countryside into the cities. And because China is rapidly aging, this means it is gradually getting harder for employers to find and retain workers. That has made life harder for many exporters, who are finding it difficult to deliver goods inexpensively.

For China to generate more domestic consumption, said Richard Ho, who recently founded Athenee, a boutique advisory firm in Shanghai, it needs to foster a more vibrant private sector.

"If you can unleash the power of private enterprise and create a level playing field for private and state-owned businesses," he said, "employment and wage growth can continue — supporting domestic consumption."

Source: *The New York Times*, 20th January 2014

Extract 3: There's Something Very Wrong with UK's Recovery

Britain's economic recovery is leaving the country's manufacturers behind, according to new European Commission figures. The stats show UK investment in equipment has fallen, even as the economy has picked up. Recovery is being driven by the services sector and domestic consumption rather than by manufacturing, business investment and exports. Weak investment in the sector will concern British policymakers who have been looking to rebalance the economy toward exports.

The manufacturing sector has performed particularly poorly despite a shift towards high-tech, advanced manufacturing with global supply chains. What should concern the government is that the Commission's figures show investment in new technology falling well behind international peers. Failure to keep pace could result in the UK becoming less competitive and ultimately impact the future prospects for the sector. This threatens to exacerbate the trend of its declining importance.

The worst news for policymakers is that the traditional currency devaluation for manufacturing no longer appears to have the intended effect. Despite a 20-25% decline in the value of sterling, the cheaper relative prices of their goods did not appear to benefit manufacturers much. Globalisation has turned lots of countries into stopping-points in the manufacture of individual products. Components are imported, augmented and re-exported. This suggests the shift in the manufacturing sector has weakened the impact of currency devaluation.

Source: *Business Insider*, 12th September 2014

Extract 4: UK Policies and Economic Growth

The IMF says that growth has rebounded more strongly than anticipated in the UK on the back of easier credit conditions and increased confidence. But it cautions that the recovery has been unbalanced, with business investment and exports still disappointing. Furthermore, an external shock involving further growth disappointment in emerging market economies could spill over to the euro area and the UK.

In the UK, monetary policy should stay accommodative, and recent modifications by the Bank of England to the forward-guidance framework are therefore welcome. Forward guidance is the term used by central banks to communicate to consumer and investors what their future monetary policy will be and allow them to manage their expectations.

Similarly, the government's efforts to raise capital spending while staying within the budget limit in the medium term should help bolster recovery and long-term growth.

Source: *BBC News*, 8th April 2014

Questions

(a) (i) Compare the change in China's current account balance with that of the UK between 2009 and 2014. [2]

(ii) With reference to the data, suggest the reason for the improvement in the UK's budget balance from 2009 to 2014. [1]

(b) Explain why China's growth is one that is referred to as investment and export driven. [2]

(c) Explain how creating a level playing field for private and state owned businesses can increase employment. [2]

(d) Explain why "the traditional currency devaluation for manufacturing no longer appears to have the intended effect." [5]

(e) Discuss the effectiveness of the policies the UK government has implemented to shift away from consumption-driven to investment-driven growth. [8]

(f) The data provides an explanation of two different policy approaches to generating economic growth. Assess the economic case for these two different approaches. [10]

Y6 H2 Prelim II CSQ2 - Economic Rebalancing in China and the UK

Suggested Answers

(a)

(i) Compare the change in China's current account balance with that of the UK between 2009 and 2014.

- Difference: China has a current account surplus while UK has a current account deficit. [1]
- Similarity: Both current account balance decreased. [1]

(ii) With reference to the data, suggest the reason for the improvement in the UK's budget balance from 2009 to 2014. [1]

- From Table 1, UK GDP growth is increasing [0.5]. This results in increasing government tax revenue which leads to the decreasing government budget deficit [0.5].

(b) Explain why China's growth is one that is referred to as investment and export driven. [2]

Possible evidences
For Both

- Extract 5: Strong and relentless economic growth was achieved on the back of productive investment and parabolic rise in exports.
- Extract 6: China has relied on state-driven investment and a manufacturing sector that has been highlight geared for exports for decades.

For investment driven

- Credit-fuelled investment boom helped to maintain economic growth to pre-crisis level.
- Ample and industrious labour force attracts FDI

For export driven

- Ample and industries labour force lead to CA in manufacturing labour intensive goods
- Based on Table 2, current account is in consistently in surplus.
- During the crisis, demand collapse

(c) Explain how creating a level playing field for private and state owned businesses can increase employment. [2]

- creating a level playing field increases competition → increases incentive for firms to innovate → increase LRAS [1]
- increase in output → require more factor input such as labour → increase employment [1]

(d) Explain why extract 3 suggests "the traditional currency devaluation for manufacturing no longer appears to have the intended effect." [5]

- Explain how devaluation works: ExR↓ → P_X↓ + P_M↑ → MLC → NX↑ [1]
- Global supply chain → components are imported, augmented and re-exported [Extract 3] [1] → price of imports become relatively more expensive with devaluation
- Cost of production increases → Price of exports will rise. [1]
- Net effect: Fall in price of exports due to devaluation may be largely offset by the increase in price to due rising COP [1]
- Overall exports will not rise as much → "weakened the impact of currency devaluation" [1]

(e) Discuss the effectiveness of the policies the UK government has implemented to shift away from consumption-driven to investment-driven growth. [8]

Fiscal Policy
- "government's efforts to raise capital spending" [Extract 4] → expansionary FP (increase G) → development expenditure

Limitations
- UK is experiencing a budget deficit [Table 3] → government has to spend 'within the medium-term fiscal envelope' [Extract 4] → increase in G may not be significant *(NB: students must link the G to infrastructure)*

Monetary Policy
- "easier credit conditions" [Extract 4] → regulations eased to enable firms to obtain credit easily *(NB: not decrease in i/r)* → expansionary MP → increase I
- Move to a 'forward guidance framework' [Extract 4] → banks aim to calm uncertainty in markets and corporations → build confidence in the market → encourage I

Limitations
- Easier credit conditions may increase C as well → "growth has rebounded more strongly … but business investment and exports still disappointing" [Extract 4] → can be inferred that the growth is due to C and not I and X
- Effectiveness of 'forward guidance framework' in increasing I still depends on the confidence of firms and their expectations regarding the economic outlook → "the recovery has been unbalanced … external shock involving further growth disappointment in emerging market economies could spill over to the euro area and the UK" [Extract 4]

Exchange Rate Policy
- Devaluation decreases the cost of investing in the UK → increases the rate of return → increases FDI
- Traditional currency devaluation [as explained in part (d)] → NX↑ → increases growth prospects and drives I

Limitations
- The "shift in the manufacturing sector has weakened the impact of currency devaluation" explained in part (d)

LORMS		
L2	Developed and balanced analysis on whether the policies are effective, with clear links between policies and investment. Coverage of all three policies is required to achieve the top marks in the level.	6
	Undeveloped but balanced analysis on whether the policies are effective.	4-5

	**FP and MP must be well explained to obtain 5m as exchange rate policy and its limitations have been explained in part (d).*	
L1	Developed but one sided analysis.	2-3
	Descriptive answer with no economic analysis and no framework to support.	1

EVALUATION		
E2	Developed judgment that is supported with economic analysis.	2
E1	Unexplained judgment.	1

(f) The data provides an explanation of two different policy approaches to generating economic growth. Assess the economic case for these two different approaches. [10]

China	UK
1. To make the Chinese economy more resilient / reduce its economic vulnerability due to external factors • China is experiencing slow economic growth caused by internal and external factors. According to extract 1, *"strong and relentless economic growth was achieved on the back of a parabolic rise in exports".* This indicates a high reliance on the external sector (exports) for growth. With the global economic slowdown, demand for China's exports fell as mentioned in extract 1, "*the global financial crisis erupted and international trade suffered a sudden collapse".* • Hence, economic rebalancing away from investment and exports allows China be less vulnerable to the external sector for growth in the future. 2. To reduce inefficiency and rising debt • China depended on cheap credit to fuel its investment. According to extract 1, "*credit-fuelled investment boom [led to] a worrying rise in debt levels, inefficient capital allocation and industrial overcapacity*". With the cheap credit which lowers the cost of borrowing, investment in infrastructure and construction increases, leading to large overcapacity in the industry. This is seen as a rightward shift of the LRAS	1. To increase the competitiveness of UK manufacturing sector • UK investment in manufacturing sector is falling behind other countries. As stated in extract 3, *"investment in new technology falling well behind international peers".* This translates to a loss of competitiveness of UKs exports due to loss of comparative advantage and lower productivity. • Hence rebalance the economy to investment-driven growth via policies that encourages research and development as well as innovation will raise productivity in the manufacturing sector and directly increase investment. 2. To decrease the reliance on consumption driven growth • Lower export demand from major trading partners caused a slowdown in economic recovery in the UK. As mentioned in extract 4, *"external shock involving further growth disappointment in emerging market economies could spill over to the euro area"*. • Hence the shift toward investment-driven growth will increase export competitiveness as mentioned above. The lower export prices are expected to mitigate the fall in export

without a corresponding increase in AD. Cheap credit also encourages consumers to consumer beyond their means, leading to rising debt levels. • Economic rebalancing away from investment and exports will reduce investment levels and thus reduce the industrial overcapacity. The removal of cheap credit, as seen in extract 2 where *"Beijing's tough love approach … to crimp lending"* will moderate the rise in debt levels. • China also depended a lot on state-owned enterprises as well as private firms to drive investment as mentioned in extract 2, "*"inefficient state-driven investment"*. This led to state-driven inefficiencies and wastage of resources. Moving away from an investment-driven economy would result in less state intervention e.g. subsidies, tax exemptions. This lowers the returns to investment and results in a fall investment as projects that were previously viable are no longer viable. This reduces inefficiencies in state-owned and private firms and drives out some firms from the industry as these inefficient firms cannot continue production without government help.	countries. This will increase their export percentage of GDP (lower C percentage of GDP).

LORMS		
L2	Developed analysis on the reasons for the different policy approaches in both countries.	7
	Undeveloped analysis on the reasons for the different policy approaches in both countries.	4-6
L1	Developed analysis on the reasons for a policy approach by one country.	2-3
	Descriptive answer with no economic analysis	1

EVALUATION		
E2	Developed judgment that is supported with economic analysis.	2-3
E1	Unexplained judgment.	1

RIVER VALLEY HIGH SCHOOL
YEAR 6 Preliminary Examination II
in preparation for General Certificate of Education Advanced Level
Higher 2

ECONOMICS
9732/02

Paper 2: Essay Questions **19 September 2016**

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 **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 as the answers are to be **handed in separately.** Indicate clearly the **question number**.

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.

[Turn over

Answer **three** questions in total.

Section A

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

1 Coffee farmers in the major coffee-producing regions have been grappling with climate change threatening crop harvest. In addition, rising affluence combined with marketing efforts have fuelled the growth of café culture. These have impact on the commodities market for coffee and also firms selling coffee-based beverages.

Discuss the likely combined impact of these events on the market for coffee and how it may cause firms selling coffee-based beverages to make differing decisions. [25]

2 Firms make decisions based on various considerations such as barriers to entry as well as the business risks and uncertainty associated with each possible option.

(a) Explain how barriers to entry can cause firms to make differing pricing and output decisions. [10]

(b) "Periods of falling income expose firms to higher risks of business closures."

During periods of falling income, discuss how the performance of firms can be affected by both the nature of the goods they sell and the types of markets within which they operate. [15]

3 Alcohol was not a direct cause of the riot, the Committee of Inquiry said. "However, it was a major contributory factor, among others, to the nature and escalation of the Little India riot."

(a) Explain why the amount of drinks a rational consumer decides to have often differs from what the regulator deems to be rational. [10]

(b) Discuss whether banning alcohol consumption should be implemented given the decision of consumers differs from that of the regulator.

Section B

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

4 In 2014, the five countries that recorded the highest GDP growth rates were Turkmenistan (10.1%), Mongolia (9.1%), Democratic Republic of the Congo (8.6%), Myanmar (8.5%) and Mozambique (8.2%).

Source: IMF, accessed 18 August 2016

(a) Explain the potential causes of such high GDP growth rates. [10]

(b) Assess the likely impact of such high GDP growth rates on these economies. [15]

5 Supply-side policies can have an impact on the demand-side of the key sectors of an economy.

(a) Explain how supply-side policies can have significant impact on the circular flow of income. [10]

(b) Discuss why the above impact might differ for different economies. [15]

6 In recent years, greater globalisation and rapid technological change have inevitably caused the unemployment rate to rise in Singapore.

Discuss the extent to which the Singapore government's approach to international trade may need to be adjusted in response to the rise in unemployment.

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RVHS 2016 Question 1

Coffee farmers in the major coffee-producing regions have been grappling with climate change threatening crop harvest. In addition, rising affluence combined with marketing efforts have fuelled the growth of café culture. These have impact on the commodities market for coffee and also firms selling coffee-based beverages.

Discuss the likely combined impact of these events on the market for coffee and how it may cause firms selling coffee-based beverages to make differing decisions. [25]

Introduction

The demand for coffee beans arises from owners of cafes and coffee shops that are both willing and able to purchase while the supply of coffee beans arises from farmers who combines the factors of production to produce coffee beans. Various determinants of demand and supply will affect the price and equilibrium quantity of coffee beans, and the relative extent of shift in demand and supply and other factors like the price elasticity of demand and supply will also play a role in affecting the extent of the change in price and quantity of coffee beans. The impact of these events on the market for coffee beans will determine the potential price rise for coffee-based beverages in a range of markets, such as coffee stalls in hawker centres and high-end cafes.

Impact on the market for coffee beans

Demand Factors:

Rising affluence has increased consumers' purchasing power. Consumers are now more willing and able to purchase coffee-based beverages, which are normal goods. Demand for coffee-based beverages increases.

Successful marketing efforts have fuelled the growth of café culture. The emergence of the café-hopping culture has seen consumers checking out new coffee joints as a hobby and something they can post about on social-networking sites. Also, consumers evolving tastes, with more seeking out speciality coffee resulted in a change in taste and preference in favour of coffee-based beverages. Consumers are now more willing to purchase coffee-based beverages, leading to an increase in demand for coffee-based beverages.

Taken together, it leads to an increase in demand for coffee beans which is derived from the demand for coffee-based beverages. As seen in Figure 1, demand for coffee beans shifts rightwards from D_0 to D_1. Hence, a shortage occurs at the original price level P_0, thus putting an upward pressure on the price. Market price thus rises until P_1, where quantity supplied equals to quantity demanded at a higher quantity Q_1. However, the extent of the increase in price and quantity will depend on the price elasticity of supply of coffee beans, ceteris paribus. Supply is price inelastic when an increase in the price brings about less than proportionate increase in quantity supplied, ceteris paribus. As in the case of coffee beans, even if the price of coffee beans were to rise, farmers are unable to respond by significantly increasing the quantity supplied of coffee beans given the relatively long gestation period involved in growing coffee beans. Referring to Figure 1, an increase in demand from D_0 to D_1 brings about a larger increase in the price of the good from P_0 to P_i along the more price inelastic supply curve (S_i) than the more price elastic supply (S_e), and a smaller increase in equilibrium quantity from Q_0 to Q_i. Consumer expenditure/total revenue increases from $0P_0aQ_0$ to $0P_ibQ_i$.

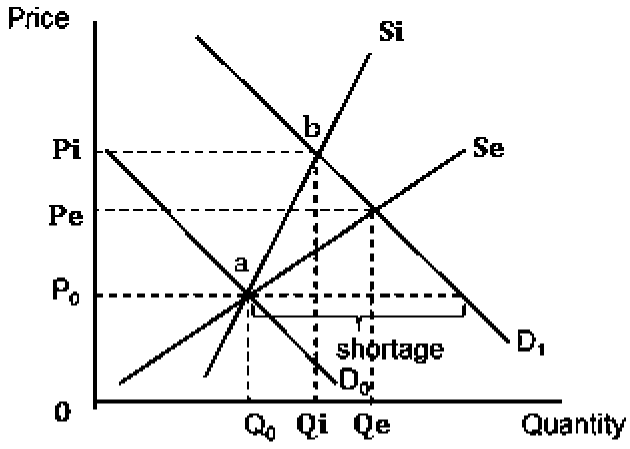


Figure 1: Increase in demand for coffee beans coupled with price inelastic supply and price elastic supply

Supply Factor:

Climate changes such as prolonged periods of drought or unusually cold weather resulted in low harvest. For example, Vietnam, the second largest coffee-producer experienced unseasonably cold weather while coffee-producing areas in East Africa have suffered from a lack of rain. Thus, producers' will be less able to supply coffee beans resulting in a fall in quantity supplied at each and every price level. Supply of coffee beans decreases from S_0 to S_1 as seen in Figure 2. As a result, equilibrium price increases while equilibrium quantity falls. The extent of the increase in price and the fall in equilibrium quantity will depend on the price elasticity of demand of coffee beans, ceteris paribus. Demand for coffee beans is likely to be price inelastic due to the lack of close substitutes, and coffee beans are a necessity for cafes that make coffee-based beverages. Referring to the Figure 2 below, a decrease in supply from S_0 to S_1 brings about a greater increase in the price of the good along the more price inelastic demand curve (D_i) than the more price elastic demand (D_e), and a smaller decrease in equilibrium quantity. Hence, there will be an increase in equilibrium price from P_0 to P_1, and a less than proportionate fall in quantity from Q_0 to Q_i. Total expenditure could increase, decrease or remain unchanged depending on how much quantity demanded has changed.

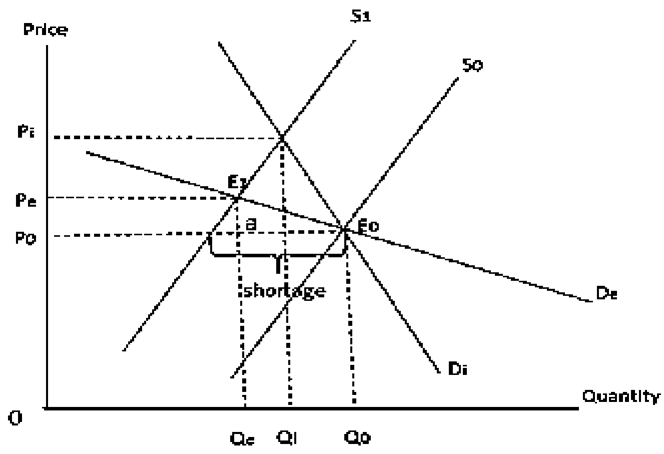
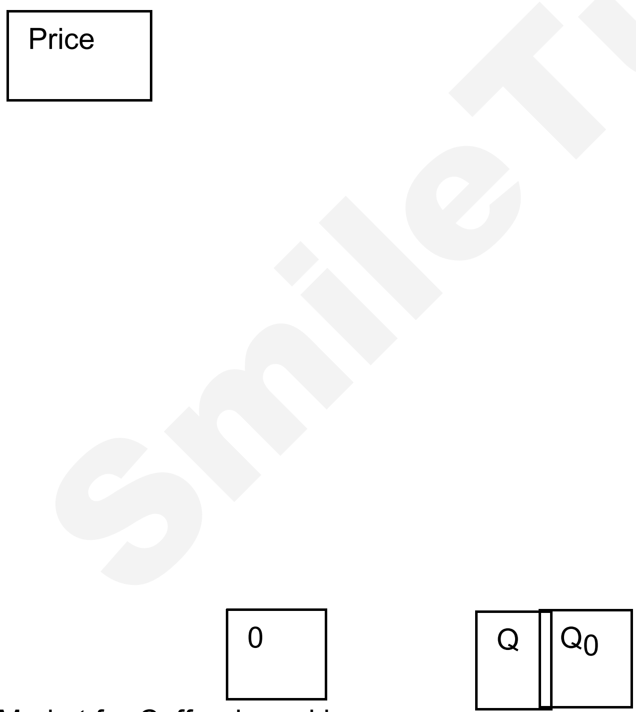


Figure 2: Market for Coffee Beans

Combined effect on coffee beans market:
Overall, the combined effect on the market for coffee beans includes a fall in supply and an increase in demand. This will cause the equilibrium price to rise with the change in quantity being uncertain as this is dependent on the relative extent of change in demand and supply. Brazil and Vietnam, the world's largest exporters of coffee beans experienced the worst drought/cold weather in decades, thus it is likely to have a significant impact on global supply of coffee beans. On the other hand, the increase in consumer expenditure from an increase in demand is likely to be small given that the YED for necessities such as coffee beans is *0<YED<1, where an increase in income leads to a less than proportionate increase in demand for coffee beans.* In this case, the fall in supply will be more than the increase in demand. With reference to Figure 3, there will be an increase in equilibrium price from P_0 to P_1, and a fall in quantity from Q_0 to Q_1. Total expenditure could increase, decrease or remain unchanged depending on how much quantity demanded has changed. **The more price inelastic the demand for coffee beans, the more likely that consumer expenditure will increase. Holding demand constant, a fall in supply of coffee beans brings about an increase in price. If demand for coffee beans is price inelastic i.e. cafes that require coffee beans to make coffee-based beverages, then an increase in price will lead to a less than proportionate fall in quantity demanded, leading to an increase in consumer expenditure/total revenue. Hence, coupled with the rise in demand for coffee beans, consumer expenditure/total revenue will definitely increase.**



<u>Market for Coffee-based beverages</u>

SS factor:
The rise in price of coffee beans, a factor input for making coffee-based beverages means that cafes have to incur a higher cost to produce such beverages. This translates to lower profits, ceteris paribus; hence cafes are now less willing and able to produce coffee-based beverages, leading to a fall in supply of the coffee-based beverages.

DD factors:

As explained earlier, the demand for coffee-based beverages will increase due to rising affluence & the growth of the café culture.

Taken together, a fall in supply and an increase in demand for coffee beverages will bring about an increase in price of coffee beverages.

<u>Impact on firms' decisions</u>

1) Application of PED to the firms' decision to change price

Owners of coffee stalls in hawker centres are likely to have a large number of competitors and so the demand curve for individual firms is likely to be **price elastic**. Any increase in prices will result in a more than proportionate fall in quantity demanded, ceteris paribus. Hence the increase in total revenue due to the increase in price will be less than the loss in total revenue due to the fall in quantity demanded, resulting in a net loss in total revenue. This means that there is limited scope for such coffee stalls to increase prices.

However, owners of coffee stalls in hawker centres are not likely to be making excess profits as these coffee stalls are likely to operate in a monopolistic competitive industry. Hence, if their costs rise, they will make short term losses if they do not increase prices.

On the other hand, **large cafes like Starbucks and new coffee joints/ speciality cafes** are likely to have a more price inelastic demand due to a smaller number of competitors and a lack of close substitutes due to the unique beverages sold (speciality coffee) in the short run. Any increase in prices will result in a less than proportionate fall in quantity demanded, ceteris paribus. Hence the increase in total revenue due to the increase in price will be more than the loss in total revenue due to the fall in quantity demanded, resulting in a net increase in total revenue. This means large cafes like Starbucks are likely to increase prices. *[* students can also use the concept of price rigidity here – i.e. firms will not increase prices]*

However, large cafes are likely to have large buying powers and be able to limit the rise in price of coffee beans and coffee-based beverages from their suppliers. Moreover, these cafes are likely to operate in an oligopolistic industry; hence they may have excess profits in the past and are able to absorb some of the price rise. *Upon evaluation, it is likely that large cafes like Starbucks would not raise its prices.* ***These firms usually buy its coffee beans in advance for the year, thus, even if the coffee bean price were to go up, it may not affect Starbucks at all.***

2) Application of YED to the firms' decision to change price & production choices with changing income levels

The income elasticity of demand (YED) is a measure of the responsiveness of demand to changes in income, ceteris paribus. Coffee beverages sold in hawker stalls are deemed as necessities, and owners of such coffee are likely to be serving the lower end of the market. Income elasticity of demand (YED) is likely to be positive but less than one. Hence, an increase in income will result in a less than proportionate increase in demand for its coffee beverages.

In contrast, the specialty coffee beverages sold in large cafes like Starbucks and new coffee joints are deemed to be luxury goods, and these cafes are likely to be serving the luxury end of the market. Income elasticity of demand is likely to be positive and greater than one, hence an increase in income will result in a more than proportionate increase in demand for its coffee beverages. Coupled with the fall in supply of coffee-based beverages, prices of coffee beverages sold by large cafes and speciality coffee joints will experience a larger increase in price, hence may be more likely to raise prices as compared to coffee stalls at hawker centres. ***This analysis is based on the assumption that the coffee beverages sold in hawker centres is a normal good while coffee beverages sold at large cafes like Starbucks is a luxury good. However, some consumers may deem coffee beverages sold at hawker stalls to be inferior goods. Given an increase in income, demand for such coffee beverages may fall, causing the price of coffee to fall. Whether or not stall owners would decide to change the prices of their coffee beverages will depend on the relative shifts of the demand and supply curves. Ultimately, whether the good is deemed to be an inferior good or a luxury good depends very much on the income of individuals.***

Large cafes like Starbucks and coffee joints may decide to produce luxurious higher end beverages such as specialty coffee, whose demand is income elastic and will see a larger rise in demand as households become more affluent.

In conclusion, whether or not firms would raise prices of their coffee-based beverages would depend on the firms' PED, and the nature of the good produced by these firms (YED). However, there are some limitations of elasticity data. Data reflecting accurate consumers' preferences and responses may be difficult to obtain. Therefore, coffee stalls and café owners can only make rough estimations of various elasticity values of their coffee-based beverages, which relevance and usefulness in helping them make appropriate pricing decisions will be compromised.

Knowledge, Understanding, Application & Analysis		
L3	**18-21**	For a ***developed discussion*** on how consumer expenditure/total revenue is affected in the market for coffee beans. The answer should include a developed analysis of demand and supply factors with the aid of diagrams, accurate application of PED & *PES*. For a developed analysis on the demand and supply factors affecting the market for coffee-based beverages, and a developed discussion on the application of elasticity concepts (PED & YED) to the **firms** decision to change price and by how much. The answer should include *two different types of firms* (coffee stalls in hawker centres/ roadside stalls vs. larger cafes such as Starbucks).
L2	**10-17**	For a ***developed explanation*** on how consumer expenditure/total revenue is affected in ***either the coffee beans market or the coffee-based beverages market***, and an ***undeveloped explanation for the second market***. **OR** For an ***undeveloped explanation*** on how consumer expenditure/total revenue is affected in the ***coffee beans market and coffee-based beverages market***. Such an answer includes an undeveloped analysis of demand and supply, and/or some use of elasticity concepts.

		AND A developed explanation on the application of elasticity concepts (PED & YED) to the firm's decision to change price and by how much. (Note: refer to only one type of firm) **OR** For an ***undeveloped explanation*** on how the events affect the decisions made by *different types of firms* selling ***coffee-based beverages***. Such an answer includes an undeveloped analysis of demand and supply, and some use of elasticity concepts.
L1	**Upper 6-9**	For an ***undeveloped explanation*** on how consumer expenditure/total revenue is affected ***only in the market for coffee beans or coffee-based beverages***. Such an answer could include an undeveloped demand and supply analysis for this market, and/or some use of elasticity concepts. **AND** For an undeveloped answer that shows knowledge of factors that might affect pricing decisions.
	Lower 1-5	Smattering of valid points (i.e. answer shows some knowledge of demand and supply with misconceptions).

Evaluation		
E2	For a well-reasoned judgment on the likely effects on expenditure/revenue in the market for coffee beans and an answer that uses analysis to support an evaluative conclusion about the key economic factors that determine the extent of price increases.	**3-4**
E1	For a generally unexplained judgment on the likely effects on expenditure/revenue in the market for coffee beans and an answer that gives an unsupported evaluative statement about the key economic factors that determine the extent of price increases.	**1-2**

2016 RVHS Y6 H2 Prelim II Essay Q2

Firms make decisions based on various considerations such as barriers to entry as well as the business risks and uncertainty associated with each possible option.

a) Explain how barriers to entry can cause firms to make differing pricing and output decisions. [10]

b) "Periods of falling income expose firms to higher risks of business closures."
During periods of falling income, discuss how the performance of firms can be affected by both the nature of the goods they sell and the types of markets within which they operate. [15]

Part a

Barriers to entry refer to any impediment that prevents new firms from competing on an equal basis with existing firms in an industry. Barriers to entry can be classified into two categories, namely natural barriers to entry and artificial barriers to entry. Barriers to entry determine the degree of competition faced by firms in an industry and hence the degree to which they can influence price and output decisions.

Body: Explain how low barriers to entry affect firms' pricing and output decisions

In a perfectly competitive market, there are no barriers to entry and existing firms are unable to stop new firms from entering the market. There are also no restrictions on existing firms leaving the market. Because of this ease in entering and exiting the market, no single firm has the market power to influence the market price of the product by changing its output. Thus, each firm is a price taker.

Figure 1a below shows how the equilibrium price, P_0, and output, Q_0, is determined in a perfectly competitive market, i.e. by the intersection between the market demand and supply curves. Each firm in the perfectly competitive market will then take the market price, P_0, as given. Since each firm in the perfectly competitive market is a price taker, the demand curve faced by each firm is perfectly price elastic as shown in Figure 1b. Each firm will then produce at its profit-maximising output, Q_0, where marginal revenue (MR_0) is equal to marginal cost (MC). In this case, the perfectly competitive firm is initially earning supernormal profits shown by area P_0ABC.

In the long run, since there is free entry and exit into the perfectly competitive market, firms outside the market will be attracted to reallocate their resources to this market so that they can enjoy the high profits. The entry of new firms will increase the market supply and the equilibrium price will fall. Eventually, when the market supply increases from S_0 to S_1 in Figure 1a and demand remains unchanged, the market equilibrium price will fall from P_0 to P_1 and this will erode away any supernormal profits earned by firms. As all firms in the market are price takers, each firm in the market will sell its product at P_1 and determine its output where its MC is equal to MR_1, which is shown by Q_1 in Figure 1b, earning normal profits in the long run.

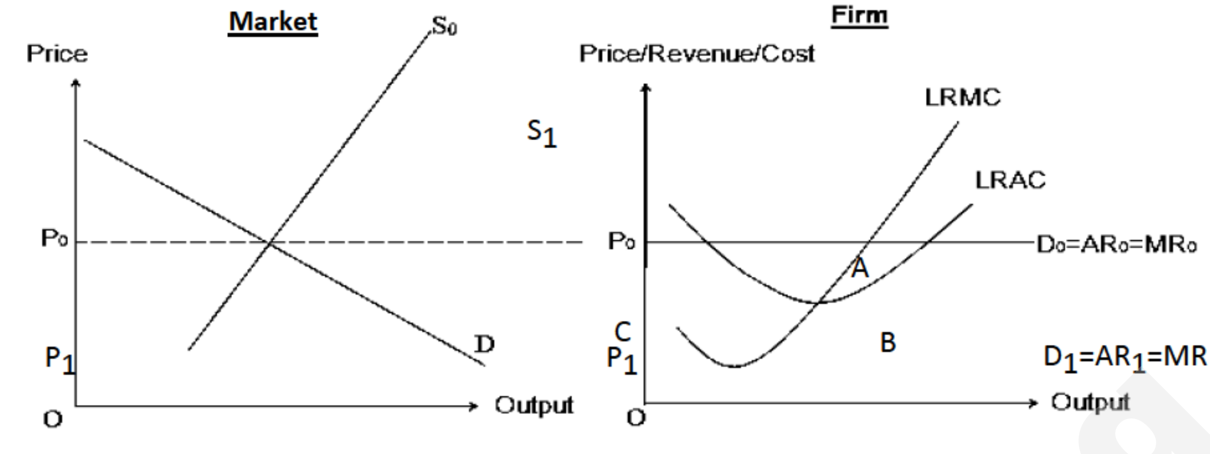


Figure 10: Long Run Equilibrium under Perfect Competition (adjustment process if supernormal profits are earned initially)

Figure 1a: PC Market

Figure 1b: PC Firm

Body: Explain how high barriers to entry affect firms' pricing and output decisions

On the other end of the spectrum, there are high barriers to entry in a monopoly. A monopoly is one in which there exists only a single firm in the market.

As the monopolist is the only producer of a good, it is the industry. Thus, the monopolist's demand curve is also the market demand curve. The monopolist's demand curve is relatively price inelastic since it is the sole seller of a good with no close substitutes.

To maximise profit or minimise losses, the monopolist will produce at the output where MR = MC (and MC curve cuts MR curve from below). In the short run, the monopolist can be in equilibrium earning supernormal profits, normal profits or subnormal profits. Figure 2 shows a monopolist making supernormal profits. The monopolist will produce at the profit-maximising output where MR=MC, such that output is at Q_1 and price is at P_1. Thus, the supernormal profits is indicated by area P_1ABC.

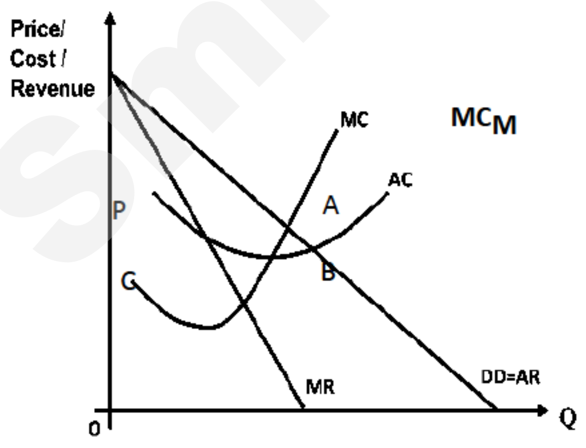


Figure 3: Monopolist earning Supernormal Profits in the Short Run

Quantity

Figure 2 Monopolist earning supernormal profits

Since there are high barriers to entry for new firms, a monopolist's short-run profits will not be competed away in the long run. Hence, unlike a perfectly competitive firm, the monopolist can continue to sell Q_1 at price P_1 and retain/ continue to earn supernormal profits even in the long run.

Conclusion

The high barriers to entry allow monopolist to maintain its price and output so as to continue earning supernormal profits. On the other hand, firms in a perfectly competitive market that are earning supernormal profits will face a lower price and a smaller output as more firms join the market due to freedom of entry and exit.

Level	**Descriptors**	**Marks**
L3	Developed explanation of how barriers to entry can cause firms to make differing pricing and output decisions.	8-10
L2	Undeveloped explanation of how barriers to entry can cause firms to make differing pricing and output decisions.	4-7
L1	A smattering of valid points.	1-3

Part b

Overall analysis

A wide range of answers is to be expected, with a single exogenous factor – recession – and analyzing its impact on a wide range of criteria – price and output, allocative and productive efficiency, consumer choice, etc, due to actions taken by consumers, producers and the government, in the long run and short run. A comprehensive answer combining several aspects of each of the analysis would score very well.

1. **Recession:** Falling income, GPL, AD shifts to the left
    a. **Responses by Consumers:** Substitution by consumers from normal goods to inferior goods
    b. **Responses by Producers:** Change in profit-maximising output/quantity, shutdown, product differentiation and innovation
    c. **Responses by Government:** Fiscal policies (subsidies, grants), protectionism
2. **Criteria:**
    a. Ability to withstand period of lower revenue
    b. Productive/Allocative efficiency
    c. Consumer choice
    d. Equity

Introduction

During a recession, economic activities slow down and consumers' income falls as a result, causing them to adjust their demand for goods and services. This could affect firms' revenue and profit in different ways, depending on what they produce and the market structure in which they operate. Over time, the market structures in various industries may even change, impacting allocative and productive efficiency.

Nature of good – inferior goods

The nature of good produced by a firm determines its income elasticity of demand (YED), which measures the degree of responsiveness of its demand to a change in consumers' income, ceteris paribus. Inferior goods such as hawker food and public bus rides have negative YEDs, meaning a fall in consumers' income during a recession will lead to an increase in demand for such goods as consumers switch away from the more expensive, better quality alternatives (e.g., restaurant food, private transport) to the cheaper and lower quality ones. Therefore, during a recession, firms that produce inferior goods such as hawker food stalls and public bus companies could possibly enjoy higher revenues and profits as the demand for their products increases.

Assessment: These firms would experience greater profitability and will withstand the impact of the recession. Firms in **less competitive** industries (oligopolistic/monopolistic industries, such as public transport) may also have a greater ability to conduct R&D, which would improve consumer choice. However, at the same time, these firms may gain greater market power, leading to a decrease in allocative efficiency and lead them to behave in a less productively efficient manner.

Nature of good – normal goods

In contrast to inferior goods, normal goods such as healthcare and overseas vacations have positive YEDs, meaning a fall in consumers' income during a recession will lead to a fall in demand for such goods as consumers cut down on their consumption of such goods and/or switch to cheaper alternatives. In particular, luxury goods such as luxury cars and overseas vacations have YEDs greater than 1, meaning a fall in consumers' income during a recession will lead to a more than proportionate fall in demand for such goods as consumers can easily live without them and would rather spend the money on necessities / inferior goods in view of lower purchasing power. Hence firms producing luxury goods (e.g., luxury car manufacturers, 5-star hotels) are likely to experience a sharp decline in their revenues and profits during a recession as the demand for their products falls significantly. On the other hand, necessities such as healthcare and rice have positive YEDs less than 1, meaning a fall in consumers' income during a recession will lead to a less than proportionate fall in demand for such goods as consumers cannot reduce their consumption of such goods significantly since the goods are considered essential for living and wellbeing. Hence firms producing necessities (e.g., hospitals, rice farms) will only experience a small fall in revenue and profit as the demand for their products only falls slightly during a recession.

Assessment: Both luxury and normal goods will experience a fall in profitability, with luxury goods experiencing a greater extent of a fall in profitability, which would make firms that produce them more vulnerable to business closures than firms that produce normal goods.

Market structure – normal goods

The effects of a recession on firms producing normal goods and their viability to remain in the industry also depend on the market structure they operate in. The market structure that the firms operate in would determine the level of barriers to entry and exit, which in turn would determine the level of financial reserves and ability of the firms to conduct R&D and innovation in response to the recession taking place.

Assessment: Firms producing normal goods would be forced to be more productive efficient to survive, and through the lowering of prices, increase allocative efficiency.

Firms operating in **more competitive** industries (MC and PC, such as hair salons) would experience certain business closure, as they would not have financial reserves from having previously earned normal profits, and would also have low barriers to exit the industry. These firms would also not be able to conduct R&D and innovation to boost demand to counteract the fall in demand.

Firms operating in **less competitive** industries (oligopolistic/monopolistic, such as petrol retailers and SingPower) would have to depend on their financial reserves that they have earned previously through high barriers of entry to survive business closure. In the event that the buffer is low, they may shutdown even with some barriers to exit. Such firms may choose to use their ability to conduct product differentiation and innovation to boost demand for their goods to survive, leading to improved consumer choice.

Response of firms (normal goods, oligopoly) by innovation

Also, during a recession, firms may undertake R&D projects to counteract the decrease in demand. This is likely to happen for firms producing normal goods (which would face a decrease in demand) that are operating in a market structure with high BTE (motivation to innovate). For example, Apple, which produces normal goods (some may even argue luxury goods) such as iPhone and iPad. During the 2008-2009 global recession, despite falling consumer income, the company posted record profits, thanks to its production promotion and development efforts. Although recession could have negative effects on firms producing normal goods, such firms could adopt strategies (like what Apple did) to increase the demand for their products nonetheless and enjoy higher profits as a result. At the same time, this would increase consumer choice, but at the expense of allocative efficiency as firms exploit market power to charge higher prices.

Government intervention – subsidies and protection

Lastly, not forgetting firms producing capital goods (e.g., construction), we often observe governments trying to stimulate the economy during a recession by increasing public investment (e.g., building of infrastructure). This could benefit firms involved despite a possible fall in private investment, and lead to lower prices for the consumers. Also, goods with strategic importance (military industries) or goods in sunrise/sunset industries may receive help from the government through protectionist policies in a recession. This may erect artificial BTEs that would reduce competition in these markets and reduce allocative efficiency as well.

Conclusion

The sudden impact of the recession may result in higher profits for firms producing inferior goods, but result in the risk of business closure for firms producing normal goods. From there, the market structure of each firm would determine their viability to survive the recession. As we can see, these two factors determine the behavior of consumers and producers respectively, and thus they are crucial in determining the performance of the firms.

Marking Scheme

	Knowledge, Application/Understanding and Analysis	
L3	A developed analysis of how a recession affects firms differently due to both the nature of the good as well as the market structure that the firm operates in and an explanation of how this impacts the viability of survival and performance of the firms.	**9-11**
L2	An underdeveloped, descriptive explanation of how a recession affects firms different due to both the nature of the good as well as the market structure that the firm operates in.	**6-8**
L1	An answer that shows unexplained, descriptive knowledge about a recession and its impact on firms.	**1-5**
	Evaluation	
E2	An insightful evaluation that uses analysis to support a judgement on the relative importance of both factors in determining the performance of firms.	**3-4**
E1	An attempt at evaluation or conclusion about the importance of the factors in determining the performance of firms.	**1-2**

RVHS Q3

Alcohol was not a direct cause of the riot, the Committee of Inquiry said. “However, it was a major contributory factor, among others, to the nature and escalation of the Little India riot. “

(a) Explain why the amount of drinks a rational consumer decides to have often differs from what the regulator deems to be rational.
[10]

(b) Discuss whether banning alcohol consumption should be implemented given the decision of consumers differs from that of the regulators.
[15]

Part (a)

The decision of a consumer or a regulator is said to be rational if the decision is made based on the marginalist principle, that is comparing the benefits and costs of small incremental adjustments to an existing plan on action, which in this case refers to an extra unit of drinks. Although the decisions for both the consumer and regulator is based on the marginalist principle, the benefits and costs from the consumer’s point of view might differs, hence the amount of drinks the rational consumer to decide often differs from what the regulator deems to be rational.

For the consumer, the private benefit of an extra unit of drinks is the additional satisfaction he derived from consuming this extra unit of drinks. This amount of satisfaction can be inferred from the demand curve. However, the benefits derived from the consumption of each successive unit falls as more units are consumed due to the law of diminishing marginal utility.

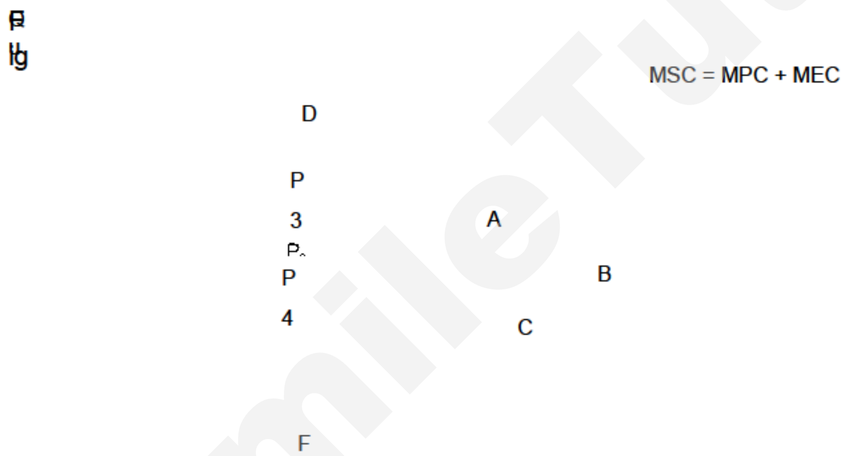
The opportunity cost for the consumer is the benefits of the next best alternative forgone. That is, if a consumer spends an extra dollar on drinks, he would have to forgo the goods that could have been bought with that one dollar as well as his ability to exercise control over oneself. Although the price he has to pay for an extra unit of drinks is constant, the increasing inability to control oneself increases as more drinks is consumed.

rational consumer decides how much to consume by comparing his marginal private benefits costs. For example, with reference to Fig 1, for Q_1th unit of drinks, the private benefits and costs are depicted by P_2 and P_1 respectively. Since the marginal private benefit is greater than the marginal private cost for this unit, the rational consumer should consume this unit.

In fact, up to Qe unit, the marginal benefits surpass the costs. As such, the rational consumer should consumer up Qe. It is irrational for him to consume beyond that as the marginal costs surpass the benefits. For instance, for Q_2 unit, the marginal costs surpass the marginal benefits. Hence, consuming this unit only decreases his net benefits.

However, this amount of drinks the rational consumer has decided to have is irrational from the regulator's point of view. This is because, to the regulator, the consumer has underestimated his private cost and disregard the external costs.

The external costs, in this case, refers to the adverse side effects of consumption on the third parties. As highlighted above, when the consumer consumes more, he is increasingly losing his ability to control oneself. And this inability to control oneself often leads to him puking on the streets, shouting, driving recklessly or resorting to violence, causing him to be a public nuisance or cause harm to pedestrians or family members. As such, the true marginal cost to the regulator consists not only the consumer's private costs but also the costs to the third parties.



With reference to Fig 2, the amount of drinks the rational consumer decides to have, Qe, given by the intersection of MPB and MPC, is considered irrational from the regulator's point of view as the marginal social cost P_3 exceeds the marginal private benefit P_4.

Alternative answers: underestimation of the private cost.

Level of Response Marking Scheme (LORMS)		
L3	**Developed explanation** on how marginalist principle is used by economic agents, either consumers or the government, to make decisions **AND** the underestimation of private costs or the disregard of external costs in giving rise to the difference in perspectives of consumers and governments.	8 – 10m

L2	**Undeveloped explanation** on how marginalist principle is used by economic agents, either consumers or the government, to make decisions **AND** the underestimation of private costs or the disregard of external costs in giving rise to the difference in perspectives of consumers and governments. **Developed explanation** on how marginalist principle is used by economic agents, either consumers or the government, to make decisions **OR** the underestimation of private costs or the disregard of external costs in giving rise to the difference in perspectives of consumers and governments. (cap at 5m)	5 – 7m
L1	Smattering of valid points	1 – 4m

Part (b)

As shown in part a, the level of alcohol consumption, if left to the market, is not socially optimal. As such, it requires government to regulate. One form of regulation is to ban alcohol consumption. This, however, should be considered for implementation only if it improves societal welfare. Otherwise, less drastic measures should be recommended.

With reference to Fig 2, the welfare loss as a result of the decision of consumer is given by area CAB. Banning alcohol consumption will reduce the level of consumption to zero. However, for units up to Qs, the marginal social benefit is higher than the marginal social cost. Not allowing the consumption of these units implies a welfare loss given by the area FDA. Hence, banning alcohol consumption totally can lead to a bigger welfare loss.

In fact, only in very rare case where the MSB is higher than MSB for all levels of output or when the extent of the costs is not yet known like the case of production of toxic chemicals, banning the production or consumption is usually not rational from the perspective of the society and hence is usually not implemented.

Having said that, it may still be recommended to ban alcohol consumption to some degree. For instance, a ban can be implemented for those below a certain age. For example, in Singapore, the legal minimum age is 18. Another form of banning alcohol consumption could be in the form of restricting the hours for which alcohol can be purchased. For example, with effect from 1st April 2016, between 10.30pm to 7am, drinking is prohibited in public places and retailers are prohibited to sell alcohol. Other form of banning alcohol consumption can be in terms of designated areas in a country. In Singapore, Liquor Control Zones, places associated with excessive drinking and hence higher risk of having public disorder, have been drawn to ban alcohol consumption.

Besides the consideration of welfare loss, there are other reasons for regulator not to ban the product. Banning a product that is habitually consumed good may cause public outcry. It can also further tarnish Singapore's reputation given critics have regard her to be a country with little rights. But more importantly, it can result in an important source of government revenue as high taxes tend to be associated with demerit goods. In addition, banning the consumption requires strict enforcement for it to be successful, which may require a lot of resources to be channeled into it.

Besides banning alcohol consumption, the next option is to regulate the consumption of the good. This includes moral suasion and taxes, which the objective is to shift either the MPC to the left to

coincide with MSC or the MPB to the left, so that the market level of output will fall to the optimal level.
The type of regulation ultimately chosen will then depend on the extent of effectiveness of each regulatory measure based on grounds of efficiency, revenue generation and the costs involved in carrying out these regulations. Even if the government has chosen an effective measure, the outcome depends on whether the government is able to estimate the amount of MEC correctly.

Firstly, the government can take on the role of an information provider to persuade people to change their drinking habits. For example, posters and advertisements seek to inform and heighten consumers' awareness on the costs of drink-driving in Singapore and to advise the population to stay away from alcohol if they are driving. However, the effectiveness of these initiatives has been mixed. This is because campaigns are passive in nature as whether consumers are receptive to advice in the advertisements is strictly voluntary, and so there might only be minimum impact on the level of consumption.

Secondly, the government can also impose on producers a tax equal to level of MEC at the socially optimal level. Because of the imposition of this tax, producers will reduce supply and pass on part of this increase in costs to consumers, which will result in a higher price of alcohol. This will shift the MPC upwards, causing the external cost to be internalised, thereby reducing the level of consumption to the socially optimal level. Compared to the case of moral suasion, the impact is more certain and hence more effective. Nonetheless, the effectiveness depends on the government ability to estimate the level of MEC at the socially optimal level of output. Too high a tax can result in greater welfare loss while too low a tax may not have significant impact on reducing the level of consumption. Moreover, the impact may not be effective on addicts as their demand for these goods are relatively price inelastic unless a high tax is imposed. For a country where drinking tends to be a lifestyle, imposing a high tax can be a political backlash.

In conclusion, some degree of banning can be helpful in reducing external costs and removing consumers who would grossly underestimate their private costs from the market. These measures, however, should be supplemented with both moral suasion and indirect tax to better deal with market failure problem especially given that there is no one measure that is most superior.

L3	Developed explanation of why some degree of ban rather than a total ban should not be implemented. Answers should also acknowledge the existence of other policies, their benefits and shortfall.	**9-11**
L2	Developed explanation why a total ban should not be implemented and consider the existence of other policies, their benefits and shortfalls.	**5-8**
L1	Smattering of valid points.	**1-4**
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**

Prelim II – Qn 4

In 2014, the five countries recorded the highest GDP growth rates were Turkmenistan (10.1%), Mongolia (9.1%), Democratic Republic of the Congo (8.6%), Myanmar (8.5%) and Mozambique (8.2%).

Source: IMF, accessed 18 August 2016

(a) Explain the potential causes of such high GDP growth rates. [10]

(b) Assess the likely impact of the high GDP growth rates on these countries. [15]

<u>Suggested Answer</u>

Part (a)

Economic growth can consist of actual and/or potential growth. Actual economic growth is measured as the rate of increase in real GDP whereas potential growth refers to the growth in the production capacity of the economy, which may or may not be present when there is actual economic growth. The high growth rates could be due to any of the following: an increase in aggregate demand (AD), increase in short run aggregate supply (SRAS) or increase in long run aggregate supply (LRAS).

Turkmenistan, Mongolia, Democratic Republic of the Congo, Myanmar and Mozambique are likely to be relatively less developed economies with a lot of unemployed resources. With the opening up of their capital markets to investments in recent years (especially long term capital), they are likely to have attracted Multinational Corporations (MNCs) into the country, which in turn increase the domestic. Since aggregate demand = domestic consumption+ domestic investment+ government expenditure + net exports, and assuming that the initial equilibrium is at Y_0 and P_0, the large increase in I will lead to a large increase in AD from AD_0 to AD_1 and a multiple increase in national income from Y_0 to Y_1 via the multiplier effect, indicating that high rates of actual growth is achieved as shown in Figure 1.

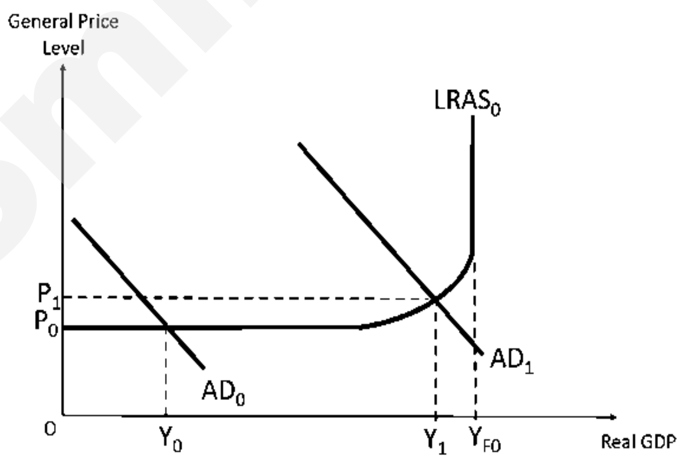


Figure 1: Increase in AD

Furthermore, with increasing government's efforts in developing the infrastructures in the countries to attract investment and facilitate trade, there was a substantial increase in public investment expenditure in the area of transportation where roads were built and transportation infrastructures were developed. This will increase the quality and quality of capital in these countries, increasing the countries' long run aggregate supply from $LRAS_0$ to $LRAS_1$ and hence the productive capacity of the countries as shown in figure 2. Assuming the initial equilibrium is at Y_0 and P_0, actual growth is further achieved with the increase in national income from Y_0 to Y_1 together with the potential growth from Y_{F0} to Y_{F1}.

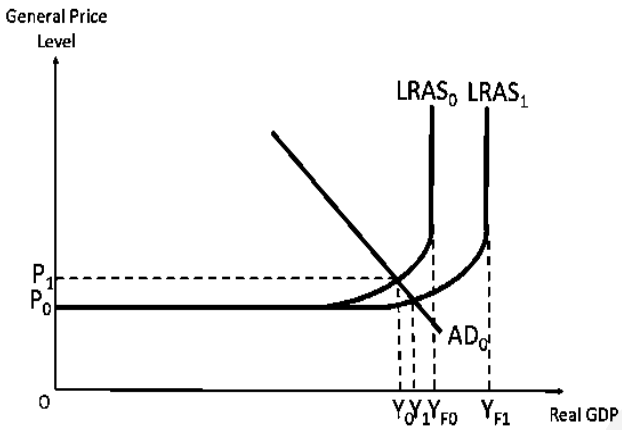


Figure 2: Increase in LRAS

With the recent drop in oil prices, this translates to a fall in cost of production since oil is a factor input used in the production of most goods and services. Thus, the short run aggregate supply will increase from $SRAS_0$ to $SRAS_1$ as shown in Figure 3. Assuming the initial equilibrium is at Y_0 and P_0, the increase in SRAS will cause an increase in national income from Y_0 to Y_1, boost the economy further.

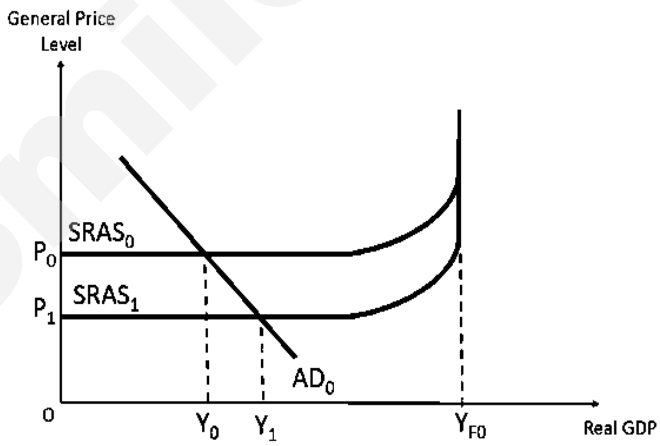


Figure 3: Increase in SRAS

Level	Description	Marks
L3	Developed explanation of 3 different causes (↑AD, ↑SRAS, ↑LRAS) leading to actual growth and/ or economic growth.	8-10
L2	Undeveloped explanation of 2 different causes (↑AD/ ↑SRAS/ ↑LRAS) leading to actual growth and/ or economic growth.	5-7
L1		1-4

	Smattering of valid points	

Part (b)

The countries mentioned in the extract recorded growth rates in the excess of 8% in a period where global growth rates averaged at 4%. The very high growth rates are likely to have both positive and negative impact on these countries. This essay will first explore the various possible reasons contributing to such high growth rates and consequently the impact on both the key economic indicators of the economies.

If economic growth was achieved by an increase in aggregate supply (AS), either in the short run (SR) or the long run (LR), the general price level falls leading to price stability. With reference to Figure 1 and Figure 2, when AS increases from $SRAS_0$ to $SRAS_1$, or from $LRAS_0$ to $LRAS_1$, national income (NY) increases from NY_0 to NY_1 and the general price level falls from P_0 to P_1. Price stability has a positive impact on an economy because it encourages investment leading to sustained economic growth in the future.

On the other hand, if economic growth was achieved by increase in aggregate demand (AD), there would be potential inflationary pressures in the economy. However, as mentioned in part (a), Turkmenistan, Mongolia, Democratic Republic of the Congo, Myanmar and Mozambique are likely to be relatively less developed economies with a lot of unemployed resources. Thus, it is likely that inflationary pressures may not set in in the immediate future and negatively impact the economy. At the present, these high GDP growth rates are likely to boost investor confidence in the country's economy and this may encourage greater inflow of foreign direct investment which can contribute to sustained economic growth in the future.

Another positive impact that could arise from economic growth is that of increased investor confidence in the economy and consequently an increase in foreign direct investment leading to an improvement in the financial account position in the balance of payments (BOP). In fact, if the economic growth was a result of an inflow in foreign direct investment, it can be seen that investment can positively feedback into the economy in the form of greater investment prospects in the future, ensuring sustained economic growth.

Despite a possible worsening of the BOP position or a larger BOP deficit, large imports of fixed capital for development is not a problem that the government should worry about. Capital accumulation has a positive impact on the economy in the long run as it increases the productive capacity of the economy in the long run. In addition to increasing employment opportunities it also helps the economy to develop industries that they have comparative advantage in so that the economy remains competitive in the world market. The overall impact on BOP is likely to be positive, largely because the increase in demand for imports is a natural consequence of rising NY and since the economies mentioned are only just starting to develop, the potential for growth is very high. This means that investment will increase significantly, and the overall impact on BOP is positive.

Another positive impact that usually accompanies economic growth is that of falling unemployment. Economic growth generates production which increases the number of jobs available in an economy leading to a fall in unemployment. If the economic growth was a result of an increase in foreign direct investment, the increase in employment opportunities may be coupled with transfer of skills and expertise brought in by these multinational companies (MNCs). This augments the existing domestic labour force and increases the productivity of the domestic labour force. Furthermore, an increase in investment can also generate job opportunities for domestic firms as they step in to provide ancillary services to these MNCs. On the flip side, economic growth that results from economic restructuring may increase unemployment as workers in the shrinking industries are retrenched and not able to upgrade their skills fast enough to find employment in the growing industries. Thus, economic growth that results from restructuring can also negatively impact an economy.

High economic growth rates also translates to higher standard of living (SOL) for residents of these countries. However, if development was concentrated in heavy industries and manufacturing or mining which is very polluting, non-material SOL of residents could have fallen instead. Furthermore, the increase in GDP may not be evenly distributed among residents if wage share of GDP is low, and there may not be an improvement in the material SOL for residents. In addition, if economic growth only benefits a small minority of capital owners, income disparity is likely to increase thus negatively impacting equity. With rising income disparity, there is the possibility of social discontent that could threaten political stability. Increase in GDP may also not increase the SOL of local residents if indigenous GDP is low and a large share of GDP goes to foreign companies and employees to be repatriated income back to home country. Thus it is difficult to determine whether the overall impact of economic growth on the economies is likely to be positive or negative.

In conclusion, the rapid rate of economic growth is likely to have an overall positive impact on the economies mentioned above, largely because the countries are very poor and undeveloped. Nevertheless, there needs to be constant monitoring of the impacts of such rapid growth to ensure that the economy grows at a sustainable rate.

	Knowledge, Application, Understanding and Analysis
L3	Developed discussion of the impact of the high GDP growth rates on the countries.
L2	Undeveloped discussion of the impact of the high GDP growth rates on the countries. Answer lacks scope or is one-sided.
L1	Smattering of valid points.

Evaluation	
E2	For an evaluative assessment of the likely impact on the countries based on economic analysis and context.
E1	For an unexplained judgement, or one that is not supported by analysis.

2016 Prelim II – Q5

Supply-side policies can have an effect on the demand-side of the key sectors of an economy.

(a) Explain how supply-side policies can have significant effect on the circular flow of income. [10]

(b) Discuss why the above impact might differ for different economies. [15]

Part (a)

The circular flow of income is a representation of how money is circulated in an economy as income and expenditure and it involves all 4 sectors of the economy, namely, households, firms, government and the external sector. It illustrates how all expenditure on the final output of a nation, which is equal to the money value of that output, ends up as someone's income.

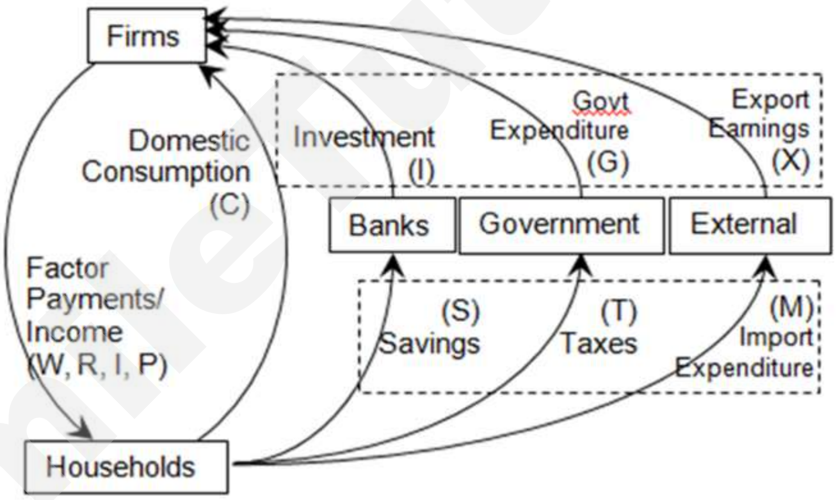


Figure 1: Circular flow of income

With reference to the figure 1, a portion of the income to the households, which is made up of wages, rent, interest and profits, is paid to the firms as consumption. The remaining income leaks out of the circular flow of income and expenditure and end up with financial intermediaries, the government and the foreign sector in the form of savings, taxes and import expenditure respectively. These leakages are also known as withdrawals.

On the other hand, besides receiving payments from the households for the goods and services they produced, firms also receive payments from the government, the foreign sector and other firms in the form of government expenditure, export earnings and investment expenditure respectively. These expenditures, other than that by the households, are known as injections.

When total injections are equal to total withdrawals, the national income is said to be in equilibrium.

Supply-side policies refer to policies that aim to increase the aggregate supply of an economy by increasing the quantity or quality of the factors of production, namely land, labour, capital and entrepreneurship.

Policies that incentivise firms to send their workers for training and policies that incentivise workers to upgrade their skills through attending courses, e.g. training grants such as the SkillsFuture Scheme and course subsidies such as the Workfare Training Support Scheme aim to increase the productivity of the labour force, thus increasing the productive capacity of the economy. These policies also have the effect of increasing government expenditure, which is an injection into the circular flow of income. In addition to that, a more productive workforce ensures sustained economic growth, which has the effect of increasing investor confidence in the economy, thus leading to an increase in investment, which is also an injection into the circular flow of income.

In order to encourage investments and consumption, governments can also decrease taxes. A decrease in corporate tax increases the rate of return of investments, thus incentivising firms to increase investments. A fall in personal income tax results in increased disposable income of households. Consequently households are likely to increase consumption of goods and services, including that of imports. As demand conditions are expected to be good, firms are encouraged to invest in expanding production capacity in anticipation of an increase in demand

The increase in injections and fall in withdrawals from the circular flow of income results in injections exceeding withdrawals from the circular flow. When injections increase, there is an equivalent increase in incomes of firms. These firms in turn increase production and pay out factor income to households, who will spend a portion of the income received i.e. induced C while the rest leaks out as savings, taxes and imports. Firms who receive this increase in income will increase their production, paying out factor income to households, who again increase their C. This cycle of income and expenditure will repeat until there is no further increase in induced consumption. This happens when the level of injections into the circular flow of income equals to the withdrawals. The economy reaches a new equilibrium at a higher level of national income.

In conclusion, supply-side policies can have an impact on the circular flow of income as increases the level of injections relative to withdrawals.

Knowledge, Application, Understanding and Analysis		
L3	Developed explanation of how supply-side policies affect the demand side of the various sectors and subsequently causes the national income to increase significantly using the circular flow. (To gain full credit, candidates should show supply-side can have effect on at least 2 sectors of the economy)	8-10
L2	Undeveloped explanation of how of how supply-side policies affect the demand side of the various sectors and subsequently causes the national income to increase significantly using the circular flow.	4-7
L1	Smattering of valid points.	1-3

Part (b)

From part (a), supply-side policies can affect the demand-side or the aggregate demand and hence the national income. The extent of the effect on national income, however, differs from country to country as it depends on several considerations. These include the size of the income multiplier, the means the government has financed her expenditure and the perception of the consumers and investors on the persistency of the tax changes.

Size of multiplier

For countries with a smaller size of the multiplier due to a large mpm and mpt value, the above impact will also differ from countries with a larger size of the multiplier. For e.g., an economy which is heavily reliant on imports will have a large mpm while an economy with high personal and corporate income tax (probably to maintain an extensive welfare system) will have a large mpt. For such economies, given that k = , a high mpm and mpt will mean that the size of the multiplier will be small. Given that ΔNY= k ΔAE, a change in C & I brought about by a fall in tax rates will not lead to a significant change in NY.

Other factors affect C & I

The above impact might also differ for different countries because it depends on how long the tax cuts are expected to last in the different countries. If the cut in corporate tax and personal income tax is expected to last only for a short period of time in a particular economy, investors may be inclined to hold back investment and consumers may be inclined to hold back consumption since the increase in the expected rate of returns and disposable income will not persist once the corporate tax and personal income tax rate will be back to its original level. In this case, the economy may not see a huge increase in investment and consumption. Thus, AD and thus national income may not rise to a huge extent.

Also, consumer sentiments in the different economies also affect the extent of the above impact. During times when the economic outlook is bleak in a particular economy, consumers and investors may not respond to the fall in personal income tax and corporate income tax as desired. With a poor outlook of the economy, consumers tend to be thriftier and reduce their level of consumption. This will in turn persuade investors to hold back projects more as expected demand condition is low. Thus, the rise in consumption and investment is unlikely to be of great significance and NY may not rise significantly.

As there are unpredictable effects on consumption and investment expenditure given a fall in tax rates, the effects of supply side policies on the demand side of the economy will have an uncertain effect on NY. Supply side policies which affect government expenditure directly would instead ensure a more predictable increase in national income.

Ability of the government to increase G

In addition, the extent of the above impact will differ for different economies as it depends whether the government has sufficient reserves to spend on policies that targets the supply side of the economy. For instance, a government with insufficient reserves will have to borrow money to fund its policies. This will increase the demand for money and cause interest rate to increase. As a result, the cost of borrowing increases and thus, reduces private investment. At the same time, there will be an increase in the opportunity cost of spending, which causes private consumption to fall. As such, the increase in government spending comes at the expense of a fall in private investment and consumption i.e. private investment is 'crowded out'. If the fall in investment completely offsets the rise in government expenditure, AD will not rise at all and there may not be an increase in NY.

Conclusion

Although the impact of supply side policies on the demand side of the economy is uncertain, it should not deter a government from pursuing supply side policies as the primary objective of these policies is to increase the productive capacity of the economy in order to achieve potential growth. This is essential as an increase in AD coupled with potential growth will bring about sustainable/ non-inflationary growth for the economy.

Knowledge, Application, Understanding and Analysis		
L3	Developed explanation of at least 3 reasons of why the impact on national income might differ among economies. Reasons must include the multiplier and the crowding out effect.	9-11
L2	Developed explanation of at least 3 reasons of why the impact on national income might differ among economies but reasons included does not have the multiplier or the crowding out effect. Undeveloped explanation of why the impact on national income might differ among economies. Answers included the multiplier or crowding out effect.	5-8
L1	Smattering of valid points.	1-4
E2	For a reasoned conclusion and substantiated evaluative comments	**3-4**
E1	For an answer with unsubstantiated evaluative comments.	**1-2**

2016 Y6 H2 Prelim II Essay Q6 – Globalisation/ International Trade

In recent years, greater globalisation and rapid technological change have inevitably caused the unemployment rate to rise in Singapore. **Discuss the extent to which the Singapore government's approach to international trade may need to be adjusted in response to the rise in unemployment. [25]**

Suggested Mark Scheme

Knowledge, Understanding, Application & Analysis		
L3	**Upper 18-21**	Developed discussion of why current approach need/ need not be adjusted in view of rise in unemployment **'Developed'** – Appropriate links between greater globalisation & tech change on structural & cyclical unemployment – Good reference to Spore context/ nature – Relevant policies in line with approach to trade are chosen with explicit links to how they are suited for Spore – Adjustments are proposed after careful consideration of what is lacking currently
	Lower 15-17	Developed discussion of why current approach need/ need not be adjusted in view of rise in unemployment; however, the adjustments are not explained in sufficient clarity/ depth
L2	**Upper 12-14**	Undeveloped discussion of why current approach need/ need not be adjusted in view of rise in unemployment OR Developed explanation of 2 of the following: – how unemployment may rise due to globalisation and technological change – policies adopted in line with Spore's approach to international trade – Suggestions for adjustments to approach
	Lower 9-11	Undeveloped explanation of 2 of the following: – how unemployment may rise due to globalisation and technological change – policies adopted in line with Spore's approach to international trade – Suggestions for adjustments to approach
L1	**Upper 6-8**	Undeveloped explanation of: - how unemployment may rise due to globalisation and technological change - policies adopted in line with Spore's approach to international trade **'Undeveloped'** – Limited application to Spore context + explanation of policies lacks economic analysis and link
	Lower 1-5	Smattering of valid points

Evaluation		
E2	Able to form a judgment on the issue after looking at both sides. For e.g., students are able to project into the future; recognise that the degree of unemployment differs across industries; weigh the pros & cons of current policies before suggesting adjustments to be made	**3-4**
E1	Some attempt to sum up the points put forth, but does not go beyond this Comments are generic and superficially stated rather than substantiated with sound judgment	**1-2**

Suggested Answer Points:

- Define globalisation -- closer integration of economies and peoples of the world through the ease of movement of goods and services, capital and labour
- Government's approach to international trade is still largely appropriate and thus, only needs to be adjusted to a small extent

(A) **Explain how greater globalisation and rapid technological change cause unemployment to rise in Spore**

(I) Explain how globalization leads to increase in cyclical unemployment
- In recent months, weak economic growth in Singapore's key export markets has directly affected the demand for our exports.
- Coupled with uncertain global outlook, this decline in external demand will likely translate to a fall in export revenue (X), causing aggregate demand (AD) to fall. This leads to a multiple fall in national income (NY) and in turn affects employment in export-related sectors.
- Make reference to AD-AS diagram

(II) Explain how globalization leads to increase in structural unemployment
- Globalisation has also made it much easier for MNCs to outsource and relocate, as well as technologies in their work processes.
- As MNCs relocate out of Spore, this has resulted in a 'skills gap' i.e. workers who have lost their jobs due to economic restructuring or relocation of firms end up structurally unemployed because they lack the relevant skills to take on new jobs.
- No Diagram needed for this point

(III) Explain how rapid technological change leads to increase in structural unemployment
- Advancements in technology have also transformed the way in which goods are produced in recent years, consequently causing structural unemployment to rise too.
- While improvements in technology may generate new jobs, it has also led to a rise in structural unemployment because many retrenched workers lack the expertise and experience to fill such positions.
- Looking ahead, structural unemployment may rise further as the use of robots become more widespread, unless older workers acquire new skills to take on available jobs

(B) **Explain how current approach to international trade is largely appropriate despite rise in unE**

- Spore's approach to trade revolves around: staying open to global economy and maintaining global competitiveness. As such, policies are tailored around this approach.

(I) Trade policies
- Focus on helping Singapore diversify her trade partners and forge new trade links → E.g. signing of free trade agreements and broadening export markets
- As a result, this helps Spore achieve EOS and diversify export markets during global shocks

(II) SS side policies
- Focus on keeping exports competitive → Govt embark on aggressive measures to raise the productivity of domestic firms and labour force e.g. Productivity and Innovation Credit (PIC) scheme
- Helps firms think of ways to raise productivity
- Other measures include Workfare Training Support Scheme (WTS) encourages Singaporean workers to attend training + Recent SkillsFuture Credit scheme

(III) Exchange rate policy

- Ensures export competitive and helps provide conducive environment for FDIs
- Keep Singdollar on gradually appreciating stance given high import content in Singapore's exports.
- Price stability ensures export competitiveness and attracts FDIs, which hopefully help generate jobs for domestic firms and workers.

(C) **Explain how current approach to international trade may need to be adjusted in response to a rise in unE**

- Globalisation and technological change is welcomed rather than avoided, despite its potential disruptive effects on industries and workers. Although this approach has yielded gains thus far, looking forward, minor adjustments can be made to better leverage on potential growth areas while minimizing the negative effects.
- Students can give any of the following or what is economically sound, some e.g. include:
    - Raise the capabilities of domestic small medium enterprises (SMEs)
    - Help domestic SMEs internationalize
    - Govt to identify new areas of comparative advantage to make us more resilient to global shocks
    - More comprehensive skills training programmes to increase workers employability
    - Provide more social safety nets
    - Establish more trade links with regional economies

Synthesis:

- Spore's approach to trade will unlikely change drastically unless out nature changes drastically too
- Govt can have complementary measures to mitigate the harm, but they are nonetheless still taken in the right direction
- Cannot avoid globalization and tech change because these will ultimately yield more benefits than costs

SERANGOON JUNIOR COLLEGE
JC2 Preliminary Examination

ECONOMICS **9732/01**

Higher 2

PAPER 1 14 September 2016

2 hours 15 minutes

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write 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.

Start your answers to each case study question on a new sheet of writing paper. Fasten your answers to questions 1 and 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.

This document consists of **7** printed pages.

Answer **all** questions.

Question 1 **Oily Business**

Extract 1: Why the oil price went down so far so fast

The reasons oil prices started sliding in June were hiding in plain sight: growth in US production, sputtering demand from Europe and China, Mideast violence that threatened to disrupt supplies and never did.
After three-and-a-half months of slow decline, the tipping point for a steeper drop came on Oct 1 when Saudi Arabia cut prices for its customers. Iraq and Iran followed. Frankfurt-based Commerzbank AG called it a price war. The move signalled that the world's largest producer would rather defend its market share than prop up prices.

While the decision was unpopular with most oil exporting countries and major international energy companies, there are several reasons why Saudi Arabia is taking this approach. First, from an internal Saudi perspective, lower oil prices are entirely manageable. Saudi oil is relatively cheap to extract so crude production can remain highly profitable at lower prices. In fact, with new drilling technologies, Saudi production costs have decreased even further while field reservoir management, a technique to prolong the life cycle of a producing field by better managing its reserves, has become more efficient. Second, the Saudis have about $900bn in foreign assets, so their public finances are immune to a sudden big fall in revenues from petroleum sales.

The Saudis also clearly view lower prices as helping them keep market share in the face of the shale oil production boom in the US. This revolutionary innovation will add several million new barrels of oil per day to the global market. However, shale oil is expensive to extract, so lower prices will mean that US producers will find their business models unsustainable over the mid to long term.

Source: *Bloomberg*, 10 October 2014 & *Financial Times*, 17 December 2014

Figure 1: Changes in Saudi Arabia oil production and world oil prices

Saudi Arabia oil

Source: www.economywatch.com, 14 January 2015

Extract 2: Ruble tumbles to record as oil slump hinders Russia's recovery

The ruble slumped to an all-time low as oil's retreat choked revenue of the world's largest energy exporter and restricted Russia's ability to lift its economy out of a recession. The currency weakened as much as 4.1 percent against the dollar, surpassing the previous record it touched at the peak of Russia's financial-market turmoil in December 2014.

The currency is close to its "fundamental levels," said the Governor of the Russian Central Bank. "We will intervene only if we see risks to financial stability. There aren't such risks now." The selloff was part of a broader rout gripping emerging markets, which pushed over 20 exchange rates to its lowest on record on Wednesday and sent stocks and bonds tumbling.

Source: *Bloomberg*, 20 January 2016

Figure 2: Profits and capital investment of US shale production firms

Profits
Profits, $bn

Source: Adapted from *The Economist*, 12 July 2015

Extract 3: In a bind – will falling oil prices curb America's shale boom?

The shale energy boom across America is the envy of the business world. Abundant oil and gas have been extracted from underground rocks by blasting them with a mixture of water, chemicals and sand—"fracking", in the jargon.

Yet now that oil prices have fallen by almost 40% in six months, these firms' mettle is being tested. Oil price slumps usually lead to cuts in energy firms' investments. But much of the burden of adjustment will fall on America's shale industry.

In the very near term, the industry's economics are good at almost any price. Wells that are producing oil or gas are extraordinarily profitable, because most of the costs are sunk. Taking a sample of eight big independent firms, average operating costs in 2013 were $10-20 per barrel of oil produced—so no shale firm will curtail current production. But the output of shale wells declines rapidly, so within a couple of years this oil will stop flowing.

However, it is far less clear if, at $70 a barrel, the industry can profitably invest in new wells to maintain or boost production. Wood Mackenzie, a research consultancy, estimates that the "break-even price" of American projects is clustered around $65-70. At $60, investment could drop by as much as half and production growth grind to a halt.

Source: *The Economist,* 6 Dec 2014

Extract 4: The economics of shale gas development

With the surge in fracking and horizontal drilling, oil and gas production in the US has increased dramatically during the last decade. The substantial increase in natural gas production over the past several years induced clear benefits to consumers. The increased supply lowers home heating costs during the winter and natural gas has become an increasingly important fuel for electricity generation which generates far-reaching economic benefits. In addition to its use in home heating and electricity generation, an important use of natural gas is as an input into various industrial production processes. As an example, natural gas production will increase fertiliser production, since gas is the primary feedstock for this process. All else equal, this increase will lower the price of fertiliser, which will have beneficial effects on agricultural production, lowering costs and prices.

While the US benefits from greater energy independence, debate rages on about whether these worldwide reserves can be tapped safely, and whether environmental damage from fracking natural gas, such as negative water resource implications that generates large wastewater streams, will outweigh the gains from using a fuel that is cleaner than oil or coal, but remains a fossil fuel nonetheless.

Meanwhile oil exporting countries like Russia, the Middle East and OPEC are expected to lose in political terms. Net oil importers such as India, Senegal and Zambia could benefit from oil price reductions induced by fracking due to economic growth effects and reductions in the cost of importing energy.

Source: *Discussion Paper, The Economics of Shale Gas Development, Mason, Muehlenbachs, and Olmstead*, revised February 2015

Questions

(a) (i) Identify the relationship between Saudi Arabia oil production and world oil price in Figure 1. [1]

(ii) With reference to the data and using demand and supply analysis, suggest a possible reason for the above relationship. [2]

(b) Saudi Arabia, one of the biggest oil producers, has 'cut prices for its customers'. Using Extract 1, explain the economic rationale for Saudi Arabia's action. [4]

(c) With reference to Extract 2 and using a relevant diagram, explain why the Russian ruble has tumbled to record low in 2016. [3]

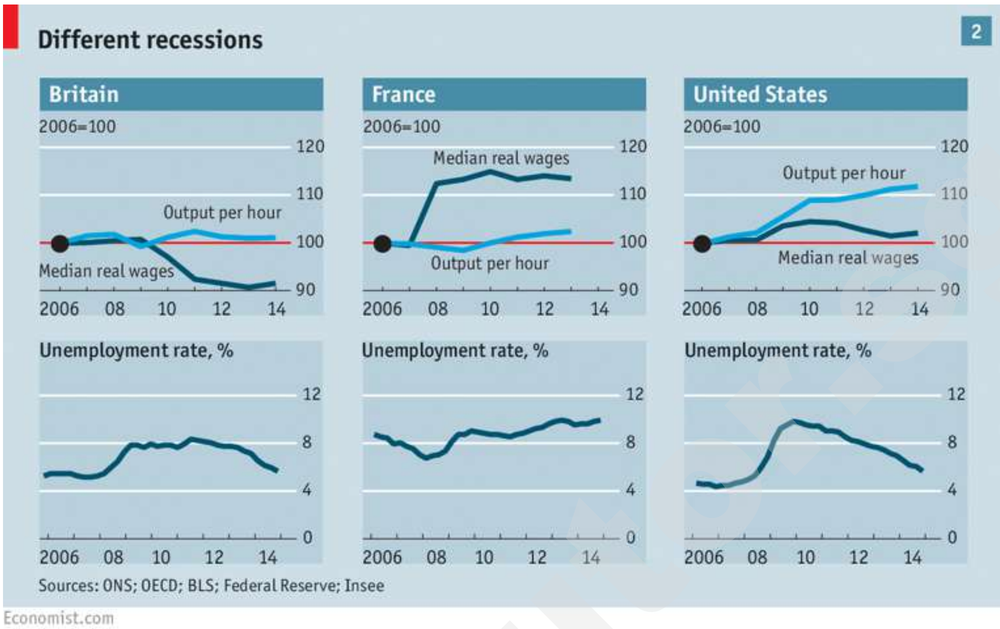
(d) (i) Explain the relationship between profits and capital expenditure of the US shale production firms shown in Figure 2. [2]

(ii) Discuss the short run and long run factors that are likely to influence a shale firm's decision as to whether it should 'invest in new wells'.

(e) Discuss the impact of the shale revolution on US consumers and other economies. [10]

Question 2 The Global Economy Pre and Post Crisis: Heading for another recession?

Figure 3: Labour and unemployment statistics



Source: *The Economist*, 2 May 2015

Extract 5: The economics of low wages

In most places, the recession that followed the 2009 financial crisis had dire effects on wages. In America, workers have been demonstrating for higher pay and stronger union rights in the profitable but poorly paying food industry. Britain's Labour Party has plans to punish "predatory" capitalists that exploit the low-paid. In Japan Shinzo Abe has sworn to lift salaries.

Across rich countries, household consumption ranges from 55% (France) to 68% (America) of GDP. While it makes sense for an individual boss to hold down pay, low pay across the economy as a whole threatens to put a lid on the growth that one would otherwise expect after a recession.

Meanwhile, scholars seeks to explain this decline in the labour share. One is that the income from capital has been increasing more than the income from labour. Another is that, in many industries, capital goods have become a lot cheaper and/or better. Bosses can choose whether to spend money on machinery or people, and declines in the price of the capital goods required for a given amount of output reduce demand for labour.

Globalisation can also reduce the demand for less skilled toward more skilled labour, driving income inequality between them. Competition from imports alter the profit opportunities facing firms. Firms respond by shifting resources toward industries in which profitability has risen and away from those in which it has fallen. And the decline of trade unions reduces labour's bargaining power. In addition, rapid technology change seems to have led to relative price declines in skill-intensive industries as well.

Source: Adapted from *The Economist*, 2 May 2015 & www.imf.org, accessed July 2016

	GDP growth (%)	Consumer Price Index (base year: 2000)	Unemploy--ment rate	Current Account ($US billion)	Budget Balance (% of GDP) *[2015 estimates]*	Gini Coefficient *[2010-2014 estimates]*	Pollution Index (PM10 ug/m3)
Singapore	3.3	99.9	3.2	53	-0.5	0.4	32
China	7.3	119	4.1	277	-2.6	0.5	98
United States	2.4	101.6	7.2	-389	-2.4	0.45	18
India	7.2	111	3.8	-27	-4.6	0.5	109
Brazil	0.1	106.3	4.8	-104	-0.6	0.5	40

Table 1: Economic data of selected countries, 2014

Source: *World Bank Data*, www.tradingeconomics.com, *IMF* website

Extract 6: Global economy faces low growth

The world economy appears to be suffering a slowdown in growth that will stretch through 2016, according to a report by the Organisation for Economic Cooperation & Development (OECD). Despite a secular stagnation that is associated with higher health and pension costs of an ageing population that impedes other investment and improved productivity in western countries, stimulus efforts appear to have had an impact with the US economy showing signs of recovery of late. That has seen the Federal Reserve, US' central bank, scale back its key stimulus measure of increasing money supply. However in its latest policy decision, the Federal Reserve said it would look at multiple factors before approving any rise in its interest rates. It has previously hinted at doing so once jobless rate fell to 6.5%.

The OECD said in its interim economic forecast that the prospect of higher interest rates in the US and UK had exposed the vulnerability of emerging market economies to higher borrowing costs. It urged the US Federal Reserve to maintain its course for higher interest rates, but called on its officials to signal that the pace of increases will be slow, allowing those countries that have borrowed heavily in dollars to adjust to the jump in costs. Brazil is expected to be one of the hardest hit by the slowdown in China and by its exposure to higher borrowing costs following a US interest rate rise.

The World Bank has cut its forecasts for growth across emerging economies, warning that they face a double whammy from rising US interest rates and lower commodity prices in the oil and energy markets. The World Bank said that emerging economies should prepare themselves for a future beyond cheap money and the commodities boom by investing in infrastructure. "We believe that countries that invest in people's education and health, improve the business environment, and create jobs through upgrades in infrastructure will emerge much stronger in the years ahead," it said. "These kinds of investments will help hundreds of millions of people lift themselves out of poverty."

Source: Adapted from *The Guardian*, 16 September 2015 & www.bbc.com, March 2014

Extract 7: The economics of infrastructure development

The development of highways, ports, bridges, public transport, railways, telecommunications, fisheries, harbours and irrigation are important for an economy's rapid development. These constitute essential economic infrastructure whose development is vital as the efficiency of investment is determined by the state of infrastructure.

Nevertheless the economics of infrastructure development, especially the methods of financing, priorities and returns to investment require serious evaluation. Infrastructure investments are large, could put a strain on balance of payments, and their economic returns take a long period of time. However beneficial investments in infrastructure are, if they lead to large fiscal deficits these would lead to inflationary pressures. Furthermore, there is a large import content in many infrastructure investment projects. In many cases it is even difficult to determine precise benefits of infrastructure investment. One current misconception is that all infrastructure investments are beneficial to the country's economic and social development. Several large infrastructure projects can only be described as White Elephants, while others will bring in only small benefits.

Future infrastructure designs will need to be anticipatory and proactive to be truly sustainable. One examples of this type of next-generation monitoring is in Songdo, South Korea where everything from traffic flow to household waste is highly responsive and networked. These smart-grid networks will become increasingly responsive to allocating electricity in response to demand, or public transport systems that respond to congestion by allocating buses where people are congregating or changing lights automatically based on traffic patterns.

Source: www.sundaytimes.lk, 27 July 2014 & www.bbc.com, 23 November 2013

Questions

(a) **(i)** What is meant by real wages? [1]

(ii) Based on Figure 3, compare the changes in output per hour and median real wages for Britain and France between 2009 and 2014. [2]

(iii) With reference to the data, explain a factor that could have contributed to the change in UK's real wages after 2009. [2]

(b) **(i)** Explain why a rise in a country's wages is not evidence of a narrowing income gap in the country. [2]

(ii) Extract 5 suggests that low pay across an economy as a whole threatens to put a lid on its growth. Using economic analysis and a relevant diagram, explain and comment whether this threat is valid. [6]

(c) Explain why maintaining a rise in the US interest rate is good news for the US but bad news for countries like Brazil. [4]

(d) (i) Analyse how infrastructure investment by emerging economies will 'put a strain' on their balance of payments (extract 7). [3]

(ii) Extract 6 states that "these kinds of investments will help hundreds of millions of people lift themselves out of poverty".

Based on the data and your own relevant knowledge, assess whether a country should then focus on infrastructure investment to achieve growth or pursue other economic goals as its priority.

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[Total: 30]

SERANGOON JUNIOR COLLEGE
2016 JC2 H2 ECONOMICS PRELIMINARY EXAMINATION
PAPER 2 SUGGESTED ANSWERS

QUESTION 1

(a) (i) Identify the relationship between Saudi Arabia oil production and world oil price in Figure 1. [1]

Direct relationship between Saudi Arabia oil production and world oil price.

(ii) With reference to the data and using demand and supply analysis, suggest a possible reason for the above relationship. [2]

- The above relationship states that Saudi Arabia production level and prices are directly related, for example a fall in prices could lead to a fall in production in Saudi Arabia.
- A possible reason could be due to a fall in demand. As seen *in Extract 1, there is sputtering demand from Europe and China* due to slower economic activity → Derived demand for oil as an important factor of production for industrial activity fall
- This leads to a fall in price of oil which leads to a fall in quantity supplied as profit-maximising producers have less incentive to produce, hence leading to a fall in production.

(b) Saudi Arabia, one of the biggest oil producers, has 'cut prices for its customers'. Using Extract 1, explain the economic rationale for Saudi Arabia's action. [4]

The economic rationale for Saudi Arabia's action is to maintain their market share in the face of the shale oil production boom in the US and maximise profits.

Operating in an oligopolistic market structure, other major oil producers like Iraq and Iran will follow suit any cuts in price. Hence, Saudi Arabia's cut in price will lead to only a less than proportionate rise in quantity demanded, c.p. this will lead to a fall in total revenue in short run
However, as seen in Extract 1, 'oil is relatively cheap to extract so crude production can remain highly profitable at lower prices', it means that cost of production for Saudi Arabia is very low and in face of 'new drilling techniques' that Saudi Arabia has, they are expecting cost to fall even further, hence even with fall in TR will lead to TR still exceeding TC to be making supernormal profits

By cutting price of oil in Saudi Arabia, the demand for shale oil in US falls as people switch their purchase from US to Saudi Arabia as it is relatively cheaper, thus quantity demanded for Saudi Arabia's oil will rise → output sold ↑→ higher market share.

(c)

Russian ruble has tumbled to record low in 2016.
[3]

The value of the Russian ruble in the flexible exchange rate system is determined by demand for and supply of the Russian ruble in the foreign exchange market. In figure 1, The market equilibrium is determined at point E_0 when the demand is equal to the supply of Russian ruble, with the value of the Russian ruble at OPo, eg, against the US$.

Extract states “oil’s retreat choked revenue of the world’s largest energy exporter and restricted Russia’s ability to lift its economy out of a recession.” Demand for oil is price inelastic since it is an essential input for production of goods and services. When price of oil falls, quantity demanded for oil exports rises less than proportionate, thus fall in exports revenue. In addition, due to uncertainty of Russia’s economic prospects, there is a fall in confidence level among foreign investors. Both factors lead to a fall in demand for Russian ruble which is showed by a leftward shift of the demand curve from DD to DD1.

Hence at the present exchange rate, there will be a fall in the demand for Russian ruble or rise in its supply, a surplus of the currency arises. This will lead to a fall in value of the Russian ruble.

(d) (i) Explain the relationship between profits and capital expenditure of the US shale production firms shown in Figure 2.
[2]

Positive relationship as seen in Figure 2 whereby when profits rose, capital expenditure rose
When profits rise, US shale firms will have more funds and ability to purchase capital investment.

(ii) Discuss the short run and long run factors that are likely to influence a shale firm’s decision as to whether it should ‘invest in new wells’.
[8]

Introduction

increase production and this depends on mainly cost and revenue factors, as the traditional objective of firms are assumed to maximise its profits.

P1: Short Run factors
In short run, for a shale firm to 'invest in new wells', it must at least meet the condition whereby total revenue is at least equal or greater than total variable cost .

Low average variable cost

For shale firms mentioned in Extract 3, existing wells that are currently producing oil or gas are extraordinarily profitable, because most of the costs in the shale production process are already sunk, meaning most of the costs that the shale firms incur are fixed. Hence, the firm's fixed costs are irrelevant in this decision-making process because the firm has to incur fixed costs whether it decides to produce or not produce in the short run.

With low average operating costs of $10-20 per barrel of oil produced, such as labour cost incurred in shale oil extracting process, investment in new shale wells may continue in the short run if oil prices are able to maintain at a minimum of $10-20 too.

Price of oil (average revenue)
Though demand is sputtering as seen in Extract 1 and hence falling, but it is unlikely that prices will hit rock bottom in the near future. This is because oil is still a main source of energy and hence there will be a minimal demand for oil.

Evaluation:
In the short run, the total revenue of US shale firms may possibly fall further with Saudi Arabia cutting prices on oil. As Saudi Arabia is a close substitute for US shale oil as an alternative energy source, consumers may switch and increase quantity demanded to buy Saudi Arabia's oil.

P2: Long Run factors
In long run, for a shale firm to 'invest in new wells', it must at least meet the condition whereby total revenue is at least equal or greater than total cost (or whereby price must be at least equal or greater than average cost).

Cost factor
In the long run, since all factors are variable, there are no fixed costs. Hence all factors are variable including costs of drilling new shale wells.

Revenue factor
Alternative sources of energy may be developed over time with research and development done. These may be greener and produce less negative externalities such as possible water pollution from the production of shale oil and gas. These substitutes may grow in popularity in the long run, leading to the fall in demand for shale oil. Hence, price of shale oil may fall significantly in the long run.

Evaluation:
The ability to continue production in the short run and long run could also be

US government might provide subsidy to encourage firms to invest in new wells.

(e) Discuss the impact of the shale revolution on the US consumers and other economies. [10]

Introduction

(i) Shale revolution: as seen in Extract 4, with the surge in fracking and horizontal drilling, oil and gas production in the US has increased dramatically during the last decade

(ii) Overview: This increase in oil and gas production in the US has different impact on various economic agents

- US consumers of energy – Rise in consumer welfare: lower energy prices for households, lower factor prices for industrial production
- US consumers – Fall in consumer welfare for third parties in terms of negative externalities
- Other economies – Macroeconomic impact on oil exporters (OPEC, US, Saudi Arabia) and oil importers (India etc): link to any 2 macroeconomic goals

P1: Positive impact on US consumers in terms of higher consumer welfare due to lower prices and higher quantities enjoyed in various markets.
With US entering the global energy market as a major oil and gas producer, there is an increase in supply of energy sources. Since energy sources like *natural gas are major factor of production for electricity generation as seen in Extract 4*, the rise in supply of natural gas due to the shale revolution has led to the fall in energy prices and hence a fall in cost of generating electricity. This in turn translate into a fall in heating homes.
Since electricity to drive heaters in homes are essentials during seasons of cold weather, demand for electricity is price inelastic. With a fall in price of electricity, there will only be a less than proportionate fall in quantity demanded for electricity to heat homes ceteris paribus, hence leading to a fall in energy expenditure for US consumers.

P2: Negative impact on other oil exporting countries, like Russia and the Middle East, in terms of a worsening trade balance and in turn adversely affecting economic growth and employment.
Rise of US as a new oil exporter in global market → Assume global demand remains constant → Fall in market share for incumbent oil exporters such as Russia → as seen in Extract 2, choked revenue of the world's largest energy exporter and restricted Russia's ability to lift its economy out of a recession → Fall in export revenue for Russia, assuming import expenditure constant, <u>worsening trade balance</u>

Assuming other components of AD remains unchanged, the fall in net exports will result in a fall in AD for Russia as shown in Figure 1 by the leftward shift of the AD curve from AD0 to AD1. The resultant surplus lead to a new equilibrium general price level and real national output are lower at P_1 and Y_1. With a fall in real national output, this will lead to lower national incomes. Consequently, this fall in incomes will lead to a fall in induced consumption and a further fall in national incomes.

Evaluation:
The significant fall in AD & in turn NY if Russia is highly dependent on its oil exports

P3: Positive impact on net oil importers such as countries, like India, Senegal and Zambia, in terms of lowering inflation and raising economic growth.
With the shale revolution that will reduce global prices, these net oil importers will benefit from oil price reductions whereby they will enjoy fall in price of imported oil. Since oil is an important energy source for many industrial activities, this will lead to a fall in cost of production for various industries. Assuming no change in revenue, there will be a rise in profits for producers in these countries and hence there will be a rise in short run aggregate supply as seen in Figure 2 below whereby AS curve shifts from AS_0 to AS_1.

Figure 2: A rise in SRAS for net importing countries

At P_0, the level of aggregate supply exceeds the level of aggregate demand. In other words, producers wish to supply more than is demanded. Hence, there is surplus of output. The general price level will keep on falling the general price level is lower at P_1 while the real national output is greater at Y1.

Overall, the shale revolution spells good news for US consumers especially if the US government is able to put in place regulations that can manage the amount of negative externalities that shale production may bring to third parties.

SECTION A – QUESTION 2

(a) (i) What is meant by real wages?
[1]

Nominal wages / earning of workers adjusted for inflation.

(ii) Based on Figure 3, compare the changes in the output per hour and median real wages for Britain and France between 2009 and 2014. [2]

Output per hour rose slightly whilst the median real wages fell significantly for UK. In contrast, in France, both output hour and real wages rose continuously with its rate of output rising faster than UK

(iii) With reference to the data, explain a factor that could have contributed to the change in UK's real wages after 2009.
[2]

World economy slowing down with slow growth in China, the second largest economy that drives the world economy, including UK *(ext 4)*. As a result, UK investors and firms have a pessimistic economic outlook and cutback production as they anticipate that its trading partners will buy less imports from them.
This will cause a fall in the derived demand for labour as less production is required. Assume price of goods and services unchanged, real wages thus fell.

(b) (i) Explain why a rise in a country's wages is not evidence of a narrowing income gap.
[3]

A narrowing income gap means there is less uneven distribution of earnings amongst the various groups of people.

Wages are a major source of household income in both developed and developing economies but a rise in the country's wages does not mean that all workers benefit equally. The rise in wages could have been significant and benefitted only certain industries/sectors, especially those in the trade sectors spurred by globalisation export opportunities. At the same time, a fall in demand for less skilled workers reduces their income.

In addition, it has also been observed that globalisation presents vast opportunities for capitalists and entrepreneurs which means that their profits could also have improved greatly.

(ii) Extract 4 suggests that low pay across an economy as a whole threatens to put a lid on its growth.
Using economic analysis and relevant diagram, explain and comment whether this threat is valid.
[6]

Growth may be actual or potential rise in real GDP. Using the expenditure the foreign sector, ie: C+I+G+X-M.

It may be achieved by either increasing aggregate demand (AD) for locally produced goods and services and/or a rise in aggregate supply(AS).

Low pay results in low C by households due to firstly their low income and purchasing power and secondly, households' *pessimistic outlook* at the same time. Therefore, in figure 1, at the same price OP, AD will fall. This is illustrated by a left shift of AD from ADo to AD1.

AS_1

Eo

E_1

Y

Figure 1: Impact of low pay on

Assuming no change in aggregate supply, the resulting surplus reduces the price of goods and services. This will reduce quantity supplied, causing a movement along AS and increases quantity demanded along AD1 until new lower equilibrium is achieved with a lower national income level at 0Y1.

This fall may be to a large extent for countries like USA and rich countries, where consumption comprise a large percentage of their GDP (68%) and especially at this current period of slow growth where consumption is required to boost production.

In addition, this fall in consumption would at the same time cause a fall in net investment by firms when they cut back on production. This fall in net investments means that the productive capacity will also be reduced in the long run. The aggregate supply curve shifts to AS in diagram. The actual

However, if low pay is a result of technology advancements where workers are replaced by machinery or business firms switch production approaches to more capital and automation and demand less labour (ext 1), it could mean that growth might be assisted by more efficient methods of production. This could also result in export competitiveness and rise in real GDP.

(c) Explain why maintaining a rise in the US interest rate is good news for the US but bad news for countries like Brazil. [4]

A rise in interest rates is good news for United States because of the current state of the economy.
It signals that US is beginning to show signs of economy recovery as suggested by successful "stimulus efforts" in ext 6. This means that the job market is improving and there is some turn around in economic growth. Hence, raising interest rate suggests that United States has already reached its targeted job creation and inflation rate. This is in spite of the problem of secular stagnation where it is gripped by higher health and pension costs associated with ageing population. Hence a rise in interest is a good contractionary tool to curb possible demand pull inflation.
However, rising US interest rates is bad news for Brazil because firstly, if Brazil is a big borrower from US banks, it incurs higher interest payment on its debt. In addition, this will prevent some government investments in Brazil due to the higher cost of borrowing from US banks. As a result, this fall in government spending will reduce the aggregate demand and output and income. Hence this further curtails economic growth and job creation in the country. Secondly, a high public debt ridden with high interest payment may dampen investors confidence in the country, further crippling the economy.

(d) (i) Analyse how infrastructure investment by emerging economies will 'put a strain' on their balance of payments (extract 6). [3]

Balance of payments is a record of receipts and payments from exports and imports of goods, services and assets. A strain suggests the country is paying more than it is receiving from its international transactions.

Infrastructural development could mean capital/government spending on roads, ports etc. These require imports of capital goods, trains, oil and construction equipment, thus demand for imports and import expenditure will rise**.** Such investments are "large" and therefore could result in huge import expenditure and hence a *severe* **current account deficit,** assuming export revenue unchanged. This will put a strain on achieving a healthy balance of payments, *assuming capital account unchanged.*

Furthermore, extract mentions the possibility of inflation with infrastructure investment. This could result because of a rise in government spending on infrastructure that stimulates the economy to near full employment level. This resulting demand pull price instability could reduce foreign direct investment as foreign firms could be discouraged from setting up business in the country as they have challenges estimating cost, revenue and profits. Assuming local account as a net outflow of currency would result.

(ii) Extract 5 states that "these kinds of investments will help hundreds of millions of people lift themselves out of poverty".
Based on the data and your own relevant knowledge, assess whether a country should then focus on infrastructure investment to achieve growth or pursue other economic goals as its priority.
[10]

There are a few fundamental macro-goals a country should seek to achieve, such as growth, external healthy balance of payments, low inflation stability and full employment. Microeconomic goals include equity in income distribution amongst various groups of people and efficiency in resource allocation.

TS1a: The data (ext 6) suggests the importance of developing physical infrastructure such as ports and highways to stimulate economic growth.
Infrastructure investment can be seen as an expansionary fiscal tool with long run sustainable rise in real GDP. Firstly, this rise in government spending will initially raise the aggregate demand for locally produced goods and services, stimulate production and bring about a rise in real GDP. Secondly, once this infrastructure is completed, it improves the productive capacity of and attracts further investments in the economy bringing about an increase of the country's aggregate supply. This enables sustainable economic growth into the long run.

TS1b: At first glance, it appears that this focus on government spending to improve infrastructure is therefore necessary if growth is the priority.
This would be the case especially if a country experiencing slow growth or recession or ***severe*** poverty. This will especially *lift emerging economies out of* ***poverty***, bring about a **higher standard of living** for everyone as a rise in income would now mean a higher purchasing power for the average citizen, **assuming the inflation rate remain constant or rise less than the rise in national income.** In addition, through growth, it is hoped that strong job creation and equity goals can also be achieved through a redistribution of income that a rise in government tax revenue makes possible with economic growth.
Hence under such conditions, growth would be a reasonable priority to pursue for countries like Brazil with only a growth rate of 0.1% (Table 1) with the danger of sliding into **recession.** If this happens, investors' confidence will further be shaken with serious repercussions on reviving the economy. In addition, the strength of choosing this priority is that it is not likely to be **in conflict** with other goals, but achieves other important goals such as employment and equity simultaneously as explained above.
TS2: Some countries such as India and China also appear to suffer from serious pollution issues with an unhealthy pollution index of close to 100 (Table 1) and may need to prioritise micro economic goals instead.
Such countries should seriously also look into environmentally sustainable growth with measures to manage growth and efficient use of resources at an optimal level. This is because environmental pollution will undermine citizens' non material well-being and quality of life due to negative externalities arising from economic activity. Such externalities could affect both the living and the unborn as water and air pollution cause serious medical concerns and deaths

where research has already shown to have happened in countries like China. Hence instead of pursuing growth at all cost, it should prioritise cutting on environmental damage.

TS3: However, the data also suggests that countries such as Brazil and United States suffer from a huge deficit in their current account balance. This means that the country's export earnings are less than its import expenditure arising from trade in goods and services. This means the country suffers from an external debt where it is living beyond its means. The opportunity cost of interest paid on debt would mean less funds available for other competing needs of the economy. The more immediate concern is that a **massive** current account deficit suggests a continuing loss of export competitiveness and a possible loss of investors' confidence and credit rating with long term consequences. Hence, the severity of the deficit suggests this could be the priority area for such countries. Instead of concentrating on growth alone fuelled by domestic factors, these countries could look into measures to improve, for example training and productivity of their workers to reduce their cost of production in the respective sectors to ensure a healthy external performance.

Conclusion

There are many economic goals a government wishes to pursue. With a limited budget, it should consider carefully how serious or how far short its country is currently at in achieving these goals and whether they wish to solve the short term challenges with long term solutions. This requires an expedient

SERANGOON NIOR COLLEGE
JC2 Preliminary Examination

ECONOMICS **9732/02**

Higher 2

PAPER 2
2016

20 September

2 hours 15

READ THESE INSTRUCTIONS FIRST

Write 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.

Start your answers to each essay question on a new sheet of writing paper. Fasten your answers to each question 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.

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 In recent years, the number of online food delivery companies is increasing. Some restaurants have partnered these delivery companies as an additional way to grow revenues as they grapple with rising rentals and a manpower crunch. Others however have been affected by this competition.

With reference to the above developments, discuss the impact on the sales revenue of online food delivery companies and different types of restaurants. [25]

2 **(a)** Explain how the price mechanism addresses the problem of scarcity. [10]

(b) To what extent should Singapore rely solely on the price mechanism to achieve its microeconomic goals? [15]

3 **(a)** Explain the factors that affect the price and output decision of a firm in an oligopoly industry. [10]

(b) Discuss whether problems arising from market dominance can be alleviated by globalisation. [15]

Section B

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

4 With economic growth, many countries have seen their living standards improve. As a result, many have equated economic growth to improvement in standard of living.

Discuss whether economic growth should be the top priority in a country's pursuit of higher living standards. [25]

5 The global financial crisis of 2007-08 caused a resurgence in Keynesian demand management policies. However, Edmund Phelps, the 2006 Nobel laureate in economics, advocates that innovation – not more Keynesian fiscal stimulus – offers hope of a durable way out of the current stagnation gripping the world's most developed economies.

(a) Explain how the AE-Income model can be used to analyse how a worldwide recession would affect the national income of a country. [10]

(b) Discuss the view that Singapore would be better off promoting innovation instead of adopting Keynesian fiscal stimulus to drive its slowing economy. [15]

6 **(a)** Explain what might cause a current account deficit in the balance of payments. [10]

(b) Discuss whether Free Trade Agreements or protectionism is a more viable solution to a country's balance of payments deficit amidst a global economic gloom. [15]

[End of paper]

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SERANGOON JUNIOR COLLEGE
2016 JC2 H2 ECONOMICS PRELIMINARY EXAMINATION
PAPER 2 SUGGESTED ANSWERS

<u>Question 1</u>

In recent years, the number of online food delivery companies is increasing. Some restaurants have partnered these delivery companies as an additional way to grow revenues as they grapple with rising rentals and a manpower crunch. Others however have been affected by this competition.

With reference to the above developments, discuss the impact on the sales revenue of online food delivery companies and different types of restaurants. [25]

Introduction
Definition:

- Demand and supply in the free market will determine the equilibrium price and output. Hence, changes in the demand and supply will impact the market equilibrium which in turn will affect the sales revenue of producers. Sales revenue (TR) of producers is calculated by multiplying the price by the quantity sold in the free market.

Direction:

- With rising number of online food delivery companies, this will lead to a rise in the supply of online food delivery service and its impact on sales revenue will depend on the price elasticity of demand. On the other hand, the sales revenues of different types of restaurants will be affected differently as a result of the above developments depending on whether the restaurants have partnered with these online food delivery companies. The extent of the change in the firms' revenue in the markets is affected by the different elasticities of demand and supply.

Body

1. <u>Online food delivery companies</u>

   P1: A rise in SS of online food delivery companies could lead to a rise in total revenue on food delivery companies.

   Online food delivery services have been expanding in recent years in Singapore. This can be seen by rising number of online food delivery companies in the market. This could be due to advancement in technology which reduces the cost of setting up online food delivery companies, thus there is a rise of supply of online food delivery companies. With rising number of online food delivery companies, this leads to a rise in the supply of online food delivery service and it is illustrated by a rightward of supply curve to the right from S0 to S1 as shown in figure 1.

Figure 1

Demand for food delivery service of a particular firm is likely to be price elastic as there are many other substitutes available.Therefore any fall in price of online food delivery service would lead to a more than proportionate rise in quantity demanded, ceteris paribus, thus total revenue of online food delivery is likely to rise.
The original equilibrium price is at P_0 and the quantity is at Q_0, with the original market equilibrium at E_0. When supply increases, there will be surplus at price P_0 which will lead to a downward pressure on price. Eventually, a new market equilibrium E_i is reached. At this point, total revenue of the online food delivery company has increased.

2. <u>Restaurant meals</u>

P2: Rising rentals and manpower crunch will lead to a fall in total revenues of restaurants, ceteris paribus.
The amount of a good that producers are willing to supply depends very much on the costs of production. In Singapore, due to rising land scarcity, rental has been increasing considerably over the years. In addition, manpower crunch is a major concern faced by many restaurant owners in Singapore as ageing workers retire. Hence, there will be a significant rise in cost of operating a restaurant, thus supply of restaurant meals will fall which is illustrated by leftward shift of the supply curve from S0 to S1 as shown in figure 2.

E_0

Figure 2

Demand for restaurant meals is likely to be price elastic as there are many other substitutes such as hawker food and home cooked meals. Therefore any rise in price of restaurant meals would lead to a more than proportionate fall in quantity demanded, ceteris paribus.

The original equilibrium price is at P_0 and the quantity is at Q_0, with the original market equilibrium at E_0. When supply of restaurant meals falls, there will be a shortage at price P_0. This will lead to an upward pressure on price. Eventually, a new market equilibrium E_i is reached. Hence, when there is an increase in cost of production, ceteris paribus, the total revenue for all restaurants will fall.

P3: There will be a rise in demand for restaurants in partnership with online food delivery companies.
As mentioned in the preamble, some restaurants have partnered with online food delivery companies as an additional way to grow revenues. When there are more firms provide online food delivery service, the price of such service falls, this will lead to a rise in quantity demanded for online food delivery service, ceteris paribus. Since restaurant meals and food delivery service are complement (XED<0), a fall in price of online food delivery will lead to a

higher demand for those restaurant who partner with the online food delivery companies. This is illustrated by a rightward shift of demand curve from D_0 to D_1 as shown in figure 3.

P4: With a rise in demand for and fall in supply of those restaurants who have chosen to partner with online food delivery compaies, total revenues on these restaurants is indeterminate.

In the context that rental and wages form a large proportion of a restaurant's total operating cost, thus the rise in rental and wages could lead to a significant rise in its operating cost, therefore the fall in supply is likely to outweigh the rise demand as shown in figure 3 → thus the fall in TR due to significant fall in supply is likely to be more than the rise in total revenue, thus overall sales revenue could still fall from $0P_0E_0Q_0$ to $0P_1E_1Q_1$ but to a smaller extent as compared to those restaurants who did not tap into this new development.

<u>**Evaluation: extent of impact on sales revenues for different restaurants**</u>

However, the sales revenue for some restaurants could rise if they are able to overcome the problem of manpower crunch such as using technology to replace workers.

P5: A fall in price of online food delivery service would lead to a fall in demand for those restaurants not in partnership with online food delivery companies.

SS_0

A fall in price of online food delivery service → rise in quantity demanded for such service, ceteris paribus → since restaurants that partner with online food delivery companies are close substitutes with those who don't provide online food delivery service → fall in demand for restaurant meals who do not engage in online food delivery service from DD_0 to DD_1 as shown in Figure 3. Coupled with fall in supply due to rising cost of production as explained above, equilibrim price falls from $0P_0$ to $0P_1$ and equilibrium quantity falls significantly from $0Q_0$ to $0Q_1$→ overall, fall in total revenue for those restaurants who do not tap into this development from Area $0P_0E_0Q_0$ to Area $0P_1E_1Q_1$

Conclusion
In conclusion, the above development has led to a rise in total revenue for online food delivery companies whereas the impact on revenues for different types of restaurant is indeterminate. It depends on whether restaurant owners able to tap onto the existing and new technologies to transform their business model.

L3	• For a detailed analysis of the impact of the mentioned factors on the revenue of online food delivery companies and different types of restaurants • Good application of **both** PED and CED to determine the impact of sales revenues on the different markets. • Well-drawn demand and supply diagrams to support clear analysis and made reference in the write-up.
L2	• Some analysis of the impact of the mentioned factors on sales revenues on online food delivery companies and at least 1 type of restaurant but analysis may not be rigorous • Demand and supply diagrams drawn to support analysis but reference may not be consistent. • Good application of at least 1 elasticity concept to discuss the extent to which sales revenues change.
L1	• For a descriptive response with some relevant points. • Limited economic analysis.
E2	• Evaluative judgement supported by appropriate analysis for the combined effect of the factors for different types of restaurants • Assess the extent of impact of sales revenues using relevant elasticity concepts.
E1	

Question 2

(a) Explain how the price mechanism addresses the problem of scarcity. [10]

(b) To what extent should Singapore rely solely on the price mechanism to achieve its microeconomic goals? [15]

PART A

Introduction

Scarcity arises because there are limited resources but unlimited human wants. Price mechanism is a system whereby market forces of demand and supply determine prices which then act as signals to firms to allocate scarce resources.

Body

P1: In a free market economy without govt intervention, the price mechanism tackles scarcity what and how much to produce.

To tackle the problem of scarcity, price mechanism works automatically to allocate scarce resources based on demand and supply forces. Goods and services are provided through the market where consumers and producers act in their self-interest. To maximise their satisfaction, consumers will signal their demand by offering a price they are willing and able to pay for each additional unit. This price is determined **marginal private benefit**. Profit maximising producers in turn, will produce the quantity they are willing and able to supply based on the price consumers offered to them. Its decision to supply is based on the **marginal private cost** of producing an extra unit

Market equilibrium is determined at point E where demand equals supply or where **MPB(DD) = MPC(SS).** At equilibrium pt E, quantity demanded equals quantity supplied thus solves the problem of scarcity. Assuming there are no externalities & market imperfections, equilibrium output Qe is also the socially optimal output level that maximises society's welfare. As MSC = MSB, resources are efficiently allocated & price mechanism addresses the problem of scarcity.

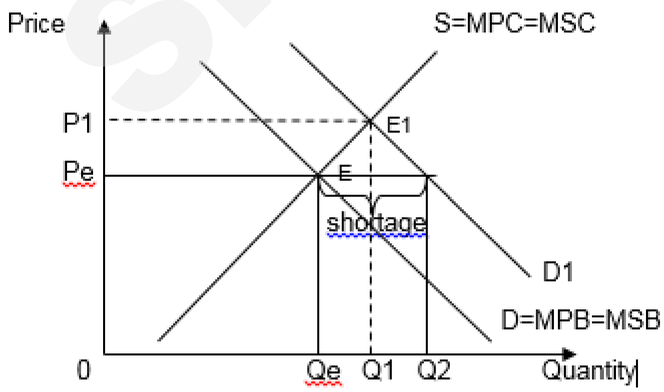


Fig 1: Determination of equilibrium price & quantity

P2: The price mechanism also helps to tackle scarcity by deciding how and for whom to produce

Due to the competitive environment, firms produce goods by combining scarce resources in the least costly way. Price mechanism enables producers to compare prices of inputs to decide **how to produce** at the lowest cost. Prices of inputs depend on demand & supply and firms substitute cheaper inputs to replace more expensive ones.

Consumers differ in their dollar votes or willingness & ability to pay due to differences in income & preferences. Consumers who are willing & able to pay more will exert a greater influence on resource allocation. Profit driven producers will channel scarce resources into production of the goods desired by consumers, backed by ability to pay.

Conclusion

Through its allocative, rationing & signalling functions, price mechanism addresses scarcity to ensure efficient allocation of resources. However in reality, presence of externalities, zero production of public goods, inequity etc limit its ability to maximise society's welfare.

L3	• Good understanding of how PM tackles scarcity based on self interest (using MPB=MPC approach & diagram). Showed clear links to what, how much, how & for whom to produce so as to address scarcity
L2	• Sufficient understanding of how PM tackles scarcity but weak link to the 4 questions
L1	• Smattering of ideas/ little understanding of the role of PM with some reference to 1 or 2 of the 4 basic questions without 'HOW' analysis.

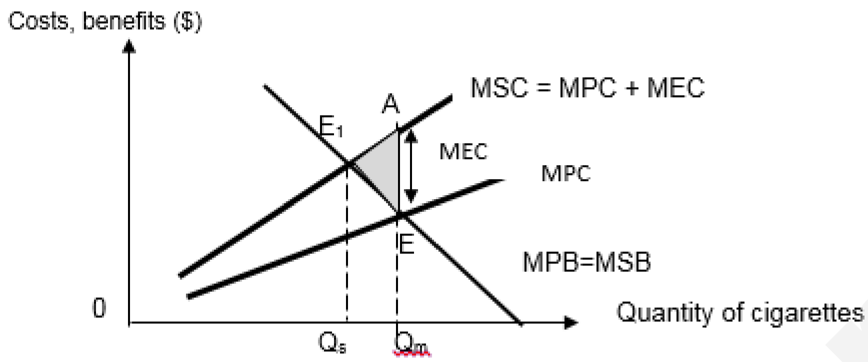
PART B
Introduction

Price mechanism can help to achieve the microeconomic goals of efficiency in resource allocation and income equity provided the assumptions of perfect competition and absence of externalities are made. However in reality, this is not possible thus in Singapore, varying degrees of government intervention is needed rather than relying solely on the price mechanism.

Body

P1: For demerit goods with negative externalities, Singapore cannot rely on the price mechanism.

Cigarettes are demerit goods with external costs. Left to the price mechanism, there will be overconsumption leading to inefficiency in resource allocation. Smoking gives rise to marginal external cost (MEC) for third party passive smokers. Assuming no positive externality, MPB is thus equal to MSB. However, with negative externality, there is a divergence between MPC and MSC. Smokers only consider their private benefits and costs but ignore the external cost. They consume up to where MPB=MPC resulting in Qm market equilibrium level. However, socially optimal level is at Qs when MSB=MSC where the full cost and benefit to society are taken into account. Since Qm > Qs, there is an overconsumption of cigarettes by QmQs amount. E1AE is the total deadweight loss to society if consumption is left to price mechanism



Negative Externality & Overconsumption of cigarettes

Evaluation
As smokers tend to over-value hence over consume cigarettes due to information failure, it is obvious Singapore will not and cannot rely on the price mechanism to bring about efficient resource allocation. There is much government's involvement in this market to discourage smoking due to the adverse consequences on the health.

P2: For public goods, Singapore definitely cannot rely on price mechanism.

E/E2a: explain characteristics of public good
Due to its characteristics of non excludability and non-rivalry in consumption, there is zero production of public goods like street lighting. Non-rivalry in consumption means a person's consumption of it does not diminish the amount available to others. Non-excludability in consumption means it is not possible or too costly to prevent non-payers from consuming it. This leads to the free rider problem where people can enjoy the good without paying for it. This gives rise to concealed demand. Since no one is willing to pay for it, firms will not produce because there is no profit.

Given the above 2 characteristics, profit motivated producers will not want to produce, thus complete market failure results. In this case, it is obvious Singapore cannot depend on price mechanism at all to achieve its efficiency in resource allocation goal.

Evaluation
Government intervention is absolutely necessary as the absence of such essential goods and services could threaten the nation's survival (defence).

P3: Singapore will also not rely solely on price mechanism to achieve income equity.
Equitable income distribution occurs when there is less unequal income distribution such that most people can afford basic necessities. For price mechanism to work well and thereafter achieve microeconomic goals, it assumes firms operate in perfectly competitive markets. However in the real world, market imperfections prevail. In many countries, the presence of dominant firms with their high entry barriers enable them to restrict output to keep price high. Thus they can earn supernormal profits at the expense of consumers who are largely from other income groups, including the poor. This leads to a widening income gap which compromises the goal of income equity.

Evaluation:

However in Singapore, the likelihood of dominant firms contributing to a widening income gap is quite low because of the country's openness to international competition. Instead in a highly globalised economy like Singapore, it is globalisation that is the likely cause.

P4: Lastly, Singapore continues to rely largely on the price mechanism to produce private goods & services which do not give rise to externalities
The nature of some goods and services makes it unnecessary & inefficient for government in Singapore to intervene in the market. For many commercially traded private products (eg. electronic goods, household items, fruits, clothes etc), the quantities exchanged are best left to the market forces. There is no need for government intervention since market demand & supply forces will interact to find their equilibrium prices & quantities.

Conclusion: When market dominance and market failures exist, Singapore to a large extent, will not rely completely on the price mechanism to achieve the microeconomic goals. Instead it implements appropriate measures to reduce the limitations of the price mechanism though it acknowledges that there is a possibility of government failure due to problems such as imperfect information.

L3	**Detailed** analysis of why PM makes micro goals unattainable **in Spore** (1) for public goods & goods with externalities (demerit OR merit gds/svs) + (2) when market dominance exists Brief explanation for Spore's continued reliance on PM for private goods without externalities End points are clearly linked to respective microeconomic goals
L2	**Adequate** analysis (covered at least 2 sources of market failure, 1 of which has to be preferably market dominance) End points are not always linked to respective microeconomic goals
L1	**Limited** analysis with little/ no link between market failure & micro goals. Showed weak grasp of key contents, conceptual errors, many gaps in analysis
EV 2	For evaluative comments on the extent of Spore's reliance on PM to achieve microeconomic goals (based on some guidelines)
EV 1	For an unsubstantiated statement regarding the extent of Spore's reliance on PM

Question 3

(a) Explain the factors that affect the price and output decision of a firm in an oligopoly industry. [10]

(b) Discuss whether problems arising from market dominance can be alleviated by globalisation. [15]

Part A

Introduction

Oligopoly is a market structure in which a few large but interdependent firms control a large part of the industry's output, selling products that are either homogeneous or differentiated, with high barriers to entry and exit in the industry and imperfect knowledge in the market. An example of such a market structure would be the telecommunications service industry, which currently consists of M1, Starhub and Singtel.
The price and output set by oligopoly firms is then dependent on the firm's stand on profit-maximisation. In addition, due to mutual interdependence between firms, the action of one firm will have significant effect on others.

Body

P1: High barriers to entry and profit-maximising objective will influence price and output.
The high barriers to entry prevent new firms from entering the market. Hence, the oligopoly firm is faced with relatively less competition and has a downward sloping demand curve as seen in Figure 1 below.

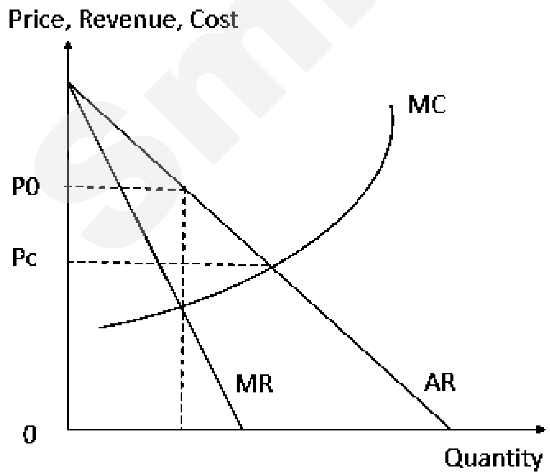


Figure 1

If the oligopoly firm chooses to profit-maximise, it will produce at the output level 0Q0 where MC=MR and MC is rising. At the profit-maximising output level 0Q0, the firm charges a price 0P0. Therefore, profit-maximising oligopoly firms are able to restrict output and charge higher prices than the perfectly competitive market price of 0Pc.

P2: In addition, oligopoly firms are mutually interdependent.

P2a: Firms in a non-collusive oligopoly have no explicit agreement amongst themselves to co-operate to limit competition. The kinked demand curve theory is one of the models that is used to explain how firms behave in a non-collusive oligopoly. In this model we assume that if a firm reduces its price, rivals will follow suit to match the price cut to prevent losing customers to the first firm. If the firm increases its price, rivals will not follow suit since by doing so they can expect a gain of customers from the first firm.

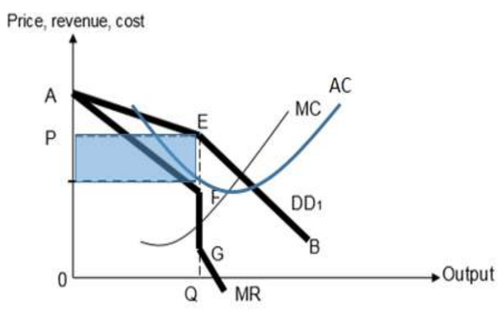


Fig. 1: Kinked Demand Curve

Figure 2

Arising from the kinked demand curve, the marginal revenue curve of the firm has a discontinuous portion. The profit-maximising firm will produce an output where MR=MC. This is output 0Q and he will charge a price of 0P allowing the firm to maximise its profits as shown by the shaded area.

The kinked demand curve model explains why there is price rigidity in oligopolistic markets. There is no incentive for any firm to initiate price reductions since other firms will follow suit, thereby resulting in no gain in its market share. Conversely, if the firm increases its price, the rivals will not follow. Hence the first firm to raise its price will face a fall in its sales and market share.

Firms in a collusive oligopoly agree formally or informally to co-operate and thus limit competition among themselves. Collusion may be undertaken in order to **reduce uncertainty** in the markets, **maximise the firms' joint revenue** and also to **avoid price wars** that will make all firms worse off in the end. One example of collusive oligopolies is a **cartel**.

Conclusion

Due to high barriers to entry and the profit-maximising objective, oligopoly firms would usually set a high price and restrict output. In addition, due to mutual interdependence, frequent price changes are unlikely to occur in the oligopoly industry. Hence, firms in the oligopoly will resort to product differentiation in order to compete. The presence of barriers to entry in the industry will result in market dominance which allows the oligopoly firms to set prices. This might result in various problems such as economic inefficiency.

Levels Marks Scheme	
L3	• Thorough explanation of pricing AND output decision of oligopolistic firm with respect to non-collusive (Kinked Demand) AND collusive models • Explanation is supported with accurate diagram(s • Relevant characteristics of the oligopoly market structure (high barriers to entry, mutual interdependence) are well-linked to the explanation of pricing and output decisions.
L2	• Some explanation of pricing and output behavior of oligopolistic firms with reference to either the non-collusive (Kinked Demand) and/or collusive model • Diagrams may / may not be drawn

L1	• Weak and incomplete understanding of the concepts and context • Mainly irrelevancies and substantial glaring conceptual errors

Part B

Introduction

Globalisation refers to the process of continuing integration of countries in the world where national markets become increasingly interlinked. This means greater mobility of goods and services, capital, labour and technological know-how amongst countries.
High entry barriers have given rise to markets that are dominated by just one firm (monopoly like postal service) or several large firms (oligopoly like petroleum industry) which enjoy huge monopoly power which the power to influence price or output.
Market dominance can result in allocative and productive inefficiency which in turn result in economic inefficiency and market failure. The large profits that dominant firms make also result in inequity. These problems can be alleviated by globalisation to a certain extent.

Body
Thesis

P1: Globalisation can help alleviate the problem of allocative inefficiency caused by market dominance.
Allocative Efficiency is attained when society produces the right type and right amount of goods and services from society's point of view and hence society's welfare is maximised. This situation is attained when P=MC for the last unit of output produced. The monopolist's significant degree of market power and his profit-maximising behaviour allows it to charge P>MC, resulting in a deadweight loss to society.

Globalisation can help remove some barriers to entry such as the substantial economies of scale as trade opens up the huge external global markets for firms allowing them to produce at a higher output level. This reduces the market power of the dominant firm as consumers now have got other alternatives from abroad to turn to such. This results in a fall in demand for the monopolist, causing the average revenue curve to shift leftwards. Prices charged by the monopolist would be reduced, hence leading to lesser deadweight loss

P2: The rise in competition due to globalisation could also encourage firms with market power to achieve productive efficiency and dynamic efficiency.
Due to market dominance, the firm may incur higher costs of production due to X-inefficiency, because as the dominant firm and with barriers to entry, there is no competitive pressure on profits. Thus, cost control can become lax. Also, while the dominant firm is said to have the incentive and ability to engage in R&D, he could at times lack the incentive do so. This is because of the complacency brought about by the absence of competition as dominant firms are protected by barriers to entry. In such a case, consumers may be faced with a limited variety of goods and hence less choice for the consumers.

Rise in trade due to globalisation will increase the level of competition for dominant firms. As a result, there is now more competition in these industries, increasing the pressure on incumbent dominant firms to achieve greater efficiency in production so as to keep unit cost of production low and maintain profit levels. Hence, the problem of productive inefficiency is alleviated. Dominant firms will also have greater impetus to engage in R&D in order to improve on the quality of their goods and services in order to stay competitive thus resulting in dynamic efficiency.

Evaluation:
The increased flow of technology and high tech capital goods into the country will further enhance dynamic efficiency as firms are now able to tap on these high tech machineries

and production methods to further improve on the quality of their goods and services which will improve the welfare of the consumers.

Anti-thesis

P3: The rise in competition due to globalisation could also however worsen the problem of inequity in income distribution caused by market dominance.

Due to high barriers to entry, dominant firms can make huge supernormal profits, especially if they have strong market power. This may lead to inequitable income distribution, and be considered unfair by the small, competitive firms and low income earners. Monopoly firms earn supernormal profits at the expense smaller firms. Hence, there is a widening income gap between owners of the different factors of production.

The greater flow of labour allows the dominant firm to hire foreign labour with lower wage rates and replace low-skilled labour in the home country. In this way average cost of production for the dominant firm is reduced and the extent of its supernormal profits will grow, thus worsening the income inequity between capitalists and entrepreneurs, and labourers.

Evaluation:

The rise in flow of technology due to globalisation, in both advanced and developing economies, creates greater demands for those with higher skills. To the extent that technological change favours those with higher skills and exacerbates the “skills gap”.

Conclusion

Overall, globalisation is able to alleviate the problems caused and increase consumer welfare as seen in cases whereby consumers are able to enjoy more types of goods and services at far lower prices due to trade and specialisation as a result of globalisation. However, it might give rise to other forms of income inequity due to the changes in demand of labour of different skills. There is therefore a need for the government to implement policies such as re-training to tackle the problems that may arise.

L3	– Thorough explanation of the efficiency (allocative efficiency, productive efficiency) AND equity problems caused by market dominance – For a clear and well elaborated consideration how globalisation can and cannot address the above problems.
L2	– Some explanation of the efficiency and/or equity problems caused by market dominance
L1	– Smattering of points with little elaboration – An answer that shows some knowledge, e.g unexplained listing of impact of globalisation on economic efficiency.
E2	– For an evaluative discussion of how globalisation can alleviate the problems caused by market dominance given the conditions or policies that are in place to further enhance the effects of globalisation.
E1	– For an unexplained assessment, or one that is not supported by analysis –

Question 4

With economic growth, many countries have seen their living standards improve. As a result, many have equated economic growth to improvement in standard of living.

Discuss whether economic growth should be the top priority in a country's pursuit of higher

Introduction
The standard of living refers to the level of material and non-material well-being of an individual or household. Material standard of living refers to the amount of goods and services that an average citizen can consume over a period of time, usually a year while non-material living standard can be defined as the quality of life and measurements usually include stress levels, amount of leisure and the state of environment.
Although the pursuit of sustained economic growth can lead to an improvement in SOL, it might not be the top priority as there are other factors such as income distribution and environmental concerns that could affect a country living standards.

Body
P1: Sustained economic growth can bring about higher living standards
Economic growth can refer to actual growth or potential growth and achieving both actual and potential growth will allow for sustained economic growth. This means that there is an increase in the country's real GDP over time with little or no increase in the general price level. At the same time employment levels are likely to be kept low with the increase in output given that labour is a derived demand. Therefore when there is sustained economic growth there will be an increase in real income. This means that people's 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.

With sustained economic growth, government will be able to collect more tax revenue as rising income and thriving businesses will mean that more tax revenue can be collected from firms and household. In addition, government will also need to spend less on unemployment benefits as sustained economic growth also bring about lower level of unemployment. This ensure government is able used the tax revenue collected to finance expenditure on infrastructure, education, healthcare.

Evaluation:
Sustained economic growth should be a top priority because achieving it can also help support the other goals, e.g. equity in income distribution.

P2: Improvement in income distribution is also needed to bring about higher living standards for all as growth may cause inequity in income distribution.
The pursuit of economic growth could lead to a widening of income distribution as measured by the Gini coefficient. Economic growth could involve a restructuring of the economy and requires changes in production in terms of the types of goods and services produced or techniques used and skills required. Government needs to direct resources to help people displaced by restructuring. Doing so will prevent social unrest which may disrupt production and thus affecting future growth. Also, this can bring about more equal access to education, healthcare and other public services contributes greatly to improving income distribution, further giving opportunities to the poor to raise their living standards.

Evaluation:

Economic growth should be not be a top priority for developed economies such as Singapore, United States and South Korea because of the state of their economy. Given that these countries are in the later stages of economic development, a smaller improvement in living standard can be achieved by placing economic growth as the top priority.

P3: Improvement in environmental standards is also needed to bring about higher living standards as economic growth may harm the environment.
Making economic growth the top priority in order to improve material SOL can ironically lead to a worsening of non-material SOL causing SOL overall to be lower. This is because sustained economic growth brought about by industrialisation involves firms using more oil, building on green field sites and creating more pollution, thus damaging the environment. For example, negative externalities such as pollution have brought harmful effects to the quality of the environment in China because it is the so-called "factory of the world". When the health of the citizens of the country worsens, it could also bring about a slowdown of economic growth

Conclusion
The conditions from country to country will differ greatly and thus the top priority will be different for different countries. Countries will have to carefully weigh the cost and benefit based on the severity of the different issues.

L3	An answer that displays strong economic analyses and conveys good understanding of question requirements by explaining how different government goals can bring about an increase in standard of living. Good use of examples to support analysis
L2	An answer that displays some economic analyses and conveys some understanding of question requirements by explaining how different government goals can bring about an increase in standard of living Some/Limited use of examples to support analysis
L1	For an answer that briefly displays knowledge of macroeconomic objectives and living standards OR a brief and undeveloped answer. No examples given
E2	For well-substantiated opinions on whether or not economic growth needs to be the top priority to achieve improvement in standard of living
E1	For non-substantiated opinions on whether or not economic growth needs to

Question 5

The global financial crisis of 2007-08 caused a resurgence in Keynesian demand management policies. However, Edmund Phelps, the 2006 Nobel laureate in economics, advocates that innovation – not more Keynesian fiscal stimulus – offers hope of a durable way out of the current stagnation gripping the world's most developed economies.

(a) Explain how the AE-Income model can be used to analyse how a worldwide recession would affect the national income of a country. [10]

(b) Discuss the view that Singapore would be better off promoting innovation instead of adopting Keynesian fiscal stimulus to drive its slowing economy. [15]

Part (a)

Introduction
The AE-Income model can be used to determine the equilibrium level of national income (NY) which is that the level at which the total value of planned output by firms (Y) is equal to the total amount of desired expenditure (AE) by the economy. There are four components of aggregate expenditure in an open economy namely: Consumption expenditure by households (C); Investment expenditure by firms (I); Government expenditure on goods and services (G) and Net Export (X-M, where X=Export and M=Import) expenditure by the foreign sector.

Body
P1: The worldwide recession will lead to a fall in AE of a country.
A recession refers to a fall in real GDP for 2 consecutive quarters. A worldwide recession implies falling NY globally and much pessimism. Households all over the world will respond to this fall in purchasing power by cutting back on consumption of domestic goods and services as well as imported ones assuming all are normal goods. This weakens external demand of its trading partners. For a given country, its export revenue (X) will fall. In addition, there may be a loss of investors' confidence if the recession is perceived to be severe or prolonged thus investment expenditure will also fall, hence resulting in a fall in **autonomous** injection into the circular flow which gives rise to a multiplied decrease in its NY.

P2: The fall in aggregate expenditure will lead to an initial equal fall in NY.
The economy is assumed to be initially at equilibrium point E where the equilibrium level of NY is $6000m.

Fall in injection of $1000m

New Eqm NY falls by more than $1000m

With a fall in export revenue of $1000m, AE will fall from $6000m to $5000m and an downward shift of the AE curve from AE_0 to AE_1. The immediate effect of a decrease in I by the firms of $1000m is a fall in income of $1000m to the resource owners that supply the exported goods to the foreign sector. This fall in expenditure therefore generates an equal decrease in wages, rents, interest and profit.

P3: However, the fall in NY does not stop there.
Since factor owners now have less to spend on goods and services, assuming the marginal propensity to consume (MPC) is 0.6, they will cut spending by 0.6 of $1000m, i.e. $600m on domestically produced goods. They will also cut withdrawals by $400 in the form of savings (S), taxes (T) paid to the government and expenditure on imports (M) of foreign goods. The process of decrease in NY and induced C will interact to result in a multiple decrease in NY. As the level of NY falls, so is the total amount of savings, tax and import expenditure (total withdrawals). The multiplier process is completed only when the total fall in withdrawal (W) equals to the initial fall in injection, J (in this case, exports) of $1000m.
In the above illustration, an initial decrease in AE of $1000m will eventually lead to a decrease in equilibrium level of NY of $2500m where the ρNY=k x ρAE(autonomous).

Conclusion
The AE=Income model is commonly used to determine the impact of a change in injection(s) on the level of NY through the multiplier process and it is popular with Keynesian economists to determine the amount fiscal stimulus to be injected.

L3	• Well-explained answer of the reverse K process and factors affecting autonomous AE during worldwide recession and linking back to the impact on NY.
L2	• A clear explanation of how recession affects 1-2 components C, I, G, X; some understanding of K process and AE=Y equilibrium.
L1	• For an answer that has weak/no recognition of the K process or Y=AE model to explain the impact of worldwide recession on national income.

Part (b)

Introduction

Innovation economics has been gaining recent popularity. The central goal of this policy is to spur higher productivity through greater innovation, and thereby greater rate of economic growth. Generally, the usefulness of fiscal stimulus to get countries out of a recession is a recognised fact but the preamble suggests that such stimulus is not effective when the economies are stagnating or slowing down.

Body

P1: Fiscal stimulus can be effective.

Fiscal stimulus involve both a rise in government spending (G) and a fall in corporate and personal income tax to encourage firms' investment (I) and household spending (C). This is because a fall in corporate tax increases post-tax profits and serve to make (I) more profitable. In the same way, a fall in personal income tax which increases disposable income will encourage C. Hence, together with a rise in C, I and G, there will be an overall rise in the AE for domestically produced goods and services leading to a shortage and unplanned disinvestment. As firms raise output, the rise in NY will cause an increase real GDP by a multiple amount.

Evaluation:

- Given the current 17% for corporate tax and 20% personal income tax are relatively competitive in the region, a further lowering of taxes may not result in a more than proportionate rise in domestic demand.
- Fiscal measures are also limited because of the small k size.

P2: Given the limitations of more fiscal stimulus, some are promoting innovation.

Innovation can be promoted using interventionist supply-side policies (SSP) aimed at research and development (R&D) to improve product quality or create new products in key sectors, eg biomedical services and other industries. SSP helps to increase the productive capacity thus increasing the aggregate supply (AS) in the long run. Fig.2 shows the shifting of AS0 rightward to AS1. At P0, the greater output gives rise to a surplus exerting a downward pressure on price. The final equilibrium is a higher real output from Y0 to Y1 and therefore a rise in real GDP. The fall in general prices improve Singapore's exports competitiveness. If demand of exports is price elastic, the fall in price of exports will result in a more than proportionate rise in quantity demanded and therefore a rise in exports revenue, ceteris paribus. This will improve Singapore balance of payment current account. The rise in Yf allows greater growth in AD without high inflation.

Evaluation:

- Supply-side policies take time to work
- Firms may be unwilling to invest in innovation because of unknown returns.

Conclusion

Fiscal stimulus is needed to reflate an economy and get it out of recession. However, the government needs to bear in the mind the small multiplier size. In the long run, innovation is necessary to maintain Singapore's competitiveness.

L3	• Sound explanation of eFP and its limitation • Analysis of how SSP promote 'different' innovation in terms of efficiency and product quality. • Recognition of limitations of SSP in boosting growth (antithesis).
L2	• Sound explanation of eFP plus limitation. • Explanation of SSP may be theoretical where innovation is merely stated and not explained.
L1	• Descriptive policies with little economic analysis. • Smattering of ideas.
E2	• Synthesis e.g recognising original intent of eFP to reflate the economy and innovation for long term competitiveness with justifications. • Use of evaluative criteria contextualised to Singapore.
E1	• For an unexplained synthesis such as mere stating of examples/factors not

Question 6

(a) Explain what might cause a current account deficit in the balance of payments. [10]

(b) Discuss whether Free Trade Agreements or protectionism is a more viable solution to a country's balance of payments deficit amidst a global economic gloom. [15]

Part (a)

Introduction
The current account records the total value of exports and imports of currently produced goods and services, investment incomes and unilateral transfers. Together with the capital account, it is part of the balance of payments which is a record of a country's international transactions between its residents and those of the rest of the world over a period of time. A current account deficit occurs when payment for imports or investment income paid to abroad exceed the receipts for export on investment income received from abroad.

Body
P1: High inflation relative to other trading partners could result in a current account deficit.
When there is higher inflation in a country relative to its trading partners, its exports will now be relatively more expensive than those of its competitors. The fall in price competitiveness of the country's exports will result in a fall in the demand for exports and hence a fall in export earnings. At the same time, imports will be relatively cheaper than the domestically produced import substitutes. Thus, there will be a rise in demand for imports and hence import expenditure. As a result, a fall in export revenue together with a rise in import expenditure will worsen the country's current account that may result in a deficit.

P2: Lower exchange rate of trading partners could also result in a current account deficit.
When country B lowers their exchange rate, assuming demand for country A's exports is price elastic, a rise in price of exports will cause quantity demanded to fall more than proportionately, ceteris paribus, the export revenue will fall. Similarly, if country A's demand for imports is price elastic, a fall in price will cause quantity demanded to rise by more than proportionately, ceteris paribus, the import expenditure will rise. As a result, the net exports will fall. As long as the Marshall-Lerner condition holds, where the sum of price elasticity of demand for export and import is more than one, undervaluation by country B will lead to a worsening of the current account of country A that may result in a deficit.

P3: The fall in price competitiveness of exports due to structural changes in the economy could also result in a current account deficit.
The demand for specific exports and imports may change due to changes in comparative advantage, technology, availability and prices of new substitutes and tastes and preferences. If a country is slow or unable to adapt to these changes, this will result in a loss in export competitiveness of the developed countries, hence a current account deficit may occur and this deficit is likely to persist as long as the country is unable to reallocate its resources.

Conclusion
Maintaining a healthy balance of payments is one of the government's macroeconomic goals and thus there is a need for the government to implement policies to tackle the problem of a persistent current account deficit as it has negative economic consequences.

L3	Well-developed explanation on 3 causes of current account deficit
L2	Some explanation on the causes of current account deficit
L1	Undeveloped explanation on the causes of current account deficit Shows knowledge of current account deficit and/or identify the causes of current account deficit Understands the components in terms of goods and services and concept of

Part (b)

Introduction
Protectionism occurs when a government distorts market forces to give domestic producers an advantage over foreign producers via imposing barriers to trade such as tariffs, quotas and subsidies. FTA is an agreement whereby member countries agree to remove tariff and non-tariff barriers among themselves but each can retain whatever restrictions she wants for non-member countries. Whether FTA or protectionism is a more viable solution to BOP deficit will depend on the country in consideration.

Body
P1: FTA is a more viable solution than protectionism.
FTA may be able to mitigate the negative impact of the global economic uncertainty. The FTA connects member countries to major economies and new markets and enhance trade and investment flows through the removal of trade barriers and improvement to custom procedures.
The access to a bigger market base afforded by the FTA will enable countries to enjoy the gains of better utilisation of resources and economies of scale. These result in greater efficiency in production and hence a fall in average cost. The rise in price competitiveness of a country's export will lead to a rise in demand for exports. 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. Under FTA, due to the rules relaxed to allow foreigners to invest in a country, new ideas, technology and skills can be expected to flourish. This leads to an increase in foreign direct investment (FDI). Ceteris paribus, such inflow of investment will lead to an improvement in capital account.

Evaluation:

- Some countries would gain more while some would gain less depending on their relative comparative advantage.
- The FTA facilitates the inflow of FDI and also enables member countries to gain higher export revenue from producing and exporting
- The increased competition afforded by the FTA could also lead to structural unemployment.

P2: In the short term, protectionism may be more viable.
To reduce the BOP deficit, a country may impose trade barriers on imported goods. This raises the price of imports. The greater the price elasticity of demand for imports, the greater will be the fall in import expenditure. This reduces the import expenditure, ceteris paribus, thus reducing the balance of trade deficit. Assuming capital account is constant, protectionism reduces BOP deficit, hence it is justified in the short run, but not viable in the long run.

Evaluation:

- Increasing domestic consumption may not help the situation if the domestic population is small.

P3: In the long term, protectionism would be less viable because not only does it worsen the BOP deficit, it can lead to other economic problems.
Such protectionistic measures will undoubtedly harm the trade position of her major trading partners as their exports to the tariff-imposing country will fall. It is deemed to be a 'beggar-thy-neighbour' measure. The other trading partners may retaliate by imposing trade barriers on the country's exports too which can lead to a fall in the country's export revenue. Hence, its balance of trade may not improve. In addition, the country's national incomes will fall due to the fall in its export earnings. The fall in world trade will impede recovery of the countries from the global gloom and worsens the situation, so not a viable solution.

Evaluation:

- Tariffs can result in microeconomic issues of inefficiency in the use of scarce resources and loss of consumer welfare.

Conclusion
Protectionism goes against the theory of comparative advantage and the benefits arising from free trade. Whilst there are possible benefits in the short run, the reality is that the costs will outweigh the benefits in the long run. By protecting their industries and employment in the midst of the global economic uncertainty, countries are merely passing their problem on to their trading partners who in turn may retaliate, leading to further contraction in world trade and fall in global income. Thus, FTAs should be pursued to ensure that benefits of trade are enjoyed when the global economy recovers.

L3	Good understanding of costs and benefits of protectionistic measures &/or FTA in the context of global gloom. Good use of framework on economic growth and employment. Well-explained limitations for both protectionism and FTA.
L2	Some understanding of costs and benefits of protectionistic measures &/or FTA on BOP &/or economy, and limitation for either protectionism or FTA.
L1	Smattering of points Cursory understanding of protectionistic measures &/or FTA and effects on BOP/economy
E2	For an evaluative assessment based on economic analysis. Supported stand with key economic analysis.
E1	For an unexplained assessment, or one that is not supported by analysis.

Case Study Q1 Suggested Answer Scheme

1 **(a)** With reference to Figure 1, summarise the changes in the price of iron ore. [2]

Iron ore price rose from 2006 to 2010 after which it fell. [1]
The rise in price was the greatest from beginning 2009 to the first half 2010. [1]
or
The fall in price was the greatest beginning 2014 till 2015. [1]
or
Before 2008, prices are less volatile. [1]

(b) With the help of a diagram, examine the reasons for a drastic change in iron ore prices as mentioned in Extract 1. [4]

State the "drastic change" in iron ore prices from Extract 1, paragraph 2:
"…iron ore prices are expected to decline the sharpest by 26%"

Provide reasons to explain the **drastic fall in the prices** of iron ore: [2]
Demand factor *[1]:* Extract 1, paragraph 3 → "… a slowdown in the Euro Area and emerging economies"; "… slowdown in larger economies" such as China "… in particular to cutbacks in infrastructure projects…"

- ♣ fall in demand for iron ore which is a crucial factor input …

Supply factor *[1]:* Extract 1, paragraph 1 → "a well-supplied oil market and good crop prospects have contributed to a weakening of many commodity prices... Oil prices began tumbling …"

- ♣ oil is an essential factor input in iron ore mining activities → fall in cost of production and raise profitability → increase in supply of iron ore …

Evaluation of the scenario drawn: [1]

Illustrate with a well-labelled & properly drawn diagram + diagram explanation: [1]

Alternatively:
Students can explain demand for iron ore falling [1] + E_P<1 for iron ore [1] + E_S<1 [1] for iron ore + diagram & diagram explanation [1]

(c) Explain the impact of Australia's iron ore trade on Chinese firms and the economy of China. [6]

Impact of Australia's iron ore trade on Chinese firms:
Microeconomics impact:

- ♣ By being open to iron ore trade with Australia, competition from foreign imports lowers barriers to entry and forces local iron ore firms to be more cost-efficient and adopt product and process innovation → improvement towards dynamic efficiency
  Perspective of local miners → Extract 2, paragraph 5: Mining giants BHP Billiton, Rio Tinto and Fortescue Metals Group Ltd to saturate the Chinese market with imported ore to drive out local miners has driven prices down

by more than half in 2014 → local miners cannot compete → relatively cheaper foreign iron ore → ↑$QD_{\text{foreign iron ore}}$ → ↓$DD_{\text{local iron ore}}$ if they are close substitutes → ↓AR_1 to AR_2 and MR_1 to MR_2 → local mining firms will earn subnormal profits in the SR

OR: SR: local mining firms earning subnormal profits will shut down and exit the industry if AR<AVC
Diagram illustration to show shut down condition for local mining firm earning subnormal profits in the SR:

LR: AR<AC, local mining firms will exit the industry as long as it continues making subnormal profits. The firm will choose to divert its resources to producing more profitable goods instead.

- Perspective of iron ore users →
  SR: Iron ore users (steel makers) benefits in terms of lower factor input prices hence lower cost of production→ higher profits earned, ceteris paribus
  LR: Iron ore users (steel makers) suffers as they face an increase in the price of factor input in the future since there are lesser suppliers to choose from (demand for iron ore becomes more price inelastic with the departure of smaller iron ore firms) → lower profits earned, ceteris paribus

<u>**Impact of Australia's iron ore trade on Chinese economy:**</u>
Macroeconomics impact:
<u>Provide the basis for trade between countries:</u>
Trade based on theory of CA

<u>Evidence from Extract 2, paragraph 5 suggests that China is an iron ore importer:</u> "Iron ore exporters from Australia are winning the battle for market share in China, boosting large export volume to their largest buyer."

<u>Macroeconomics impact:</u>
- Based on the theory of CA and Extract 2, paragraph 5, China will benefit from her ability to import iron ore more cheaply than resorting to produce iron ore herself where the opportunity cost of doing so would be relatively higher
- Lower prices on imported inputs → lower COP → increase SRAS from $SRAS_1$ to $SRAS_2$ → increase real national output (actual growth), lower general price level (GPL), dampening cost-push inflation. (Illustrate with rightward shift of SRAS curve)
- Lower COP also increases China's export price competitiveness, assuming $E_{PX} > 1$→ increase in export revenue (TR_X) and similar effects on raising AD, actual growth (multiple increase in real national income) and employment level.
- From Extract 2, paragraph 5 → "Mining giants BHP Billiton, Rio Tinto and Fortescue Metals Group Ltd to saturate the Chinese market with imported ore to drive out local miners has driven prices down by more than half in 2014"→ possibly lead to structural unemployment in China

Accept alternative explanation: When the Chinese steel companies import iron ore from Australia → increase in import expenditure (TE_M) …

Suggested Mark Scheme		
L2	A good discussion and understanding of question requirement, using economic application and case study evidence. Maximum of 5m for theoretical response. Max. 4m if candidate only answer either part (micro / macro – internal & external) of the question well.	4-6
L1	Limited grasp of question requirement. Limited use of case study evidence.	1-3

(d) Discuss the factors that are likely to influence the government's decision to resume the extraction of iron ore in India. [8]

The costs and benefits of resuming the extraction of iron ore in India, Goa need to be considered carefully.

Costs:

Microeconomics:

- ♣ Extract 3, paragraph 1: Companies now had to get environmental … clearances from the government in order for mine production to take place → extraction of iron ore gives rise to negative externalities
- ♣ High costs faced by India's private iron ore producers → government needs to consider trade-off in other areas when using funds for the mining industry

Macroeconomics:

- ♣ Poor export market → competition from Australian miners in terms of prices and quality, making iron ore from India less competitive in international markets → iron ore export-oriented industries suffers from low demand → structural unemployment

Benefits:

Macroeconomics:

- ♣ Tap on India's comparative advantage based on their factor endowments → Extract 3, paragraph 1: India was the world's third-largest exporter of iron ore → ↑ X revenue → ↑ (X-M) expenditure → improving India's current account balance, hence balance of payment position. The increase in export revenues also created greater demand for Indian Rupee (IDR), causing IDR to appreciate, ceteris paribus.
- ♣ The improvement in current account fuels higher levels of AD which works through the multiplier process to raise the national income and reduce unemployment (especially important since iron ore sector employed 100000 people)
- ♣ Extract 3, paragraph 2: vertical integration of Indian Iron and Steel Company (IISCO) and Steel Authority of Indian Ltd. (SAIL) which can be deemed as a profitable move for effective cost management
  → able to lock and control cost
  → improve the quality of inputs into the production process to produce better quality steel → enhancing export competitiveness [link to point 1-3]

Microeconomics:

- ♣ India's iron ore sector → key industry providing significant employment opportunities → resuming extraction activity → lower unemployment → more people in the workforce are gainfully employed and receiving an income → narrow the income gap

Evaluative Conclusion:
In all, the benefits and costs of constructing / reconstructing and running the mines would influence Indian government's decision to proceed with the extraction of iron ore.

Knowledge, Application, Understanding and Analysis		
L2	A rigorous and insightful discussion with good understanding of question requirement using cost-benefit analysis. Maximum of 5m for theoretical response. Max. 4m if candidate answers only either part (benefits / costs or micro / macro) of the question well.	4-6
L1	Limited grasp of question requirement i.e. inability to use cost-benefit analysis / inability answer the question using relevant economic analysis. Limited / No use of case study evidence.	1-3
Evaluation		
E	Judgment based on evaluation.	1-2

(e) Using the case material, assess one possible option available to firms to help them deal with a commodities downturn and consider whether government intervention is necessary. [10]

Define 'commodities downturn':
From extract 4, paragraph 1:
→ firms selling to other companies that depend on high commodity prices should be anticipating a decrease in sales and an increase in bad debts.
→ due to fluctuations in the prices of commodities, firms experience uncertainty in predicting their revenue and therefore profits.

Part 1: Explanation of firms' strategies + evaluating the strategies:

Explanation of firms' strategies	Evaluation:
♣ Extract 4, paragraph 1: Joint ventures are able to help firms benefit from collaborative work. ♣ A successful joint venture can offer: o access to new markets and distribution networks o increased capacity in terms of production, as well as other economies of scale and scope. o reduced risk → sharing of risks and costs with a joint venture	♣ Partnering with another business can be complex. It takes time and effort to build the right relationship. ♣ Problems are likely to arise if: o the objectives of the venture are not totally clear and communicated to everyone involved

partner o access to greater resources, including specialised staff, technology and finance ♣ Extract 4, paragraph 1: For instance, Chilean state-owned copper mining firm – Codelco and US electric vehicle manufacturer Tesla Motors are discussing a joint venture for the exploration of lithium which is a key ingredient of the electric car batteries used in Tesla's autos. → Joint venture partners benefit from being able to join forces in especially research and development such as exploration of lithium to help Codelco raise TR, hence higher profits and Tesla Motors to lower its COP, hence higher profits. → win-win situation	o the partners have different objectives for the joint venture o there is an imbalance in terms of levels of expertise, investment or assets brought into the venture by the different partners o different cultures and management styles → result in poor integration and co-operation
♣ Extract 4, paragraph 1: Mining companies could also look into streamlining management, IT and HR processes, improving mining operations → minimise redundancies and overheads, engage in cost-cutting measures so as to reduce business cost and improve organisational effectiveness / efficiency → minimise firms' losses via o eliminating waste and avoiding duplication o simplifying processes and procedures o aggressive control over non-essential overheads (e.g. banning first or business class travel unless essential)	♣ Job losses; Workers being retrenched → economic hardship ♣ Pay cutting / wages control → affect work effort → affect business competitiveness ♣ The business can be left with insufficient capacity to handle unexpected or short-term increases in demand. ♣ Cost reductions by one department may surprise and / or annoy other functions if they are not properly communicated and coordinated.

Part 2:

Explanation of government intervention strategies + evaluating the strategies:	
Explanation of government's strategies	**Evaluation:**
♣ Extract 4, paragraph 2: implementing a minimum price on commodities → implementing a	♣ By establishing a minimum price, quantity supplied is greater than quantity

price floor ♣ Define: legal limit on the minimum price a producer can charge for a good or service When a price floor is imposed, at P_{MIN}, the market price is not allowed to fall below P_{MIN}. → objectives: support prices of commodities and firms' incomes → diagram illustration Overcome commodity price volatility: guaranteeing that the firms will receive the minimum price of their commodities.	demanded. A surplus [Qd-Qs] will result → inefficient resource allocation. Tax payers' money may also be used to run the warehouse used to stock up the surpluses. ♣ By raising the price of commodities such as iron ore → result in a rise of cost of production for iron-ore user companies like steel makers, worsening profitability.
♣ Extract 4, paragraph 2: Research and Development (R&D) projects → state-funded projects for firms to improve businesses' production processes → increase the efficiency / productivity, decrease unit COP or aid in business diversification → increase total revenue → Objective: to maximise profits for firms	♣ Long gestation period ♣ Success of any R&D is not guaranteed … ♣ Such programmes are costly …

Consider whether government intervention (GI) is necessary

<u>GI is necessary:</u>

♣ To minimise fluctuations in the prices of commodities, firms in the commodities market can achieve certainty in predicting their revenue and therefore profits. → beneficial for their development and investment planning (by implementing a minimum price policy)

♣ To reduce massive unemployment level if downturn is prolonged and affect the entire economy significantly → especially important for countries like Australia and India which are reliant on commodities export market so as to restore sufficient confidence.

<u>GI is not necessary:</u>

♣ Extract 2, paragraph 2 → Australia's iron ore market is oligopolistic in nature since key players such as Rio Tinto, BHP Billiton and Fortescue Metals Group Ltd dominate 80% of the market share in Australia.

→ should have sufficient funds for R&D purposes

→ should have appropriate HR strategies to minimise retrenchment of excess workers during downtime → consider sending their employees for skills training and upgrading to help both companies and workers manage the downturn and invest in skills for the upturn

♣ GI in the form of price controls distorts prices of goods and services and / or factors of production → prevent the price mechanism from discharging its signaling incentive role → inefficiency in resource allocation

Evaluative Conclusion:
The extent of government intervention therefore depends on
- ♣ 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 deadweight loss removal. Notably, 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.

Candidates can recognise government failure too as part of evaluative conclusion.

In conclusion, government needs to see whether the benefits of intervention in the commodities market outweigh the cost of intervention.

	Knowledge, Application, Understanding and Analysis	
L2	A good, rigourous and well-balanced discussion with reference to case study evidence. Max. 5 marks if discussion of policies is without addressing whether government intervention is necessary or not.	4-6
L1	Weak / undeveloped explanation of firms' and / or government's strategies. Limited use of case study evidence. Max. 3m if candidate answers only 1 part question.	1-3
	Evaluation	
E 2	Judgment based on strong evaluation.	3-4
E 1	Judgment based on weak evaluation.	1-2

H2	**TAMPINES JUNIOR COLLEGE** **JC2 PRELIMINARY EXAMINATION**

CANDIDATE NAME

CIVICS GROUP | 1 | 5 |

TUTOR NAME

ECONOMICS **9732/01**

Paper 1

Monday, 29 Aug 2016

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.

Answer **all** questions in **both** sections.

Begin your answer to Question 2 on a fresh sheet of paper.

Hand in your answers for Question 1 and 2 separately

Attach this cover page to your answer for Question 1.

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

Begin **each case study** on a **fresh sheet of paper.**

Please submit your answers for Case study question 1 and 2 separately.

Question 1 **Drowning in Commodities – Iron Ore**

Figure 1: The Price of Iron Ore Price (US$ per Dry Metric Ton)

Source: *www.indexmundi.com*, January 2016

Extract 1: End of Commodities Boom?

Prices of most commodities, particularly oil, are expected to remain weak through much of 2015. Growing concern over a slowdown in the Euro Area and emerging economies, a well-supplied oil market and good crop prospects have contributed to a weakening of many commodity prices since the summer. Oil prices began tumbling in mid-June, a reflection of well-supplied markets and weak demand, despite ongoing geopolitical tensions. Oil prices experienced one of the sharpest declines, decreased more than 20% to below $90 per barrel in early October. The weakness is likely to persist through most of 2015.

Metal prices are also expected to decline 5.5% in 2014. Specifically iron ore prices are expected to decline the sharpest by 26%. As metals are key intermediate inputs in industrial production and construction, metal prices are largely affected by growth especially in emerging economies and notably China which currently consumes almost half of world's metals.

Iron ore, the main ingredient in steel, is sensitive to any slowdown in larger economies and in particular to cutbacks in infrastructure projects. China's steel consumption declined in 2014 for the first time since 2000 due to slower economic growth thereby curbing demand for the building material.

Sources: Adapted from *The Guardian*, 11 March 2014, *The World Bank*, 16 October 2014 and *International Monetary Fund*, October 2015

Extract 2: Australia Wins Iron Ore Market Share in China as Mines Shut

Mining represents a very significant part of the Australian economy. It accounts for about 9% of total Gross Domestic Product (GDP) from 2014 until 2015. Iron ore is Australia's largest export earner and exports of iron ore increased 15% from 2014 until 2015.

Australia's iron ore market is primarily dominated by a small number of large, low-cost iron ore producers. The key players are Rio Tinto, BHP Billiton and Fortescue Metals Group Ltd, of which they dominate 80% of the market share in Australia. Other smaller but significant producers include Hancock Prospecting, Mitsui Iron Ore Development.

China is the world's largest steel producer and iron ore consumer and is Australia's largest export market, with its share increasing from less than 10% to 46% from 2002 to 2014. Shipments from Australia accounted for 59% of China's overseas purchases last year from 51% in 2013. China imported about 548 million tonnes from Australia in 2014, an increase of 32% from 2013.

Since 2000, Australia's iron ore market share has grown steadily from 34% to 50%. This is largely attributed by the productivity gains and cost management that have begun to reestablish its price competitiveness in the global market. In addition, plunging currencies and falling oil prices are some factors that enabled Australian iron ore companies to expand their mines. Together with the weakening demand from Chinese steel makers, this has contributed to a glut of production that has saturated markets and thus driving iron ore prices down from 2014 until 2015.

Iron ore exporters from Australia are winning the battle for market share in China, boosting large export volume to their largest buyer and squeezing higher-cost producers as prices decline to the lowest level since 2009. A controversial strategy by mining giants BHP Billiton, Rio Tinto and Fortescue Metals Group Ltd to saturate the Chinese market with imported ore to drive out local miners has driven prices down by more than half in 2014.

Sources: Adapted from *The World Bank*, 16 October 2014**,** *The Australian Business Review*, 23 October 2015 and *International Monetary Fund*, October 2015

Extract 3: India's Push to Resume Extraction of Iron Ore

The Supreme Court of India banned mining in Goa in 2012 as part of a clampdown on illegal mining. It lifted the ban in April last year as India was the world's third-largest exporter of iron ore and the state of Goa used to employ more than 100,000 people in the iron ore sector.

Companies now had to get environmental and other bureaucratic clearances from the government in order for mine production to take place. According to the latest report from BMI Research, production from restarted mines owed by India's private iron ore producers will be hit by high costs, low prices and a poor export market. Instead, state-owned miners will be the ones leading the nation's production growth, which is estimated to be at 3.8% a year from now until 2019. A good example to cite would be the vertical integration of Indian Iron and Steel Company (IISCO) and Steel

Authority of Indian Ltd. (SAIL) which can be deemed as a profitable move for effective cost management as IISCO's iron ore mines provide SAIL directly with total deposits of more than 3.2 billion tons of ore and more than 125 million tons of coking coal.

Sources: Adapted from *The Wall Street Journal*, Biman Mukherji, 12 April 2015 and *www.mining.com*, 14 August 2015

Extract 4: Building Resilience During Commodities Bear Market

The downturn in the commodities market does not bode well for many businesses that have not adjusted their operations and plans to beef up resilience. At the moment, businesses selling to other companies that depend on high commodity prices should be anticipating a decrease in sales and an increase in bad debts. Also, due to fluctuations in the prices of commodities, firms experience uncertainty in predicting their revenue and therefore profits.

There may be challenges in commodities cycles, but businesses can weather through this downturn with appropriate strategies. Joint ventures are becoming common as firms want to benefit from collaborative work. For instance, Chilean state-owned copper mining firm - Codelco and US electric vehicle manufacturer Tesla Motors are discussing a joint venture for the exploration of lithium which is a key ingredient of the electric car batteries used in Tesla's autos. Mining companies could also look into streamlining management, IT and HR processes, improving mining operations to minimise business cost and improve organisational effectiveness.

State intervention such as implementing a minimum price on commodities or state-funded projects for firms to improve businesses' production processes or aid in business diversification are some of the possibilities to consider too in order to insulate firms against a commodities downturn.

Sources: Adapted from *The Extractive Industries and Society*, Philippe Le Billon & Elizabeth Good, 24 December 2015

Questions

(a) With reference to Figure 1, summarise the changes in the price of iron ore. [2]

(b) With the help of a diagram, examine the reasons for a drastic change in iron ore prices as mentioned in Extract 1. [4]

(c) Explain the impact of Australia's iron ore trade on Chinese firms and the economy of China. [6]

(d) Discuss the factors that are likely to influence the government's decision to resume the extraction of iron ore in India. [8]

(e) Using the case material, assess one possible option available to firms to help them deal with a commodities downturn and consider whether government intervention is necessary. [10]

[Total: 30]

Question 2 A story of off-shoring

Extract 5: The Story So Far

Once upon a time the rich world's manufacturing firms largely produced in the rich world for the rich world, and most services were produced close to where they were consumed. Then Western firms started sending manufacturing work abroad on a large scale. By the 1980s this was well established. The movement was overwhelmingly in one direction: away from rich countries to places where workers with adequate skills were much cheaper.

Whether openly stated or not, lower labour costs were almost always the chief rationale. For many firms their very survival was at stake, since new competitors were undercutting them on price. This often involved shutting capacity in America and Europe as new factories were opened in China, Mexico, Taiwan, Thailand, eastern Europe or wherever offered the lowest costs.

The economic benefits of offshoring have been immense. For workers in low-cost countries it has meant jobs and rapidly rising standards of living. Rich-world workers have been able to leave the drudge work to someone else. For companies lower labour costs have brought higher profits. Western consumers have enjoyed access to more goods at far lower prices than if production had stayed at home.

But offshoring from West to East has also contributed to job losses in rich countries, especially for the less skilled, yet increasingly for the middle classes too. It has become the aspect of globalisation that workers in the developed world dislike and fear the most. Around a decade ago firms realised they could use the internet to offshore information technology and back-office work to places such as India and the Philippines. India's outsourcing industry took wing and is still growing.

86% of Americans polled in a 2010 survey said that offshoring of jobs by local firms to low-wage locations was a leading cause of their country's economic problems. France's new Socialist government has appointed a minister to resist "delocalisation". Germany's chancellor, Angela Merkel, worries publicly about whether the country will still make cars in 20 years' time.

Public concern over the high levels of unemployment has also encouraged politicians to bash companies that send their work abroad, compounding the effect. Obama's presidential campaign last year repeatedly claimed that his rival, Mitt Romney, had sent thousands of jobs overseas when he was working in private equity.

Source: *The Economist*, 19 Jan 2013

Extract 6: Here, There, Everywhere

The original idea behind offshoring was that Western firms with high labour costs could make huge savings by sending work to countries where wages were much lower. Offshoring means moving work and jobs outside the country where a company is based. It can also involve outsourcing, which means sending work to outside contractors. These can be either in the home country or abroad, but in offshoring they are based overseas. For several decades that strategy worked, often brilliantly. But now companies are rethinking their global footprints.
The first and most important reason is that the global labour "arbitrage" that sent companies rushing overseas is running out. Wages in China and India have been going up by 10-20% a year for the past decade, whereas manufacturing pay in America and Europe has barely budged. Other countries, including Vietnam, Indonesia and the Philippines, still offer low wages, but not China's scale, efficiency and supply chains. Lenovo's labour costs in North Carolina will still be higher than in its factories in China and Mexico, but the gap has been narrowing so substantially that transport costs increasingly offset it, and so it is no longer a clinching reason for manufacturing in emerging markets. With more automation, labour's share of total costs is shrinking anyway.

Second, choosing the right location for producing a good or a service is an inexact science, and many companies got it wrong. Companies pursued many unpromising mergers and acquisitions until painful experience brought greater discipline to the field, a lot of chief executives offshored too quickly and too much.

Up until last year around half of General Electric's information-technology work was being done outside the company, mostly in India, but the company found that it was losing too much technical expertise and that its IT department was not responding quickly enough to changing technology needs. It is now adding hundreds of IT engineers at a new centre in Michigan.

There is changing economics in offshoring for the corporate world. Offshoring in its traditional sense, is maturing, tailing off and to some extent being reversed. Multinationals will certainly not become any less global as a result, but they will distribute their activities more evenly and selectively around the world, taking heed of a far broader range of variables than labour costs alone.

That offers a huge opportunity for rich countries and their workers to win back some of the industries and activities they have lost over the past few decades. With labour-cost differentials narrowing rapidly, it is no longer possible to point at rock-bottom wages in emerging markets as the reason why the rich world is losing out. Developed countries will have to compete hard on factors beyond labour costs. The most important of these are world-class skills and training, along with flexibility and motivation of workers, extensive clusters of suppliers and sensible regulation.

Source: *The Economist*, 19 Jan 2013

Figure 2: U.S. Dollars per British Pound, July 2014 to May 2015

Figure 3: U.S. Dollars per European Euro, July 2014 to May 2015

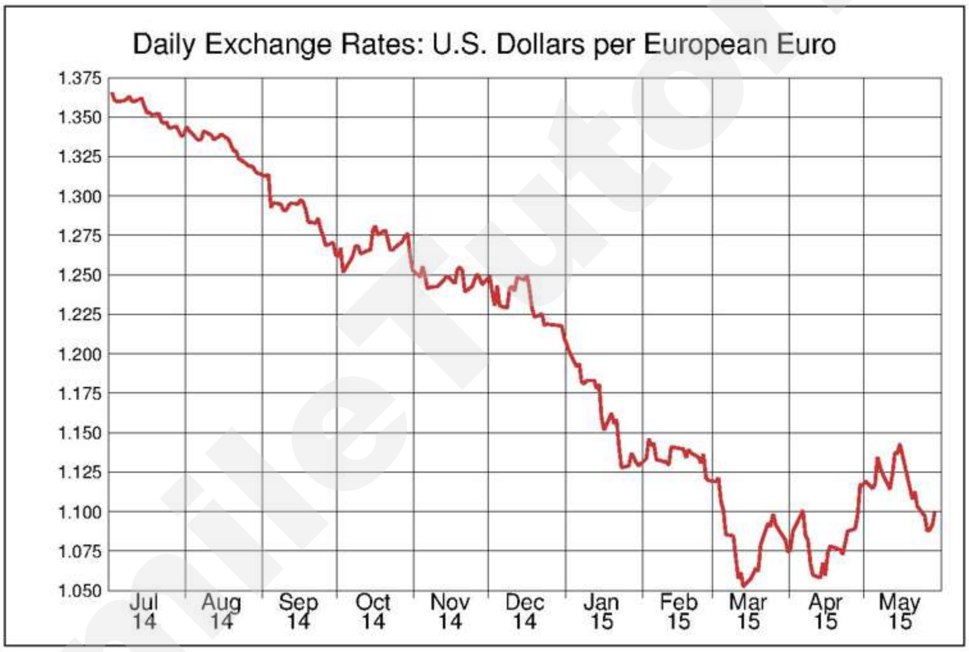
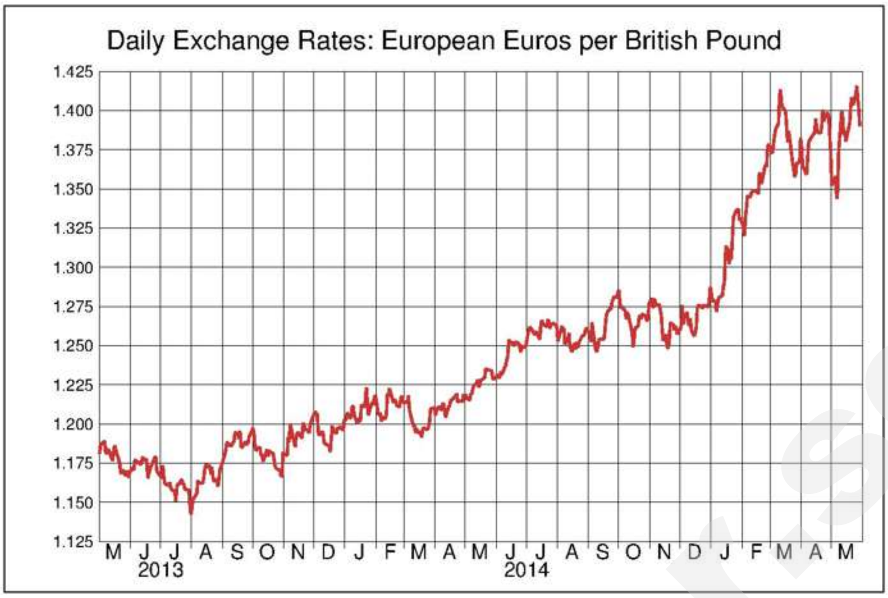


Figure 4: European Euros per British Pound, May 2013 to May 2015



Source: University of British Columbia

Questions

(a) Using Figures 2 and 3, compare the exchange rate of the pound against the dollar with that of the euro against the dollar. [2]

(b) **(i)** With reference to Figure 4, analyse how the overall change in the pound against the euro might affect the revenue and cost of UK producers of manufactured goods and suppliers of services. [4]

(ii) Suggest and explain one strategy that these firms might undertake to counter the harmful effects of the change. [2]

(c) "Lenovo's labour costs in North Carolina will still be higher than in its factories in China and Mexico, but the gap has been narrowing so substantially that transport costs increasingly offset it, and so it is no longer a clinching reason for manufacturing in emerging markets." (Extract 6)

With reference to the above statement, explain how transport costs may adversely affect the viability of 'manufacturing in emerging markets' for firms. [4]

(d) **(i)** Assess two possible solutions that the government can undertake to tackle the 'high levels of unemployment' other than 'bash(ing) companies that send work abroad' (Extract 5). [8]

(ii) Given the current conditions of the global economy, discuss whether domestic firms in developed countries should offshore. [10]

[Total: 30]

END OF PAPER

Case Study Q2

a) Using Figures 2 and 3, compare the exchange rate of the pound against the dollar with that of the euro against the dollar. [2]

The direction of their change was similar - both depreciated and then appreciated. OR Both depreciated on the overall.

The extent of their change was different though – on the overall the pound depreciated less significantly than the euro.

OR The pound was consistently stronger than the euro.

b i) With reference to Figure 4, analyse how the overall change in the pound against the euro might affect the revenue and cost of UK producers of manufactured goods and suppliers of services. [4]

The appreciation of the pound against the euro makes exports to the Eurozone more expensive and imports from the Eurozone less expensive.

Changes in revenue:
Since Europe is a high-income market, it is likely that both manufactured products as well as services from the UK are exported there, and so both are likely to face a fall in sales.

As the larger economies in the Eurozone are at the similar stage of development as the UK and hence provide significant competition for UK firms, the demand for UK exports is likely to be price-elastic, and hence there will be a MTP fall in sales, resulting in a fall in revenue.

Given that UK's comparative advantage favours services more than manufactures (particularly because London is a financial centre), UK services will be less susceptible to the competition and perhaps face a smaller fall in revenue.

Changes in cost:
Since manufacturing is likely to be more dependent on imports particularly of inputs from the Eurozone, UK manufacturing firms may benefit more than UK suppliers of services in terms of cheaper imports and hence cost of production.

ii) Suggest and explain one strategy that these firms might undertake to counter the harmful effects of the change. [2]

Pricing Strategy:
- ↓ cost by ↑ productivity, offshoring or buying cheaper inputs from other countries → ↓P → mtp ↑ Q, assuming Ep > 1 → ↑ TR → ↑ profits
- Reduce revenue and thus profit margins by ↓P
- Hedge against exchange rate movements through fixed price contracts
- Price products in a more stable currency such as USD

Non-price strategy:
- Strengthen home marketing → increase domestic sales to offset fall in foreign sales → ↑ Q → ↑ TR
- Venture into new markets where the exchange rate favours UK exports i.e. depreciation of pound against foreign currency

c **"Lenovo's labour costs in North Carolina will still be higher than in its factories in China and Mexico, but the gap has been narrowing so substantially that transport costs increasingly offset it, and so it is no longer a clinching reason for manufacturing in emerging markets." (Extract 6)**

With reference to the above statement, explain how transport costs may adversely affect the viability of 'manufacturing in emerging markets' for firms. **[4]**

Offshoring → ↑ DD for labour in emerging markets → ↑ wages in emerging markets → ↑ labour cost in emerging economies → narrow gap between labour cost in emerging and developed economies.

If cost of "moving jobs and work outside the country where a company is based" ≈ labour cost differential → not viable to offshore

d i) **Assess two possible solutions to the 'high levels of unemployment' other than 'bash(ing) companies that send work abroad' (Extract 5).** **[8]**

Unemployment type: Structural Unemployment

- *Cannot compete with low-wage labour in emerging economies in manufacturing sector yet lack the necessary skills/expertise to find work in capital/knowledge-intensive industries → structural unemployment*

Explain & Evaluate 2 solutions / policies -

<u>Solution 1:</u> Supply-side policy: Training & Education → Increase in G (directly or through subsidies) to close skills gap with training and education

Evaluation →

- it will take time before skills learnt can be translated to productive work and hence warrant employment

- worker & employer resistance

<u>Solution 2:</u> Prices & Incomes Policy (SR Supply-side policy): Cuts in corporate tax or reduction in government charges such as utility fees and rentals &/or

Subsidies/grants to defray business cost such as rental and oil prices

Evaluation →

- not targeting root cause i.e. loss of labour competitiveness → firms may continue offshoring

<u>Synthesis & Conclusion</u>

To reduce unemployment – two-pronged approach→

Supply-side: employable workforce equipped with necessary skills

Demand-side: available jobs in thriving or sunrise industries (CA)

Hence on top of training & education which addresses supply-side of the unemployment problem, job creation in thriving industries is necessary as well. Therefore government support in R & D to divert resources to emerging CA (in this case knowledge-intensive industries) is important as well. Defraying of cost through rebates, tax cuts etc is but a short-term solution.

[Cyclical unemployment (properly justified) & its corresponding policies are also acceptable]

Knowledge, Application, Understanding and Analysis		
L2	Correct identification of unemployment type and accurate explanation + evaluation of corresponding policies Low L2: Accurate explanation and evaluation of 1 policy	4-6
L1	Wrong identification of unemployment type &/or incorrect policies suggested or inaccurate explanation of policy/policies	1-3

Evaluation		
E	For a reasoned judgement	1-2

ii) Given the current conditions of the global economy, discuss whether domestic firms in developed countries should offshore. **[10]**

Dissection of question:

- *Current economic conditions → global recession, emerging economics are facing falling growth rates*
- *Discuss whether → command word requires thesis and anti-thesis approach*

Yes:

- *Enhance export competitiveness, stimulates (X-M) → AD, NY increases, current account improves*
- *Allows economy to restructure and develop new areas of comparative advantage*
- *Presence of idle labour (resources) moderates structural rigidity → may attract FDI as the labour are highly-skilled (educated)*
- *Firms in developed countries embarked on off-shoring as the lower costs of production in foreign countries represent an increase in their profit margins. Due to comparative advantage, firms in developed countries tend to off-shore labour-intensive processes to developing countries, where they possessed a lower costs of production for labour-intensive processes. Developing countries possess abundance of low-skilled labour which drives down wages of low-skilled labour. The lower costs of production allows firms to price their final goods and services lower. As such, the price competitiveness of the goods and services will allow firms to enjoy an increase in export revenue (total revenue), assuming demand for these goods and services to be price elastic. Hence, with a fall in costs of production and an increase in total revenues, firms will be able to enjoy an increase in total profits, thus giving rise to the incentive to embark on offshore programmes. Firms are able to generate higher profits → improvement to current account → repatriation of profits in long run*

No:

- *Loss of jobs for domestic labour force*
- *Loss of tax revenue → smaller tax base*
- *Likelihood of fiscal deficit → transfer payment to unemployed*
- *Capital & financial account deficit → outflow of FDI*

- *"choosing the right location for production of goods and services is an in exact science", which suggests offshoring may not always be beneficial (profitable) to the firms. A poor choice of destination may incur higher costs of production, or breeds inefficiency in processes. These would reduce profitability of offshoring and thus incentivise firms to consider reshoring.*

Neutral stance (free market)

- *Market forces to direct the choice → may improve allocative efficiency → resources directed according to price mechanism*
- *Law of second best → the welfare loss from the potential loss of jobs could be offset by welfare derived from other ventures.*

<u>Synthesis & Conclusion</u>
Given prevalent economic conditions to be poor/pessimistic, neutral stance should be avoided and market forces may be subject to time lags. Government should take on active role to direct resources where its potential can be maximised so that economy can enjoy pareto improvement.

	Knowledge, Application, Understanding and Analysis	
L2	2-sided argument with application to current global economic conditions Low L2: No application to current global economic conditions &/or underdeveloped explanation	4-6
L1	Largely one-sided response	1-3
	Evaluation	
E2	For a well-reasoned reasoned judgement	3-4
E1	For an unexplained judgement	1-2

H2

TAMPINES JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATION

CANDIDATE NAME

CIVICS GROUP | 1 | 5 |

TUTOR NAME

ECONOMICS
Paper 2

9732/02

Tuesday, 14 Sept 2016

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.

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.

Circle the question numbers of the questions you have attempted on the cover sheet for Section A and Section B.

At the end of the examination, fasten all your work securely together to the respective cover sheet.

Answers for Section A and Section B are to be <u>submitted separately.</u>

Begin your answer to each essay on a fresh sheet of paper.

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

Answer **three** questions in total.

Begin **each question** on a **<u>fresh sheet of paper</u>.** Section A and B are to be submitted **separately.**

Section A

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

1 In 2014, international visitor arrivals to Singapore declined by 3.1% as the tourism sector faced challenges such as intensifying competition from the region and an uncertain global economic outlook. Analysts forecast that hotel room supply will grow at 3.9%. Meanwhile, Singapore has continued to attract medical tourists owing to our strong reputation for specialist care and critical surgery.

Sources: Adapted from *The Economist*, *Intelligence Unit*, September 2014 and *Singapore Tourism Board*, 2014

Using economic analysis, discuss the likely effects of these events on the tourism related sectors in Singapore. [25]

2 To remain competitive in the globalised market today, more and more firms are merging to consolidate their market shares so that they can enjoy economies of scale.

(a) Explain how benefits to the firms can arise from merger and consolidation. [10]

(b) More often than not, these benefits are not fully achieved by firms in the real world. Discuss why this may be so. [15]

3 London raised the daily vehicle congestion charges from £10 to £11.50 in 2014. This will contribute an additional income of £82.7m over the course of the next five years, which will be reinvested into London's transport network for buses, roads and bridges, so as to improve the infrastructure and enhance London as a destination for foreign direct investment.

Source: *Transport for London,* accessed on 18 July 2016

Explain why London imposes congestion charges and discuss whether the increase in congestion charges are justified. [25]

Section B

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

4 **(a)** Explain the possible causes of an appreciation of a country's currency. [10]

(b) Discuss the view that monetary policy centered on exchange rate is, more often than not, the most appropriate option to achieve the macroeconomic objectives of a government. [15]

5 While wealth is rapidly increasing in developing nations, and advanced economies struggle with stagnation, there is great concern about rising economic inequality in all parts of the world, particularly in Asia.

Source: World Economic Forum, 2014

Discuss the relevance of supply-side policies as Singapore continues to face the problems of income inequality and stagnation. [25]

6 The following data relate to the Singapore economy in 2014:

Top 5 Singapore Exports to Thailand (% of total export receipts from Thailand)			**Top 5 Singapore Imports from Thailand (% of total import payments to Thailand)**		
1.	Electronic equipment	37.0%	1.	Oil	22.1%
2.	Machinery	16.7%	2.	Machinery	20.9%
3.	Plastics	5.3%	3.	Electronic equipment	16.3%
4.	Oil	4.7%	4.	Ships, boats	9.1%
5.	Organic chemicals	4.4%	5.	Gems, precious metals	6.6%

Source: Trade Map, International Trade Centre

(a) Explain the demand and supply factors determining the pattern of trade between Singapore and Thailand. [10]

(b) Assess the extent to which a growth in worldwide protectionism has changed Singapore's pattern of trade with the rest of the world. [15]

END OF PAPER

TAMPINES JUNIOR COLLEGE

Preliminary Examination 2016

ECONOMICS **9732/02**

Higher 2

COVER SHEET FOR SECTION A

Name:

Class:

Please circle the **Section A questions** attempted in the box provided and attach it to your answers for Section A.

	Question Number	Marks
Section A	**1**	
	2	
	3	
	Total marks	

TAMPINES JUNIOR COLLEGE

Preliminary Examination 2016

ECONOMICS **9732/02**

Higher 2

COVER SHEET FOR SECTION B

Name:

Class:

Please circle the **Section B questions** attempted in the box provided and attach it to your answers for Section B.

	Question Number	Marks
Section B	4	
	5	
	6	
	Total marks	

Essay Question 1

In 2014, international visitor arrivals to Singapore declined by 3.1% as the tourism sector faced challenges such as intensifying competition from the region and an uncertain global economic outlook. Analysts forecast that hotel room supply will grow at 3.9%. Meanwhile, Singapore has continued to attract medical tourists owing to our strong reputation for specialist care and critical surgery.

Sources: Adapted from *The Economist, Intelligence Unit*, September 2014 and *Singapore Tourism Board*, 2014

Using economic analysis, discuss the likely effects of these events on the tourism related sectors in Singapore.
[25]

Suggested Answer Approach:

Introduction:

- Briefly explain how equilibrium price and quantity are determined via the interaction of demand and supply forces in a free market economy.

- Briefly explain the direction of this essay and the different contexts of the tourism related sectors to be considered

The essay will examine how several events mentioned in the preamble will affect the equilibrium price, quantity and hence total revenue of the different tourism related sectors in Singapore, considering also the concepts of elasticities to analyse the extent of the impact of the factors mentioned.

Possible tourism related sectors to be considered (at least 2 sectors to be covered by candidates):

1. Accommodation sector (for e.g. markets for luxury, midscale or economy/budget hotel accommodations)
2. Attraction sector (for e.g. museums, amusement parks, cultural attractions)
3. Transportation sector (for e.g. airlines, bus and coach operators, car rental)
4. Travel organiser sector (for e.g. travel agency, tour operators)

Essay Development:

- Accommodation sector (for e.g. markets for luxury, midscale or economy/budget hotel accommodations)

Luxury Hotels (for e.g. St. Regis Singapore, Marina Bay Sands)	Midscale Hotels (e.g. Village Hotel Katong and The Amoy)	Economy / Budget Hotels (e.g. Fragrance Hotel,

♥ Explain the demand factors which will impact hotel accommodations sector:

- intensifying competition from the region such as Malaysia, Thailand, Hong Kong, etc., → successful marketing campaigns from these countries → favourable change in tastes and preferences of travellers to visit these countries (Malaysia, Thailand, Hong Kong, etc.)
- uncertain global economic outlook → economy may be experiencing slow economic growth → rising unemployment because slowdown in growth could be due to certain key sectors suffering a contraction of demand causing affected firms to lay-off workers → lack of income / fall in wages → fall in purchasing power → households less able to undertake overseas vacations → fall in international visitors arrival
- Demand for hotel accommodation is mostly derived from the arrival of tourists → demand for hotel accommodation in Singapore will generally fall, ceteris paribus

♥ Bring in concepts of income and price elasticities of demand (E_Y & E_P) as income and price elasticities differ for different types of hotel accommodations.

• $E_Y>1$ and high for luxury hotels (considered to be normal-luxuries) • $E_P<1$ and high for luxury hotels	• $0<E_Y<1$ for midscale hotels (considered to be normal-necessities) with positive but low E_Y • $E_P>1$ for midscale hotels	• $E_Y<0$ → rise in demand for economy / budget hotels as travellers look for cheaper alternatives when income falls • $E_P>1$ for economy / budget hotels

♥ Explain the supply factor which will impact hotel accommodations sector and bring in the concept of price elasticity of supply (E_S):

- Supply of hotel accommodation rises → increase in the number of luxury hotel accommodation suppliers (given in preamble)
- Supply of hotel accommodation is price inelastic ($E_S<1$) in the short run

♥ Apply E_P: for a given increase in the supply of hotel accommodation,

- fall in price → less than proportionate increase in quantity demanded for luxury hotels
- fall in price → more than proportionate increase in quantity demanded for midscale / economy hotels

♥ ↓DD > ↑SS as $E_Y>1$ (positive and high) → coupled with an increase in supply along a price inelastic demand curve → luxury hotels should see a fall in price from P_1 to P_2, sales volume from Q_1 to Q_2 and TR from $0P_1E_1Q_1$ to $0P_2E_2Q_2$ and lower profits,	♥ ↓DD > ↑SS as $0<E_Y<1$ (positive and low) → coupled with an increase in supply along a price elastic demand curve → midscale hotels should see a fall in price from P_1 to P_2, sales volume from Q_1 to Q_2 and TR from $0P_1E_1Q_1$ to $0P_2E_2Q_2$ and lower profits, ceteris paribus	♥ ↑DD > ↑SS as $E_Y<0$ (negative) → coupled with an increase in supply along a price elastic demand curve → economy / budget hotels should see a rise in price from P_1 to P_2, sales volume from Q_1 to Q_2 and TR from $0P_1E_1Q_1$ to $0P_2E_2Q_2$

ceteris paribus Diagram Illustration:	 Diagram Illustration:	ceteris paribus during period when income is falling Diagram Illustration:
Evaluate: The decrease in total revenue for luxury hotels is likely to be *larger* compared to the total revenue for midscale hotels.		

♥ Supplier of goods and services to the direct businesses of tourism (hotel accommodation):

- increased business for firms supplying goods and services for example, hotel accommodation such as the supplier of bed linen, furniture, cleaning and laundry services when new hotels are built → ↑DD, ↑TR, hence profits earned, ceteris paribus

♥ MICE (Meetings, Incentives, Conferencing and Exhibitions) and Medical Tourism

- Singapore has continued to attract medical tourists owing to our strong reputation for specialist care and critical surgery (due to successful marketing efforts to distinguish Singapore from other countries → favourable change in tastes and preferences).
- Singapore has also positioned herself as strategically located venue for global company meetings, major exhibitions, etc. with the necessary infrastructure in place and access to key Asian markets.
- *Evaluate:*
  - Demand for hotel accommodation could rise and cushion the fall in hotel accommodation in the luxury hotel sector → mitigate the fall in TR faced by the luxury hotel sector due to pessimistic economic outlook and rising competition from neighbouring countries
  - At the same time, increase in demand for medical tourism & MICE will bring increased business for firms supplying goods and services to the direct businesses of tourism such as transportation service sector (for e.g. bus and coach operators, car rental) → ↑ in demand for their services → a rise in ↑TR, hence profits earned, ceteris paribus → mitigate the fall in TR faced by transportation service sector due to fall in tourist arrivals

♥ Attraction sector (for e.g. museums, amusement parks, cultural attractions)

- intensifying competition from the region and an uncertain global economic outlook → decline in visitor arrivals → fall in demand for visitation to museums, amusement parks, cultural attractions , etc. → fall in TR, hence profits earned, ceteris paribus
- *Evaluate:*

- Application of E_{AB}

Evaluative Conclusion:

♥ Recognise that the tourist industry is cyclical in nature

♥ Acknowledge that the benefits of tourism outweigh the costs of tourism.

♥ As such, there is a need for long term plans by government to
  - build industry capacity and innovation
  - seek key anchors of tourism such as world iconic events, amusement parks or hotel brands

  so that the tourism sector remains vibrant, competitive and sustainable.

Suggested Mark Scheme

The question asked has a broad coverage. Marker should accept any approach which makes good economic reasoning and thinking.

Knowledge, Application, Understanding and Analysis		
Level	**Descriptors**	**Marks**
L3	A developed and rigorous discussion with well-drawn diagrams, covering a good range of tourism related sectors and making good use of elasticities concepts.	**15 – 21**
L2	Undeveloped explanation on how the mentioned events will affect the overall market demand, supply and total revenue with limited analysis on different types of tourism related sectors.	**9 – 14**
L1	Very weak / vague / erroneous explanation on impact of the mentioned events on tourism related sectors.	**1 – 9**
Evaluation		
E2	Judgement with good evaluation.	**3 – 4**
E1	Judgement with weak evaluation.	**1 – 2**

H2 Essay Q2

2 To remain competitive in the globalised market today, more and more firms are merging to consolidate their market shares so that they can enjoy economies of scale.

a) Explain how benefits to the firms can arise from merger and consolidation. [10]

b) More often than not, these benefits are not fully achieved by firms in the real world. Discuss why this may be so. [15]

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a) Explain how benefits to the firms can arise from merger and consolidation. [10]

Outline:

Benefits from merger and consolidation will include:

1) Ability to reap internal economies of scale → merger will allow the firm to enjoy a larger market share and hence the ability to increase output. Internal economies of scale will allow firms to enjoy a lower unit costs of production.

   Eg: marketing economies, financial economies and technical economies

2) Consolidation of similar firms into an area will bring about external economies of scale → lowering of LRAC for the industry

   Eg: economies of information, economies of concentration

3) The merger of firms will bring about a larger market share, resulting in an increase in DD=AR

4) With lower costs and higher revenue, these will generate higher profits to the firms

Introduction

- Firms generally aim to maximise profits, which can be achieved through raising revenue and lowering costs
- Explain merger can occur through horizontal and/or vertical integration
- Merging of firms will lead to an increase in amount of market share while consolidation of industries can be interpreted to be placing the firms in the same area
- Mergers can bring about a larger market share, increasing the total revenue earned

- To remain competitive in globalised world, it is necessary to keep costs of production low
- And these can be achieved through internal and external economies of scale

<u>Main body</u>

Internal Economies of Scale [choose any 1]

- internal EOS refers to cost-savings a firm may enjoy as it increases the scale of production
- This is represented by a movement along the LRAC curve
- Internal EOS can be harnessed through [Choose any one]

1. Technical Economies
    - Specialisation: increased efficiency through repeatedly doing the same task, able to generate more output per unit labour hour, lowers unit costs of production
    - Creating production chain whereby individual labour only perform a specific tasks to improve on their efficiency and therefore productivity
    - Use of specialised equipment/technology, which improves the efficiency of a particular task and enable firms to achieve a lower unit costs of production
2. Administrative Economies
    - Hiring of experts/managers to streamline processes such that more output per unit labour hour can be produced, lowers unit costs of production
3. Marketing Economies
    - Enjoys bulk discount through the ordering of factor inputs in huge quantity, lowers unit costs of production
    - Singtel can enjoy marketing economies when the firm advertises the entire range of services it offers. (mobile plans, internet plans, mioTV programmes)
4. Financial Economies

- Huge/reputable firms are able to secure loans from banks at lower interest rates, lowers costs of borrowing and therefore unit costs of production
- Large firms like Apple have a range of assets (eg: machines and other capital goods) which can be used as collateral to secure cheaper loans from banks.

5. Risk-bearing Economies
   - Diversification of goods and services offered by firm, such that a poor sales revenue by good A can be compensated for by other goods
   - Apple diversified its product range from computers and laptops to include smartphones, tablets and smartwatches. So when the sales of desktops are not doing well, Apple can rely on the sales revenues generated from its other products.

External Economies of Scale [choose any 1]

- External EOS refers to cost-savings an industry enjoys as the scale of production is increased
- This is represented by the lowering of the LRAC curve
- External EOS can be harnessed through

1. Economies of Concentration
   - As firms are placed closer together, costs of transportation of materials can be lowered
   - There could be better development of infrastructures necessary for production
   - Jurong Island has a cluster of petrolchemical industries such that the firms can transport their semi-finished products to one another for processing at a lower costs.
2. Economies of information
   - With better information network, information can be better shared across firms in the industries
   - Particularly new and more efficient techniques for production
   - Sharing of R&D facilities across firms
   - Collaboration between universities and firms to embark on R&D eg: Fuji Xerox, Siemens, GE, Zeiss and Agilent have partnered NUS for many projects.

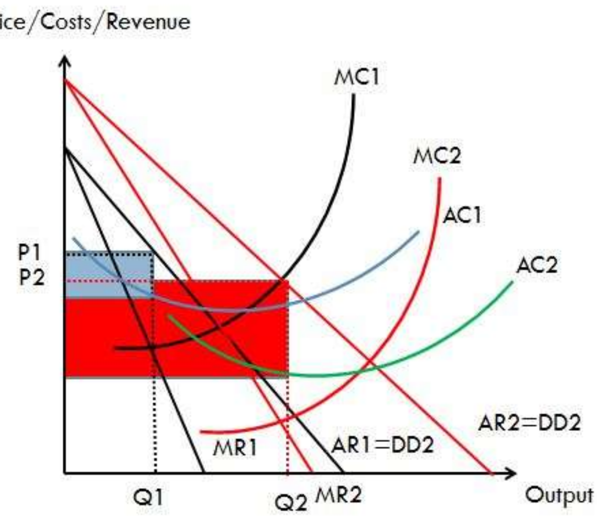
3. Economies of disintegration
   - As the industry grows, it may be possible for certain specialised processes to be split from the main production process
   - This will aid in lowering the costs of production as the specialised process can be outsourced to firms with expertise which could produce at even lower costs
   - Apple began with manufacturing desktops and laptops, however, they proceed to outsource their manufacturing segment and focus more on the designing segment.

Increase in market share after merger

- As firms merged, their combined market share will increase
- This is reflected by an increase in DD1=AR1 to DD2=AR2
- As the number of substitutes to the goods and services provided by the firm reduces after the merger, the demand for the firm's goods and services will become more price inelastic

Benefits to the firms [diagram is necessary]

- The lowering of costs of production will allow the firms to enjoy higher profit margins.
- As market share increases, the DD=AR curve will shift out
- With the rise in AR and the lowering of the LRAC, the firms may be able to enjoy larger supernormal profits



Level of Respons e	Descriptors	Marks
L3	Good analysis of different types of benefits arising from mergers and consolidation. *High L3 – 3 points with diagram(s) to illustrate the increase in profits.*	7-10 *(9-10)*
L2	Some attempt to analyse the benefits of merger and/or consolidation, although response may lack in scope.	5-6
L1	Superficial analysis of benefits with little to no elaboration.	1-4

b) More often than not, these benefits are not fully achieved by firms in the real world. Discuss why this may be so. [15]

Reasons why firms may not maximise profits [choose any 3-4]

1) Internal diseconomies of scale [choose any 1]

- Managerial problems, occurs when firms become overly large, longer communication chain, slower relay of information, prolong decision making processes which leads to inefficiency

- Staff problems, loss of sense of belonging in large firms, loses motivation, productivity, results in inefficiency and thus higher costs of production
- Marketing problems, refers to size of consumer market, which may not be sufficient to support an overly large firm
- Financial problems, difficulty in securing huge capital for operations, incurs higher interest rates when borrowing from banks

2) External diseconomies of scale [choose any 1]

- When the demand for raw materials results in a higher costs of production as raw materials become increasingly scarce
- With more competition in the industry, there may be a need for firms to engage in more non-price competition to set themselves apart, eg: advertising. This will lead to higher costs
- Strain on shared infrastructures: as the industry grows, there will be greater utilisation of infrastructure like highways leading to greater inefficiency like congestions

3) Competition from foreign firms

- **Natural costs advantages**

  i. May possess better factor endowment compared to domestic firms, which lowers their costs of production and therefore allows them to set lower prices. These costs advantages may lead to loss of comparative advantages such that even if domestic firms merged, they may not be able to withstand the competition in the short run.

  ii. Foreign firms may be more established and therefore larger, allowing them to harness greater economies of scale

- **Unfair competition**

  i. Dumping, where foreign government may choose to subsidise foreign firms to give them unfair advantages in trade.

4) Profit satisficing

Firms may be profit satisficiers, meaning so long as firms are earning a supernormal profits, they may not actively seek to maximise profits. This could be due to the difficulty firms faced with calculating economic profits, since it include both explicit and implicit components.

5) **Alternative objectives of firms** [choose any 1]

- Revenue maximising, where firms produced up to MR=0. This is a short-run goal which firms may pursue since it is easier to compute. Especially pursue when firms have a strong sales team and prioritise sales revenues over profit.
- Growth maximising, this is a long-run goal, where the firm prioritise its expansion. Firms may grow through the accumulation of assets and resources, which is also known as organic growth. Otherwise, firms may grow through mergers and acquisitions, also known as inorganic growth.
- Managerial utility, emphasises the utility that managers get from their jobs, not only from profit but also from the respect of their peers, the power to control the corporation, the fringe benefits and other perks, and a long tenure on the job. The number of staff was a symbol of the manager's professional importance.

6) **X-inefficiency**

- Firms enjoying supernormal profits without threat of potential competitors may become complacent, leading to X-inefficieny. They may fail to keep costs low. This leads to higher costs of production and therefore lowers profit margin.

7) **Imperfect information**

- Legislation: Patents and copyrights, established firms may evoke legislative power to their advantage through the use of patents/copyrights to protect their intellectual such that domestic firms may not be able to utilise new and more efficient techniques for production, and thus incur higher costs.
- Monopoly power, able to restrict amount of information in the market, especially after the firm succeed in research and development.

8) **Government intervention**

a) **Anti-trust laws**

- Firms in real life may not be able to carry out mergers and acquisitions if government deem the merger to be detrimental to consumers.
- This is done to prevent any firms from dominating the market, and therefore set prices to their advantages against the welfare of the consumers.

b) MC/AC pricing

- Government may stipulate that firms adhere to MC pricing to promote allocative efficiency or equity in the economy. However, MC pricing generally leads to the firm earning subnormal profits. Hence government may have to subsidise the firm so that there exist sufficient incentive to set MC pricing
- The alternative is a compromise known as AC pricing, where the firm priced the goods and service at average costs. This allows the firms to earn normal profits and thus require less subsidy from the government.

<u>**Conclusion**</u>

While merger and consolidation have its merits, whether firms would be able to reap the benefits depend largely on the actions of the firm itself. Firms have to remain competitive, to constantly seek to keep costs in check and maintain their market share through constant differentiation and innovation. While government may intervene with necessary policies to drive competitiveness, there are other yardsticks to assess the benefits of a merger. If it only leads to the consolidation of market power and may ultimately lead to loss of consumers' welfare, it may be more beneficial for the government to evoke anti-trust laws to prevent the market domination.

Level of Response	Descriptors	Marks
L3	Good analysis of different reasons why firms may not be able to lower costs/maximise profits *High L3 – 3 points with diagram(s) to aid elaboration*	9-11 *(9-10)*
L2	Some attempt to explore reasons why firms are unable to achieve the objective.	6-8
L1	Superficial citation of reasons with little/no analysis.	1-5

Evaluation	Descriptors	Marks
E2	Good evaluation and reasoned judgment.	3-4

E1	Some attempt to make a stance and justification.	1-2

H2 Essay Q3

3 London raised the daily congestion charges from £10 to £11.50 in 2014. This will contribute an additional income of £82.7m over the course of the next five years, which will be reinvested into London's transport network for buses, roads and bridges, so as to improve the infrastructure and enhance London as a destination for foreign direct investment.

Source: Transport for London, accessed on 18 July 2016

Explain why London imposes congestion charges and discuss whether the increase in congestion charges are justified. [25]

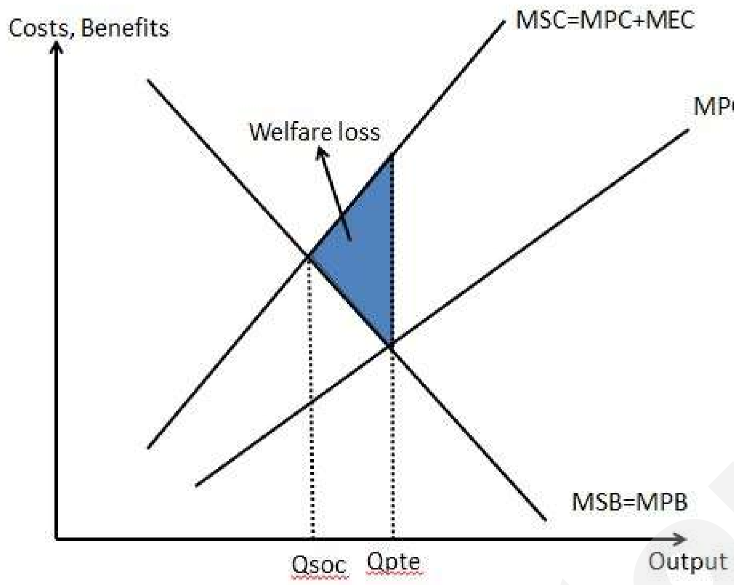
Suggested Answer

(a) Explain why London imposes congestion charges

Traffic congestion is a form of negative externality. The commuters only considered their private costs and benefits in their decision making processes, disregarding the external costs generated. Hence, commuters only considered private costs like fuel costs and parking charges, and private benefits like the ease and convenience of commute.

External costs includes noise pollution, air pollution, and loss of time, which affects third parties who are not involved in the consumption or production.

Due to presence of MEC, MSC diverges away from MPC, such that MSC=MPC+MEC



At Qpte, where MPC=MPB, and private efficiency is attained, MSC>MSB. Social optimal level of consumption would be set at Qsoc, where MSC=MSB. Thus, there is an overconsumption of private transport. This leads to the development of welfare loss as additional units of goods consumed results in greater social costs than benefits. The overallocation of resources to the consumption of transport results in market failure.

To correct the market failure, congestion charges reflecting MEC at Qsoc. This would raise MPC to the same level as MSC and consumption will be corrected to Qsoc. Welfare loss thus would be effectively eradicated.

(b) Discuss whether the increase in congestion charges are justified

Thesis: the increase in congestion charges are justified

1) **The increase in congestion charges reflect the marginal external costs more accurately.**

   As Brits enjoy higher standard of living as their income rises, **demand for private transportation will become increasingly price inelastic**, as it takes up a smaller proportion of their income. Thus, congestion charges which were effective previously will have to be adjusted upwards, to address the increase in income level. As demand for private transportation becomes relatively more price inelastic**, to maintain the private consumption of transportation at Qsoc, a large amount of tax has to be applied to effect the desired fall in quantity demanded to Qsoc.** Thus, the increase in congestion charges may be justified as this is to better reflect the marginal external costs incurred at Qsoc.

2) **The increase in congestion charges will be used to fund other transport infrastructures like highway and bridges which are public goods.**

The government announced that the tax revenue of £82.7m collected will be used to fund development of other transport infrastructures. **Infrastructures like bridges and highway are quasi-public goods which are not provided for in the free market, yet these goods generate much social benefits.** Hence, by increasing congestion charges to finance the construction of these public goods, the government can improve the transport infrastructure and relieve congestions with more highways.

3) **Government has to prioritise other merit goods.**

Furthermore, government has other areas of development to consider. In UK, 2 areas have been highlighted recently, the healthcare system and the education system. Thus, the government may have to channel more resources to promote the consumption of these merit goods. These **merit goods may exert more social benefits** to UK compared to transport network and thus, require more funding.

4) **Government has limited budget.**

In addition, **UK government faces a fiscal deficit today given the plight of its economic conditions**. Thus the source of financing the upgrade of the transport infrastructure rests upon those who utilised it heavily. Through increasing congestion charges, the tax revenue collected has been promised to be reinvested into the upgrading of the infrastructure. This may ease off the burden on the fiscal position.

5) **Government possessed more information, able to address long run needs of the country**

Government in general possess more information regarding the country and thus are able to make more informed decisions to correct markets. In this case, it appears the government has taken more consideration towards the **long run sustainability of its transport infrastructure and realised the need for an**

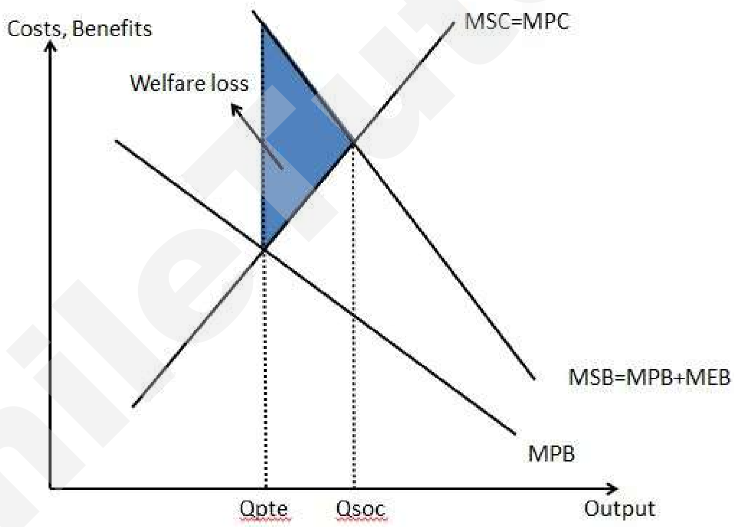
upgrade. This could better serve the population in years to come, especially with UK's growing population and raising wealth.

6) Improvement to transport network has the positive externality of attracting FDI

Good transport network has the positive externality of attracting FDI to the country benefiting third parties who are not involved in the consumption or production of transport network.

Micro-analysis: Positive externality of attracting FDI

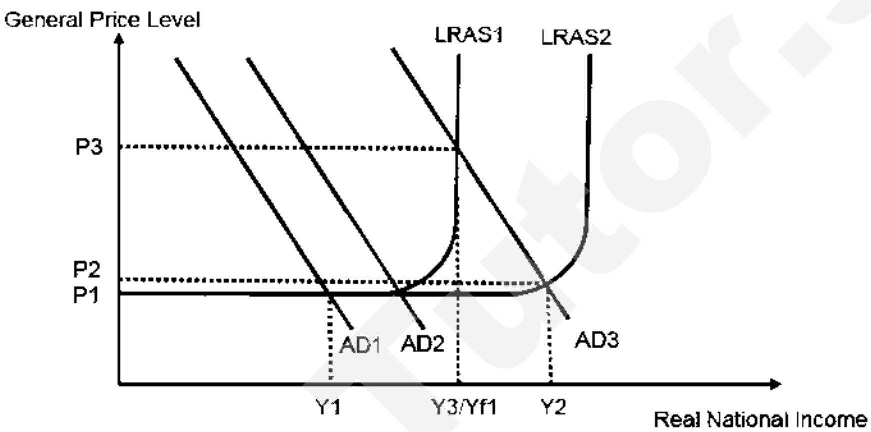
The presence of external benefits result in the divergence of the marginal social benefits from marginal social costs, such that MSB=MPB+MEB.



At Qpte, where MPC=MPB, and private efficiency is attained, MSC<MSB. Social optimal level of consumption would be set at Qsoc, where MSC=MSB. Thus there is underproduction of transport infrastructures. This leads to the development of welfare loss as additional units of goods consumed results in greater social benefits than costs. The underallocation of resources to the production of transport infrastructure results in market failure. Hence, hiking the congestion charges for the purpose of constructing more infrastructures is justified.

Macro-analysis: influx of FDI

The influx of FDI will serve to increase the investment component of the AD leading to an increase in AD therefore national income. As national income increases, the multiplier effect may take place resulting in multiple increase in output, national income and employment. Assuming the FDI increased spending on capital goods, it will expand the economy's productive capacity and leads to an increase in the LRAS. The actual and potential growth will lead to sustained economic growth in the UK. As seen in the diagram below, national income will increase from Y1 to Y2 with moderate increase in general price level from P1 to P2.

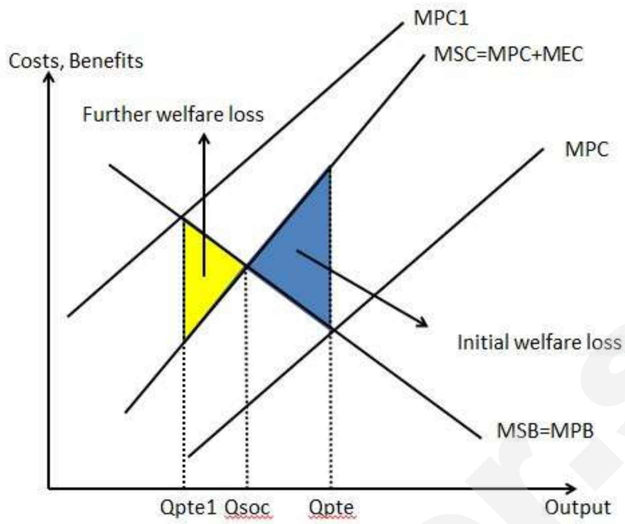


Anti-thesis: the increase in congestion charges are not justified.

1) Possibility of government failure

Information failure

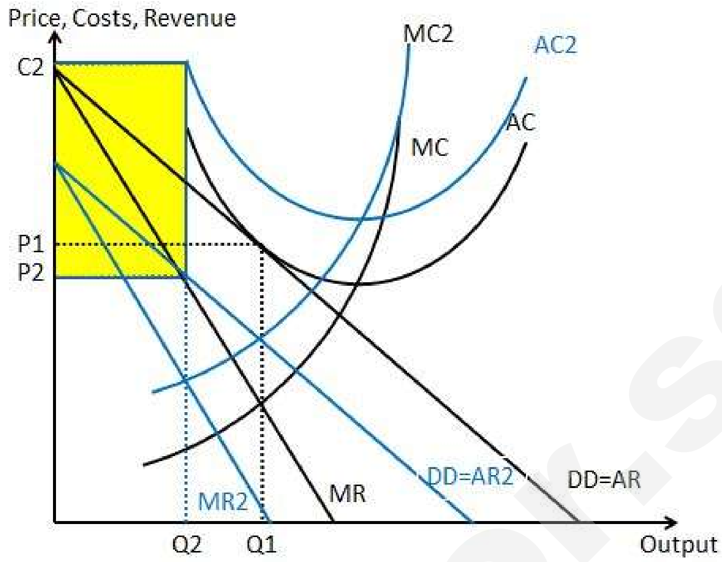
The increase in congestion charges may overcorrect the market failure, if the increase in charges is too high due to information failure. The overcorrection will result in MPC rising beyond MSC to MPC1, causing Qpte1 to be lower than Qsoc. This results in further welfare losses as shown below and thus, government failure.



2) **Negative effects on businesses in Central London**

The hike in congestion charges will reduce visitors to Central London as it is now more costly to drive. Retailers and business may see a decline in visitors and experience a fall in DD=AR to DD2=AR2

The hike in congestion charges will increase costs of operation for businesses in Central London. This increase in costs will affect the profitability of the businesses resulting in a higher AC2 and therefore lower profits for firms, as shown in the diagram below. The firms were initially making normal profits, yet with the introduction of higher congestion charges, profits may fall to subnormal profits as shown by shaded area below.



3) Alternative policies to address congestion are available, hence there is no need to hike congestion charges.

a. Expansion of public transport infrastructure may be more viable

Opponents of congestion charges hikes prefer government to spend more on developing the existing public transport network so that more commuters will switch away from private transport. However, the expansion of public transport, particularly rails and metros takes a longer gestation time and hence, unable to relieve the current congestion. Furthermore, given the size of the country, it would infeasible to expand the network to cater to the needs of every commuters.

b. COE may be more viable

UK government could consider a vehicle ownership licence programme to restrict vehicular growth in UK. This would effectively limit number of vehicles on road and reduce congestion. However, the policy would effectively price cars out of reach for low-income households, thus worsening the income disparity within UK. Furthermore, given that the existing public transport network does not cater to all areas, it would be inequitable to deprive commuters in remote areas of their means of transportation.

4) Alternative modes of transport are available, there is no need to increase congestion charges.

a. Cycling

There has been increasing calls for government to legalise cycling as an official means of transport and provide infrastructure for cycling within London. While this may reduce traffic congestion from cars, it will merely divert the problem to bicycles, which would require their specific areas for storage and parking and therefore congestion by cyclists. Government has to analyse the feasibility of this option before implementation lest it incur further welfare losses and result in government failure.

b. Promote car-pooling to reduce vehicular flow

The popular car-pooling app, Uberpool, has changed commuters' behaviour towards cabbing. More passengers are open to car-pooling, particularly if they could pay a lower fare. This would effectively reduce number of cars on the road and reduce congestion.

[govt has to consider the market power Uber possess. Currently, prices are determined by Uber, and the firm has the power to distort prices to maximise its profits.]

Conclusion

Raising congestion charges truly is a short run option. It is hardly sustainable and there is a limit to how much the government can increase the charges, before public discontent sets in. Furthermore, as London is a globalised city with free movement of labour across the European Union, more and more labour will be flocking to London in search for a higher paying job. The government should spend more effort to derive alternative modes of transport that causes less market failure like cycling or electric scooter, which may be more sustainable into the long run.

Level of Response	Descriptors	Marks
L3	Good explanation of source of market failure and sound justifications for rising congestion charges, with both macro and micro, short-run and long-run considerations.	16-21
L2	Some attempt to elaborate on the source of market failure and evaluation on way to address the market failure.	8-15

L1	Superficial explanation of the source of market failure and brief elaboration on congestion tax.	1-7

Evaluation	Descriptors	Marks
E2	Good evaluation and reasoned judgment.	3-4
E1	Some attempt to make a stance and justification.	1-2

H2 Essay Q4

(a) **Explain the possible causes of an appreciation of a country's currency.** **[10]**

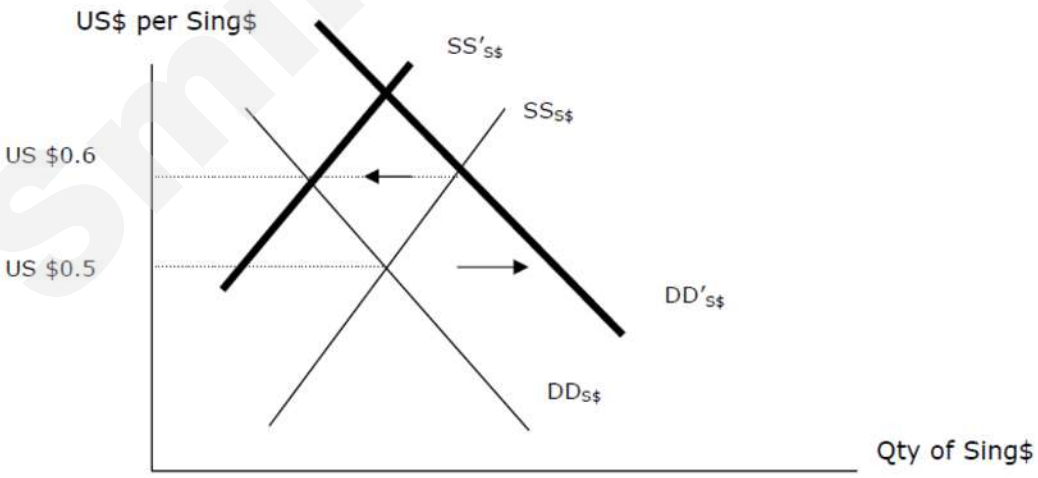
(b) **Discuss the view that monetary policy centered on exchange rate is, more often than not, the most appropriate option to achieve the macroeconomic objectives of a government.** **[15]**

Suggested answer outline for (a):

Intro:

- Exchange rate is defined as the amount of one currency that can be exchanged for another. It is the price of one currency in terms of another. When the exchange rate (S$) appreciates, it implies that the external value of the domestic currency has increased.
- Assume a free floating exchange rate regime, the exchange rate is determined by interaction of demand and supply of currency in the forex market.
- Since demand for currency is a derived demand, hence it is necessary to examine underlying determinants that would cause a shift in the demand and/or supply in the forex market. This is closely related to the status of the country's balance of payments – net currency inflows or outflows into the (i) current account (ii) capital and financial account. There could also be (iii) government intervention in the case of managed and fixed exchange rate regimes.

Devt:



With reference to the figure above, a rightward shift in the DD curve for Sing $ and/or a leftward shift of the SS curve for Sing$ would cause the Sing$ to appreciate against the USD.

A net inflow of currency from the BOP would lead the appreciation of a country's currency. This could be due to the following factors:

1. **Current account surplus** – *elaborate on any 1- 2 factors*

- **Relatively low price levels (low inflation rate) to trading partners**

  If inflation in Singapore is kept relatively lower than elsewhere, Singapore's exports will become more competitive to foreigners and there will be an increase in demand by foreigners for S$ to buy Singapore exports. At the same time, foreign goods will be less competitive (assuming high degree of substitutability between domestic and foreign goods) and so Singapore citizens will buy less imports. Singapore citizens will demand less foreign currency.In the foreign exchange market, this is reflected as a fall in the supply of S$ by locals. The combined effect of a rise in demand and fall in supply of S$ will results in the appreciation of the S$, assuming ceteris paribus.

- **Differences in the country's growth rate and economic performance (income effect on spending on foreign goods M)**
  Assume that the national income of a country (say, Singapore) decreases due to an economic downturn, it will encourage locals to purchase less foreign consumer goods (imports), thus supply of domestic currency S$ will reduce, assume demand for S$ remains unchanged, this will result in appreciation of S$ over time.

  Alternatively, there could be strong global economic growth resulting in higher purchasing power for trading partners, thus demand for Singapore's exports increases, demand for S$ increases, leading to appreciation, ceteris paribus.

- **Differences in cost competitiveness (theory of comparative advantage)**
  The emergence of China with low wages and relatively high productivity in certain manufacturing and services sectors have resulted in China enjoying comparative advantage in labour intensive manufacturing, thus rising demand for China's exports, leading to rise in demand for Chinese yuan by foreigners. At the same time, Chinese citizens could prefer to purchase local consumer goods, thus supply of Chinese yuan provided by locals falls. The combined effects results in appreciation of the Chinese yuan.

  OR if British goods become more attractive and competitive due to LR interventionist supply side policies, this will also cause the value of the exchange rate to rise. For example, if the UK has long-term improvements in labour market relations and higher productivity, UK goods becomes more internationally competitive and the in long-run, this will cause an appreciation in the pound as demand for UK exports increases. This is a similar factor to low inflation.

2. **Capital and financial account surplus** – *elaborate on any 1-2 factors*
   - **Relatively higher domestic interest rate (hot money inflows)**

     If UK interest rates rise relative to elsewhere, it will become more attractive to deposit money in the UK. Financial speculators will get a better rate of return from saving in UK banks, therefore demand for UK pound will rise.

     Local speculators could decide prefer to hold UK financial assets rather than in overseas financial centres, thus supply of UK pound decreases. This leads to the appreciation of UK pound. The higher the interest rate differential, the greater is the incentive for funds to flow across international boundaries and into the economy with the higher interest rates, the greater the extent of the appreciation of a country's appreciation assume no government intervention in the forex market.

   - **Expected future appreciation of exchange rate (to make windfall gains from currency fluctuations**
     Strong inflows of portfolio investment from overseas can cause a currency to appreciate. Financial speculators' actions are governed by their expectations. If the US dollar is anticipated to appreciate in the future owing to better than expected trade figures, improved economic performance or the mere discovery of a valuable asset (such as oil), financial speculators may rush to buy its currency now in anticipation of higher financial returns in future, thereby shifting its demand curve to the right (by foreigners) or supply to the left (by locals) – leading to an appreciation of the currency.

   - **Business confidence or future economic prospects (FDI inflows)**

     Given that US economic recovery is expected to remain on path in 2016, this may results in an increase in attractiveness of US to foreign investors as an investment destination, thus leading to rise in foreign demand for US assets (capital goods such as factories and machinery), thereby increasing demand for US$, assuming ceteris paribus, thus US$ appreciates.

3. **Government intervention in the forex market** *- optional*

   Governments can attempt to influence the value of their currency through purchase and sales of domestic currency, if under managed float or fixed exchange rate regime. For instance, Singapore may want to implement gradual and modest appreciation, therefore Monetary Authority of Singapore (MAS) makes use of its reserves to buy up the Singapore dollar and in doing so reduces its supply in the market. Holding the demand constant, a reduction in supply of S$ pushes up the exchange rate value of the Singapore dollar.

In the context of Singapore, the appreciation of the S$ is mainly due to her strong current account surplus and government intervention, where the Singapore government has used exchange rate as a policy tool to attain her macroeconomic goals.

4 (a) Explain the possible causes of an appreciation of a country's currency. [10]

	Marking Scheme	
L1	Mere listing of factors which affects the exchange rate level.	**1-4**
L2	For an answer that attempts to explain the factors which results in an appreciation of a country's currency but lacks detailed economic analysis. Good one-sided explanation of 1 factor with real world context (LL2: max 5 marks)	**5-6**
L3	A well-developed answer with in-depth explanation of the 3 factors (spans across the current account and capital and financial account) that will result in an appreciation of a country's currency. Application to real world examples (UL3) Students who explain 3 factors (but argument is solely on demand or supply factor OR on current account or capital and financial account solely) will score LL3 (max 7-8 marks) Students who explained only 2 factors but with well-developed answers spanning across current and capital and financial account will score LL3 (max 7-8 marks).	**7-10**

(b) Discuss the view that monetary policy centered on exchange rate is,

more often than not, the most appropriate option to achieve the macroeconomic objectives of a government. **[15]**

Suggested answer outline for (b):

Intro:

- The macroeconomic objectives of a government are to achieve sustained economic growth, low inflation, low unemployment, healthy balance of payments and stable exchange rate.
- Since 1981, monetary policy in Singapore has been centered on the exchange rate than interest rate. This reflects the fact that in small and open economies like Singapore, exchange rate is a more effective tool in maintaining price stability. Price stability is believed to encourage saving and investment which help to achieve sustained economic growth.
- Singapore generally tends to undertake a gradual and modest appreciation of the Sing dollar as it is appropriate in tackling short run supply shocks to ensure price stability against imported inflation.

Devt:

Thesis

(1) It depends on the nature of the economy. Yes, it is appropriate for small and open economies like Singapore which tends to use monetary policy centered on exchange rate. Explain the rationale:

(i) S'pore is a small & open economy & hence heavily dependent on trade

Firstly, this is due to the nature of the economy where many consumer goods that we enjoy in Singapore are imported and exports have high import content. The high import content (i.e. 60-70%) of expenditure and exports (i.e. refined oil) means that changes in world commodity prices or in the exchange rate have a powerful direct influence on price levels on her economy. Being highly dependent on imports, especially in the form of raw materials (crude oil) and semi-processed, demand for imports are generally price inelastic. Subsequently, any increase in price of raw materials will lead to a less than proportionate fall in the quantity demanded, ceteris paribus, and hence import expenditure rises, it results in rising cost of production for firms, leading to imported inflation.

Singapore is also highly dependent on the external sector as an engine for growth. Singapore's trade to GDP ratio exceeds 400%, one of the highest in the world. Thus, the exchange rate policy, is appropriate as MAS is able to leverage on the external demand to achieve macroeconomic stabilisation. *[Link to qn]*

(ii) Singapore is an interest rate taker – interest rate move in tandem with rest of the world so as to allow fixed interest rate parity.

Secondly, Singapore is a financial hub, whereby it embraces free capital flows in and out of her economy. This is because a vast network of international financial linkages exists in the Singapore economy, overlaid on a large external trade and services sector. As a result, capital mobility is high so that the trend in domestic interest rates is largely determined by external interest rates. This is why Singapore is an interest-rate taker, which therefore results little scope for an independent monetary policy, whereby she does not target money supply or interest rates.

Any changes in domestic interest rates could easily lead to large capital inflows or outflows of short term capital (hot money), destabilising the exchange rate, conflicting with the macroeconomic goal of stable exchange rate. As such, exchange rates, rather than interest rates, are the appropriate choice as instruments of monetary policy in Singapore. *[Link to qn]*

Since the Singapore dollar is monitored in terms of a basket of currencies of Singapore's major trading partners and is allowed to float within a broad band when MAS uses exchange rate policy, the main objective is to ensure long-term credibility of the exchange rate policy. This can be achieved as MAS can directly influence the value of the S$ via timely and appropriate intervention when necessary to smooth out short-term volatility in the exchange rate. If left unchecked, this short-term volatility can cause more market panic and impair confidence in the S$, resulting in potential adverse economic consequences, such as capital flight. Fortunately, MAS has substantial foreign reserves, and is able to engage in such market intervention. In fact, the knowledge of large reserves and lack of perfect market information serves to deter financial speculators and makes it less likely that significant amount will be needed to defend the currency.

(iii) Limited effectiveness of using conventional MP (e.g. investment is interest-inelastic & low k value)

Thirdly, conventional MP tools have a relatively limited impact on inflation and the level of economic activity in Singapore, given the greater contribution of external demand to growth than that of domestic demand.

This is because Singapore has a small domestic market size, as her population is small. Thus, to overcome her small size constraints, she is more dependent on external demand than internal demand, especially via C to generate growth. Also, her leakages are high, contributing to small multiplier size (k). To illustrate, Singapore has high savings rates arising from the compulsory savings scheme under the Central Provident Fund (CPF) and the predominant Asian thrifty mentality. This leads to a smaller consumption relative to other countries. Also, being a small country, she is heavily reliant on trade, and thus importation rate is much higher than many countries. Overall, with high leakages of MPS and MPM, her k size is small, and thus any increase in domestic demand will only lead to a limited increase in AD and hence economic growth.

Furthermore, unlike the larger economies where interest rates have a significant impact on investment, Singapore's economy is dominated by foreign MNCs with foreign sources of funds, thus limiting the importance of the domestic cost of borrowing.

Investment in Singapore is considered to be relatively interest-inelastic, indicating that any changes in interest rates will lead to a less than proportionate change in investment, ceteris paribus. This is because investment is more dependent on the outlook of an economy. As such, exchange rates, rather than interest rates, are the appropriate choice as instruments of monetary policy in Singapore. *[Link to qn]*

(2) It is depends on the nature of the problem – yes, ER policy is appropriate to tackle imported price push inflation. Explain how ER policy works to tackle the problem. Evaluate limitations of gradual and modest appreciation.

<u>Explain how and how well gradual & modest appreciation works:</u>
A gradual and modest appreciation of S$ would cause the prices of imported goods and raw materials to be relatively cheaper in domestic currency, ceteris paribus. As such, it reduces the cost of production (COP) of goods and services that make use of imported factors of production, hence lowering the price that domestic consumers have to pay for final goods and services produced. This will decrease consumers' cost of living. Faced with a lower COP, it increases the profit margin to producers, therefore resulting in an increase in SRAS, shifting the AS curve to the right from AS_1 to AS_2, as seen below, resulting in a fall in GPL from P_1 to P_2, hence easing the cost-push inflationary pressure. This provides the basis of price stability, thus ensuring sustainable economic growth in the long run as mild inflation has favourable effects on investment decisions and export competitiveness is maintained.

<u>Evaluation:</u> → May not be appropriate if excessive appreciation since it hurts Singapore's export and international competitiveness, thus preventing healthy BOP.

(-) this will have an undesirable side effect of eroding Singapore's export price competitiveness (in particular the service sectors such as tourism, education and health services targeted at foreign consumers since such services do not have high imported content unlike manufactured goods) and international cost competitiveness as a business location.

(-) In the LR, It may also accelerate outward foreign direct investments by Singapore companies and diversion of FDI projects to other countries if the Sing dollar persists to be overly strong for a long period of time

** Alternatively, some credit can be given if students explain depreciation to enhance X competitiveness or appreciation to curb dd-pull inflation (theoretical argument)*

Anti-Thesis

(1) Exchange rate policy is <u>not</u> appropriate for large economies like USA and China with large domestic demand. More appropriate for monetary policy centered on interest rate

Interest-rate centred monetary policy – manipulation of interest rate as a tool to influence the level of economic activity via level of consumption and investment and thus AD in the economy.

<u>MP more appropriate for large countries to pursue EG</u>

E.g. for a country (US) experiencing recession and high unemployment that would like to increase economic growth and lower unemployment

- Use expansionary monetary policy via quantitative easing measures → lower interest rate → stimulate C and I → higher AD → help to boost economic growth and lower cyclical unemployment through the multiplier effect.

More appropriate (better) because… *[Link to qn]*

- A fall in interest rate directly affects both consumers and firms' expenditure in SR
- Good especially for countries with large fiscal deficits (which limits the use of expansionary fiscal policy) like UK & US

[Optional]: Limited because…

- *For countries with already very low interest rates (e.g. Japan, US) they are facing the liquidity trap → unable to further lower interest rates (unless they make it negative) to stimulate AD*
- *Depends on the effectiveness of the transmission mechanism – whether banks are willing to lend and firms and consumers willing to borrow, since these are inherently risky ventures. During downturns, esp the recent financial crisis in the US, the transmission mechanism can break down due to banks hoarding cash instead of loaning it out → limited use in stimulating C & I & AD*

<u>OR MP more appropriate for countries facing dd-pull inflationary pressure e.g. China:</u>

- *Use contractionary monetary policy → lower i/r → lower AD → economy near full capacity will cool down competition for limited resources left → lower demand-pull inflation*

(2) Exchange rate policy is <u>not</u> appropriate to tacke other macroeconomic goals like domestic pressures such as rising wages for cost-push inflation. Require supply side policies rather.

Singapore adopts short run supply side policies (**income and wage policies**) to increase SRAS so as to reduce cost-push inflationary pressures. Income policy keeps labour costs low, lowering the overall cost of production. The government set guidelines on the wage increases permitted. This is done through with the National Wage Council. For example, wages may not be allowed to rise faster than the rise in labour productivity. One example can also be reduction in employer's CPF contribution rates. Singapore has a flexible wage structure for the public sector which allows wage rate to be quickly adjusted downwards. As cost of production is kept low, the aggregate supply (AS) increase (shifts to the right) and reduces wage push inflation. Incomes and wages policy can also be used as a short-run measure to reduce unemployment in times of economic downturn. LR supply side measures such as education and re-training to raise labour productivity can be used – this will tackle the supply side bottlenecks constraints that results in demand-pull inflation (which is not able to be resolved by monetary policy centered on ER).

(3) Exchange rate policy may <u>not</u> be the most appropriate policy to pursue other macroeconomic goals like stable EG and UN+. Other policies may be more appropriate

For instance, when US was in economic recession during the global financial crisis, a direct increase in G is more appropriate to stimulate the economy to attain EG and lower dd-deficient UN+. Explain how FP works and multiplier effect to create jobs and national income.

<u>OR</u> depreciation is better to lower cyclical unemployment, but is not the best in the case of structural unemployment. In that case, supply side policy that facilitates retraining and skill-upgrading of workers is a better option.

(4) Exchange rate policy is <u>not</u> appropriate for macro goals like BOP deficit if the root cause is a loss of international competitiveness. May require LR ss-side policies.

LR supply-side interventionist policies such as R&D of new production techniques & education + training of workers to move up value chain ladder and lower COP

- increase competitiveness in high-end valued-added manufacturing and services and restore export-price competitiveness
- increase international cost competitiveness as cost of doing business in is reduced via market-oriented policies like tax reforms, deregulation and liberalisation

More appropriate in improving international competitiveness in US and UK in the long run than depreciation since it tackles the root cause of the problem.

Evaluative Conclusion

Ultimately, whether monetary policy centered on exchange rate is the most appropriate policy to be undertaken to achieve macroeconomic goals depends on several factors – namely, the nature of economy (whether dependent on domestic or external demand), the root cause of the problem as well as the macroeconomic goal(s) that the government is pursuing at a particular point in time. At times, there could be a myriad of macroeconomic challenges, and no one single policy is appropriate to tackle all macroeconomic challenges. It can also depend on the state of the economy and the challenge at hand. For instance, when the economy is facing both price instability as well as economic recession, the appropriate policy may not be limited solely to monetary policy centered on exchange rates as other policies can also play a part. It has to be noted that the government does not have perfect imperfection, and hence the diagnosis of the economic problems is also a challenge, and despite the implementation of appropriate policies, there could be trade-offs. So the government has to weigh these considerations other than just the appropriateness of the policy decision.

(b) Discuss the view that monetary policy centered on exchange rate is, more often than not, the most appropriate option to achieve the macroeconomic objectives of a government. **[15]**

Level	Descriptors	Marks
3	For a balanced answer supported with well-developed economic analysis on whether exchange-rate centred monetary policy is the most appropriate policy for governments to achieve the macroeconomic objectives. Explain the rationale and how ER policy works. Answer shows consideration of various macroeconomic objectives and different countries' governments. Policy alternatives are also discussed.	9-11
2	For an under-developed answer or a one-sided discussion on whether exchange rate policy is the most appropriate policy for governments to achieve the macroeconomic objectives.	6-8
1	Mere listing of points regarding exchange-rate centred monetary policy and its use in achieving macroeconomic objectives of the government. Conceptual errors present.	1-5

Level	Descriptors	Marks
2	For insightful evaluative comment well-substantiated by economic analysis and judgement.	3-4

1	For unsubstantiated evaluative comment.	1-2

H2 Essay Q5

While wealth is rapidly increasing in developing nations, and advanced economies struggle with stagnation, there is great concern about rising economic inequality in all parts of the world, particularly in Asia.

Source: World Economic Forum, 2014

Discuss the relevance of supply-side policies as Singapore continues to face the problems of income inequality and stagnation
[25]

Introduction:
Income growth and inequality are key issues of concern for many countries across the world, including Singapore. As economic growth has seen to be stagnated in Singapore in recent years, this will translate into stagnant wages and greater income inequality. To assess if supply-side policies are relevant in solving the continuous problem of income inequality and stagnation in Singapore, several issues need to be considered first – the root causes of the problem and time constraints involved.

1A) What is Economic Stagnation?

Stagnation can be defined as a prolonged period of slow economic growth

In 2015, Singapore's economic growth was a mere 2 % and (GDP) growth is forecasted to be between 1 – 3% till 2019. This stagnant growth (slow rise in AD) in this range can be attributed by many reasons and will be briefly explained below.

C) Problems of Economic Stagnation

Stagnation has been forecasted to persist in the next few years and needless to say, will cause several problems:

i. **As seen in previous paragraph, if stagnation is caused by a slow rise in AD, inventories will fall, firms would then hire more workers as they increase production, albeit at a slower rate.** Hence, the slow increase in employment rate implies a significant share of the citizens are not working and have income→ this meant that lesser tax revenue to the government would be available to finance spending projects. **Extent of problem → Singapore's UN+ rate was at 2.1 in June 2016, the** highest jobless rate since the March quarter

ii. There could be disincentives to invest due to pessimistic business outlook. Firms will expect to gain less profits → Possible fall in Investments → fall in AD → may worsen stagnation as eventually there will be recession.

iii. **Stagnation implies lower material and non-material standard of living.**
Stagnation in EG represents slower or no increase in the average material standard of living of the people. As real income per head rise at a slower rate or at stagnant rate, this means that a lesser quantity of or quality (of both) goods and services is made available to each

	improvement in lifestyle that is made possible with higher income and hence slower increase in the non-material standard of living.
B) Causes of Stagnation:	**D) Whether the use of Supply side policies are relevant depends on the root cause of stagnation.** Supply–side policies are designed to improve supply-side potential of an economy and make markets and industries operate more efficiently. These policies are aimed to stimulate or achieve LREG and create conditions for rising living standards.
i. Loss of export competitiveness in manufacturing output. The small and open nature of the Singapore economy meant that Singapore is highly affected by globalisation trends. This is compounded by the fact that Singapore is ranked second on Ernst & Young's Globalisation Index 2012. With rising competition due to globalisation, Singapore has already lost her comparative advantage in low- to medium-end manufacturing to rapidly industrialising countries. If exports decrease due to competition from low-cost countries, it will result in a fall in AD, which would lead to a drop in output → Slowdown of economic growth	**<u>Thesis #1a:</u> Supply-side market-oriented policies, which involve measures to free up the markets or improve market incentives, can be used to resolve stagnation that is caused by the loss of export competitiveness.** In particularly, the use of sseveral corporate tax rebates have been provided by the government to enhance Singapore's international competitiveness. <u>Example 1:</u> To spur entrepreneurship, the **start-up tax exemption scheme** was introduced in 2004 to provide newly-incorporated companies some exemption on their taxable profits in their first three years of operations. <u>Example 2:</u> Additionally, the Government also recognises that small and medium-sized enterprises (SMEs) are an important component of a vibrant economy. To help such companies grow and establish themselves, the Government has put in place a **partial tax exemption scheme** which lowers the taxable profits of these companies. While the partial tax exemption scheme is available to all companies, the exemption thresholds are designed to target the benefits at SMEs. • Thus, the above examples of tax rebates would reduce firms' COP and restore export-price competitiveness. →**export price competitiveness** ↑ → Assuming demand for exports is price elastic→ ↓ Exports price → ↑ Export Revenue→ ↑ net exports. • Moreover, with the increase in profitability of investment, this allows Singapore to attract FDIs → Both AD and AS increase → sustainable EG **<u>Thesis #1b:</u> Long run supply-side interventionist policies, which concerns direct government intervention through financial support to** enhance Singapore's international competitiveness. Pro-growth policies or pro-business policies that involves ↑ G on building up world class <u>infrastructure</u> enhancing

	capabilities (e.g. ultra-high speed, intelligent and trusted infocomm infrastructure, and reliable transport and communication networks) are other examples of Interventionist Policies. This spending on infrastructure can be deliberately targeted industries such as biomedical, water technology and Interactive Digital Media→ This will lead Greater inflow of investments due to firms' increased expected rate of return. → Rise in both AD and AS → sustainable EG
ii. Trading partner's negative economic growth in the wake of global financial crisis in the past few years, recession or slow EG faced by trading partners, such as China, will cause demand for Singapore's exports to be dampened → Slow increase in AD → Slowdown of economic growth in Singapore.	*Supply side policies are not relevant*
iii. Imported inflation External shocks such as increase in price of oil caused the cost of production of firms in Singapore to increase → Profits decrease → SRAS decreases → Slowdown of EG in Singapore.	*Supply side policies are not relevant*

2A) What is income inequality? Singapore's income gap, as measured by the Gini coefficient for income, is one of the widest among developed countries at 0.464 in 2014. The Gini measures how income is distributed in a society. The closer the Gini is to 1, the more unequal the distribution of income. **A) Causes of Income inequality:** A high income inequality shows that economic growth has unequal gains - with the rich benefiting more and little gains trickling down to the lower income groups in Singapore. Needless to say, globalisation has further accentuated this disparity **i. Globalisation** As mentioned earlier, with rising competition due to globalisation, Singapore has already lost her comparative advantage in low- to medium-end manufacturing to rapidly industrialising countries. Hence, over the years, Singapore has had to move up to higher value-added goods and services like biomedical or financial services in order to remain competitive. Consequently, this meant a higher demand for skilled labour and lower demand for unskilled workers → resulting in unemployment and low wages for the low income, unskilled workers as well as higher wages and higher employment for the skilled workers → This leads to income inequality	**B) Problems of income inequality** **Firstly, it results in inefficiency or price distortion in the product market.** The free market allocates resources to produce the goods for those who are able to pay. Goods are distributed according to factor incomes such that those with the ability to pay enjoy more goods. However, this allocation of resources via the free market may not achieve maximum social welfare. When the income of the wealthier households rises at a fast pace in comparison with the other income groups, this result in an "expenditure cascade", where the higher demand for durable goods such as housing and private transport pushes up the prices of these goods. The higher prices of these goods, coupled with the slow rise in the income of the other income brackets, meant a further fall in the purchasing power of these low income earners. Hence there will be under-consumption of these goods by the lower income, leading to welfare loss. **Income inequality will also create social divide** – Income inequality creates social divide – may create social problems which if not corrected may lead to disruption of production leading to lower employment and eventually slower growth.
	Thesis #2: Long run supply-side interventionist policies, such as subsidies for retraining can help to counter income inequality caused by globalisation In particularly, the use of subsidies for education and retraining enables workers to gain skills relevant in the economy → This has the potential to raise labour mobility → as workers are able to find better-paying jobs in sunrise industries → reducing Y inequality. Examples of subsidies are elaborated below.

	• Recognising the importance of continuing education and training (CET), the Government has committed in 2010 to invest $2.5 billion over the next five years. An example would be the Continuing Education and Training (CET) Masterplan - e.g. NTUC Unit for Contract & Casual Workers (UCCW). This training is aimed at assisting contract and casual workers to upgrade their skills as well as helping them with career progression and life-long employment. As part of this Masterplan, the Singapore government would partner with multinational corporations to train locals up to take up senior and managerial positions, so that locals can take on more skilled jobs and earn higher incomes. Example 2: • Additionally, in 2015, the government introduced new initiatives to support life-long learning and deepening of skills. The SkillsFuture Credit is available for all Singaporeans above 25 to enhance their skills in work related areas. These subsidies: • improve the skills of workers (explain briefly)- Education and training of low skilled workers Increase in skills level + productivity -- increases their employability → DD for these workers increase → wages increase → reduce income inequality • At the same time, some of these workers may be equipped with the necessary skills to move to the market for high skilled labour → reduce SS for unskilled workers →Wages increase→ Higher income for low-skilled workers → reduce income inequality • Impact on the market for high skilled workers → Increase SS for skilled workers →wage rate from decreases →lower income for the skilled workers à reduces income inequality.

Are supply-side policies relevant in solving the continuous problem of stagnation and income inequality?

Evaluation: These will ensure that our LRAS will continue to increase, so that wages (especially since wage of low income has risen) can continue to increase without causing inflationary pressures and slow down economic growth further. Continual upgrading and improving the infrastructure capacity would help to maintain a sustainable living environment.

However, the success of the Supply-side policy is often not guaranteed. The question is

1. whether the government finances can continue to support such spending and whether Singapore can afford to keep on drawing down on past public sector surpluses. Shrinking labour force in Singapore reduces government's ability to collect taxes and ageing population increases demand on government's welfare spending. Less government reserves would reduce government's ability to fight future economic downturns.

2. Spending on education and training are long term in nature where success is uncertain and not guaranteed. But retraining require change of mindset by employees and employers. Some employees may not be willing to send workers for training owing to reasons ranging from lack of manpower to finding the training too costly. In fact, Singapore's productivity growth had been quite dismal and in 2014 there was a fall in productivity growth. Similarly, lowly skilled workers may depend on overtime pay to earn extra money and hence they are unwilling to forgo the income for training.

The counterargument is that it is precisely the long term nature of such policy that the result cannot be seen immediately. As firms are incentivised to upgrade and automate and workers are encouraged to upgrade their skills, if productivity can be increased, workers will move up the value chain and get better pay, increasing national income. This would enable government to keep a healthy budget balance, despite the smaller workforce.
Hence, supply side policies are largely relevant to help the economy overcome the problems of income inequality and stagnation. *However, the type of supply side measures may have to vary depending on the root cause of the problem and government may have to rely more on other policies to try to sustain the rising wages of the workers as well as reducing income inequality. Moreover, the use of ss-side policies may not directly tackle the specific cause of stagnation and may not promptly solve income inequality.*

The role of the employers also become important as they need to see the importance of life-long learning & skills to allow unskilled workers to go for retraining.

Anti-thesis #1:
Use of other policy to tackle the specific cause of stagnation (Any one policy)

Cause of stagnation	**Type of demand-management policies**
ii. Trading partner's negative economic growth	**If the cause of stagnation is due to trading partners' negative EG, Singapore could implement** devaluation (or zero percent appreciation of the SGD) of the currency with trading partners which Singapore exports to. • Singapore's Export prices relatively cheaper in foreign currency Qd for exports ↑→ Epx> 1 → TR of exports increase • Import prices relatively dearer in local currency Qd for imports↓→ Epm> 1 → TE of imports decrease Assuming Marshall Lerner condition holds, where Sum of price elasticity of demand for imports and exports is greater than 1 → Net Exports (X-M) increases→ AD increases→ reduce stagnation as real national income increases. Hence the above changes in the relative price of export can help to counter the effect of falling export revenue that is caused by the slowing in EG of trading partner. **Evaluation:** Effectiveness in boosting growth centres on ML condition holding, but Epx + Epm can be <1. In the SR, this condition may not hold because it takes time to adjust preferences and find subsitutes and for trading contracts to expore and hence appreciation may temporarily reduce growth by reducing net exports (X-M)

	Rise in (X-M) that is excessive (especially since (X-M) comprises a large proportion of AD in Spore) may cause demand-pull inflation. ****Expansionary Fiscal policy** can also be used to counter the effect of the falling X-M though ran increase in G, C and I , although this may not directly tackle the root cause of the problem of falling (X-M)*
iii. Imported inflation	**If the cause of stagnation is due to imported inflation,** strengthening of currency can help to solve this. **Gradual and modest appreciation of Sing Dollar** The Monetary Authority of Singapore enables the Sing dollar to go on a modest and gradual appreciation. With gradual and modest appreciation → price of imports such as crude oil becomes relatively cheaper in S$. This lowers the cost of living directly by reducing petrol prices for households. Following the appreciation of S$, import of crude oil as a factor of production is also cheaper → this reduces the COP of goods and services that makes use of imported crude oil→ firms are able to expand pdtn in SR as profit margin of producers rises → SRAS shifts to the right → reduce stagnation as real national income increases. Apart from the rise in real national income, there is also lower prices of final gds & svs → this allow Singapore to maintain export price competitiveness and lastly, signal the robustness of the Singaporean economy to investors → promoting further economic growth in the future. **<u>Evaluation: If the Sing dollar appreciates excessively (overly strong),</u>** (-) this will have an undesirable side effect of eroding Singapore's export price competitiveness (in particular the service sectors such as tourism, education and health services targeted at foreign consumers since such services do not have high imported content unlike manufactured goods) and international cost competitiveness as a business location. (-) In the LR, It may also accelerate outward foreign direct investments by Singapore companies and diversion of FDI projects to other countries if the Sing dollar persists to be overly strong for a long period of time.

Anti-thesis #2: Use of other policy to promptly tackle income inequality (Any one policy):

1) An example would be the use of **<u>Progressive Income Tax</u>** to ensure an inclusive society and reduce income inequality.

Government has to take care of the lower-income earners and outline strategies to assist them Progressive tax system to enable redistributing of wealth.

Higher income earners pay a proportionately higher tax →tax revenue collected enables government to finance various measures such as access to subsidised housing, a good education and high quality health care, financing of training programmes for everyone (inclusive of lower-income households) to progress up the social ladder → address income inequality and enable more lower-income

E.g. Singapore adopts a progressive tax system highest personal income tax rate at 22% and the bottom-end labour earning less than $20,000 per annum would be exempted from the paying of personal income tax.

Evaluation: Excessive government spending on redistributive programmes can increase pressure to raise income tax rate for middle and/or higher-income, leading to disincentive to work. It is important to avoid overly raising personal income tax rate → may lead to brain drain issue where professionals migrate abroad to countries with lower cost-of living and lower tax rates. This was the case in UK (where tax rates are among the highest in the world); business leaders blamed high rates of income tax as the reason for the rise in professionals leaving Britain. Hence, it is important that Singapore learn from others and past lessons, especially since Singapore have to rely heavily on skilled-labour in the higher-value-adding industries for its economic growth.

2) Other example would be the one-off handouts to lower income groups e.g. Permanent GST Voucher, GST Credits, Growth Dividends to offset the 7% GST for low income households and increase their purchasing power to consume more goods and services

Evaluation: But cost of financing would need to be considered

Synthesis:

Supply-side policies remains largely relevant in the face of continuing income inequality and stagnation. Despite the financial constraint imposed on government, such policy is necessary to avoid a stagnant or a shrinking economy and widening income gap. However, the ability to attract foreign investors, with the use of SS policies, also depends on other pull factors like political stability and quality of labour force. Hence foreign investors may be deterred by the economic outlook of stagnation. Moreover, DD-management policies can tackle specific root cause of stagnation directly and the problems of inequality directly.

Despite all odds against Singapore in recent years, Singapore has generally managed to stay resilient because of the appropriate policies undertaken by the government to tackle the challenges of stagnation. The Singapore government needs to remake the economy and to steer the economy into new areas of comparative advantage in an increasingly integrated and competitive landscape. Singapore has moved up the value-added chain, away from low-end electronics, and found lucrative new niches such as the marine engineering and biomedical sectors. Being a small country has aided Singapore in her nimbleness in responding to global challenges.

In addition, Singapore would need to look into enlarging the share of the economic pie and achieving inclusive growth in ensuring that the lower income groups and unskilled workers are not left behind. This would mean upgrading our economy and developing deeper skills, so that Singapore can sustain growth, create better jobs in every vocation and enable Singaporeans to earn better incomes. It also means doing more to help children from poorer homes overcome early disadvantages, finding their strengths and developing them to their fullest potential to keep social mobility in an upward trend.

Level	Descriptors	Marks
L 3	For a rigorous and well-developed answer that use economic analysis to explain	**15-21**

	the consequences of both income inequality and stagnation and offers analysis of relevance of supply policies that the Singapore government can adopt (for at least 2 supply side policies to solve both income inequality and stagnation). Answer is relevant in the context of Singapore. Explain and assessed more than one other measure apart from supply side policy (at least one for each income inequality and stagnation) **Note**: To score full marks, students must span across "income inequality and stagnation" countries when illustrating with examples. For response that ignores the consequences of income inequality and stagnation and focused on relevance of supply side policies and assessed more than one other measure for each economic problem- Cap at 15 marks	
L 2	Some explanation about the consequences of income inequality and stagnation (or causes of income inequality and stagnation) and with some mention of SS policies (at least 1) to be undertaken as well as other policy (only 1). Some reference to real world examples in the context of Singapore. A well-developed but one-sided explanation that focuses on either income inequality or stagnation and shows some attempt at evaluating relevance of supply side measures but assessment is not consistently applying to Singapore context. Explain at least one other measure apart from supply side policy but may not assessed it's importance or relevance [LL2: 10-12 m]	**10-14**
L 1	Developed response that addresses only the consequences of income inequality and stagnation – Max 8 marks OR Developed response that addresses only the causes of income inequality and stagnation – Max 8 marks A one-sided answer – only looking at supply side policy Inadequate coverage of supply side measures- only 1 or 2 Not really evaluating the relevance of supply side policy in tackling the mentioned problems in the context of Singapore.	**1-9**
E1	Attempt to provide a reasoned conclusion as to whether supply side policy is relevant in tackling the problems Rehearsed evaluation of ss side policies, not particularly addressing the main issues discussed.	**1-2**
E2	A developed evaluation with good justification of the conclusion as to whether supply side policy is relevant. Good judgement/ evaluation specific to issues discussed.	**3-4**

H2 Essay Q6

The following data relate to the Singapore economy in 2014:

Top 5 Singapore Exports to Thailand (% of total export receipts from Thailand)			Top 5 Singapore Imports from Thailand (% of total import payments to Thailand)		
1.	Electronic equipment	37.0 %	1.	Oil	22.1%
2.	Machinery	16.7 %	2.	Machinery	20.9%
3.	Plastics	5.3%	3.	Electronic equipment	16.3%
4.	Oil	4.7%	4.	Ships, boats	9.1%
5.	Organic chemicals	4.4%	5.	Gems, precious metals	6.6%

Source: Trade Map, International Trade Centre, *www.intracen.org/marketanalysis*

(a) Explain the demand and supply factors determining the pattern of trade between Singapore and Thailand.
[10]

(b) Assess the extent to which a growth in worldwide protectionism has changed Singapore's pattern of trade with the rest of the world. [15]

Suggested Outline

Part (a):

Pattern of Trade *c*an be viewed in terms of:

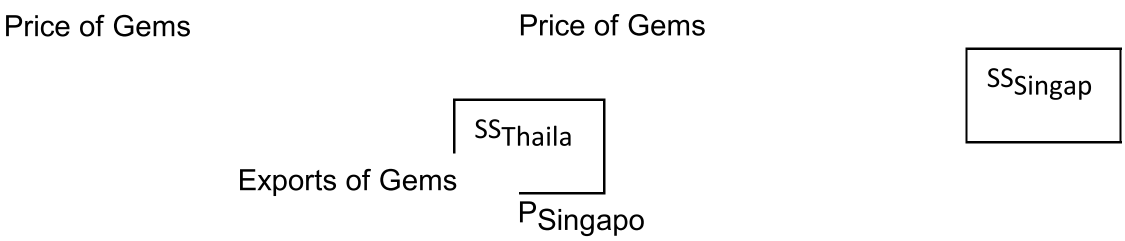
- **Commodity composition of trade** – i.e. what type of goods and services are exported and imported?
- **Geographical composition of trade** – i.e. whom do we trade with? – e.g. Singapore's trade with major trading partners like Europe, US , Malaysia and ASEAN countries.

SS factors

- Explain differing factor endowment and quality accounting for differing CAs and hence commodity composition of trade between Singapore and Thailand
- Examples from table:
  - Plastics & organic chemicals vs gems, precious metals→ inter-industry trade
  - Greater value-added Electronic Equipment & Machinery (finished goods) from Singapore vs Lower value-added ones (for example: component parts and semi-finished goods) from Thailand → intra-industry trade perhaps arising

from outsourcing/offshoring of production processes to exploit other countries' comparative advantage

- Illustrate with dd-ss diagram
  - Use demand and supply analysis to illustrate how differing opportunity costs explain basis of trade between **two countries which have different factor endowments**:
    - *Resource abundant* countries such as Thailand are able to produce gems and precious more cheaply i.e. at lower opportunity cost than developed countries like Singapore. There is lower opportunity cost because when Thailand produces gems and precious metals, her lower cost of production means that she needs to give up less of other goods and hence incurs lower opportunity cost → **Thailand has comparative advantage in gems and precious metals**
    - *Capital abundant* countries such as Singapore **will have a comparative advantage in the production of higher value-added and capital-intensive products such as organic chemicals and plastics**
  - With reference to the following diagram,
    - Assume Thailand and Singapore have identical demand = $DD_{Singapore}$ = $DD_{Thailand}$ for gems.
    - However, because Thailand has a comparative advantage in gems, there is high supply of gems in Thailand ($SS_{Thailand}$) and hence gems will be cheap in Thailand at $P_{Thailand}$. On the other hand, because Singapore does not have a comparative advantage in gems, the supply of gems in Singapore is low ($SS_{Singapore}$) and hence gems will be expensive in Singapore at $P_{Singapore}$.
    - Hence if trade takes place between Thailand and Singapore, the price at which they trade gems will be between $P_{Singapore}$ and $P_{Thailand}$ at P* where Thailand will be the exporter of gems while Singapore is an importer of gems. By the same analysis (but not illustrated here), Singapore will be the exporter of a capital-intensive product such as organic chemicals, and Thailand will be an importer due to Singapore' comparative advantage in capital intensive products. In other words, Singapore will import labour- intensive products cheaply from Thailand and Thailand will import capital-intensive or high-tech products cheaply from Singapore.



P*
P_{Thail}

Imports of Gems

DD_{Thail}

DD_{Singa}

Quantity of Gems

Thailand

Singapore

Quantity of Gems

DD factors (to explain intra-industry trade)

- Explain tastes and preferences (need for consumer variety) accounting for intra-industry trade
- Examples:
    - o Electronics from Singapore (Akira consumer electronics) vs Electronics from Thailand (Samart Engineering)
    - o Tiger beer from Singapore vs Chang beer from Thailand
- Illustrate with dd-ss diagram
    - o With reference to the following diagram,
        - – Assume Thailand and Singapore have identical supply = $SS_{Singapore}$ = $SS_{Thailand}$ of consumer electronics.
        - – However, because Singapore has a strong preference for consumer electronics compared to Thailand, there is high demand for consumer electronics in Singapore ($DD_{Singapore}$) and hence consumer electronics will be expensive in Singapore at $P_{Singapore}$. On the other hand, because Thailand has a lower demand for consumer electronics ($DD_{Thailand}$), consumer electronics will be cheap in Thailand at $P_{Thailand}$.
        - – Hence if trade takes place between Thailand and Singapore, the price at which they trade consumer electronics will be between $P_{Singapore}$ and $P_{Thailand}$ at P* where Thailand will be the exporter of consumer electronics while Singapore is an importer of consumer electronics.

Price of Consumer Electronics

Price of Consumer Electronics

SS_{Thaila}

SS_{Singap}

Exports of Electronics

$P_{Singapo}$

P*

P_{Thail}

Imports of Electronics

DD_{Thail}

DD_{Singa}

Quantity of

Thailand

Quantity of Electronics

Singapore

Knowledge, Application, Understanding and Analysis		
L3	Explanation of 3 factors spanning demand and supply with the use of examples from table and otherwise Low L3: No reference to table	7-10
L2	Explanation of 2 factors spanning demand and supply OR Explanation of 3 factors spanning demand and supply without the use of examples (either from table or otherwise) Low L2: One –sided explanation of 2 factors	5-6
L1	Explanation of 1 factor (either demand or supply) Low L1: No use of examples	1-4

(b) Assess the extent to which a growth in worldwide protectionism has changed Singapore's pattern of trade with the rest of the world. [15]

Protectionism refers to the partial or complete protection of domestic industries from foreign competition in domestic markets primarily by switching expenditure from foreign goods to domestically produced goods through the use of measures such as tariffs and quotas.

<u>Growth in worldwide protectionism has changed Singapore's pattern of trade</u>

- Protectionist measures imposed on Singapore exports → Restricts trade between Singapore and trade partners → trade diversion → fall in volume of trade as well as change geographical composition of trade if change trade partners as a result [tariff diagram to illustrate fall in trade volume]
  - With trade a small country becomes a price-taker of the world price Pw of the product due to its negligible market power amongst the infinitely large number of sellers of the homogenous product worldwide. As such world supply Sw is perfectly price-elastic at Pw.

Price $\qquad$ $S_{domesti}$

P_W + $\qquad$ World Supply + tariff

P_W $\quad$ A $\quad$ B $\quad$ C $\quad$ D $\qquad$ World Supply

$D_{domesti}$

0 $\quad$ Qs $\quad$ Q_1 $\quad$ Q_2 $\quad$ Qd $\qquad$ Quantity

  - Before the imposition of the tariff, at the world price of P_W on imports from Singapore,consumption was Qd, of which 0Qs was of domestic production source and the remaining quantity QsQd is from imports.
  - After the imposition of the tariff, the market price rises by the full amount of the tariff to P_W + t. At the new price, domestic production increase to $0Q_1$ and imports from Singapore are reduced to Q_1Q_2.

- Protectionist measures such as export subsidies in China→ Confers artificial comparative advantage to Chinese goods → Singapore imports (more) from China→ trade diversion → change volume of trade (as well as geographical if country was previously not a trade partner)

Growth in worldwide protectionism has not changed Singapore's pattern of trade

- **Pattern of trade determined more by factor endowment than protectionism**
  - Resource-scarce and small domestic market → highly trade-reliant → need to move up value chain from labour-intensive manufactures to knowledge-intensive goods and services to remain competitive and correspondingly increasingly depend on imports of raw materials and labour-intensive products → affects commodity and geographical composition of trade

- **Pattern of trade determined largely by government policy**
  - FTA with a host of countries with different factor endowments nullifies worldwide protectionism & increases FDI → raises Singapore's international competitiveness → less susceptible to competition from countries with artificial comparative advantage due to protectionism (export subsidies or devaluation) + better able to remain competitive despite protectionism imposed against its exports (tariffs and quotas)
  - Government decision in awarding rights for building Integrated Resorts in Singapore sees an increase in the volume of exports for Singapore. Also, the trade composition shifts towards that of the services sector.
  - Government's aim to promote Singapore as a research hub saw the government spending on infrastructure for this industry (Biopolis). This improves the quality of resources available in the research industry and therefore contributes to Singapore's comparative advantage in the production of services. Consequently, Singapore's trade composition for the services industry is likely to increase. The volume of trade would also increase as a result.

- **Other stronger factors determining pattern of trade**

(i) Globalization

Changes in composition of trade due to changes in the quality of capital and labour

Globalisation era has seen a higher degree of exchange in capital, particularly in FDI in Singapore. Such FDI brought about technological progress, partly through the capital goods used by foreign firms in Singapore and the high skilled labour in Singapore (foreign talents or expatriates). This has led to an increase in the quality and quantity of capital and labour in Singapore.

A congregation of highly productive capital and labour in Singapore sees Singapore gaining comparative advantage in high-tech, high skilled level products such as financial services and bio-medical services.

On the other hand, for example, the opening up of China allows this country with a high availability of labour to specialize in the production of labour intensive low end manufacturing goods.

Such developments as a result of globalization bring about the shift in comparative advantage for Singapore from low tech to high tech products.

Increase in volume of trade due to improvement in transport system

Also, globalisation has led to a more efficient transport system. This lowers the cost of transport of goods and services between countries. As a result, countries are further encouraged to trade due to the lower transport cost as a result of globalisation. This will increase the volume of trade for Singapore.

According to the law of comparative advantage then, Singapore should specialize in the production of high-tech goods and services, and export them. At the same time, Singapore should import labour intensive goods from China.

As a result, Singapore's trade composition shifts to exporting manufactured goods to higher value added goods and importing lower value added goods. Similarly, Singapore's direction of trade will also be impacted. As it gains comparative advantage in higher value added goods and loses comparative advantage in lower value added goods, it exports higher value added goods and imports lower value added goods.

Trend towards intra - industry trade

The waves of outsourcing and offshoring that stemmed from freer capital flows under globalization have increased the volumes of trade experienced by Singapore. Many foreign firms have established Singapore as one of the sites for their subsidiaries. Hence a large volume of finished and semi-finished products are imported and exported from Singapore.

Rise of new economies

Globalisation has seen the opening up of new economies e.g. China & Vietnam and has also presented new opportunities for trade to occur. For example, economic growth in these emerging economies may lead to an increase in the demand for goods and services which Singapore produces e.g. financial services and cross-border logistical services while S'pore may import goods and services from these country more cheaply. These results in higher trade volume.

Taste and Preference
Moreover, with globalisation facilitating labour movements across countries, Singapore has become a more cosmopolitan society. This fuelled the changing taste and preference for its residents. For example, with the assimilation of Japanese and Korean culture, Singapore may see an increase in its trade volume with Japan and Korea.

(ii) Rising affluence

Falling price elasticity of demand for imports as increases in income reduces the proportion taken up by import expenditure out of total income. Rise in price of imports due to protectionism sees a less than proportionate fall in quantity demanded for imports → limited impact on pattern of trade (volume, commodity composition, and direction of trade)

Conclusion

Stand – Growth in worldwide protectionism has had limited impact on Singapore's pattern of trade in terms of volume and commodity composition. The geographical composition (or direction) of trade has been more significantly affected.

Justification – Our export-oriented and import-dependent economy demands our continued participation in trade with the rest of the world.

Insight – Singapore's ability to continue thriving as a nation despite growing worldwide protectionism depends largely on a forward-looking and visionary government and people who have the capacity to stay ahead of the competition and continually ascend the value-added chain through the astute identification and development of goods and services with few substitutes and a highly price-inelastic demand, and hence accord some of degree of immunity against the tide of rising protectionism.

Knowledge, Application, Understanding and Analysis		
L3	2-sided argument with application to the Singapore context via the use of relevant examples Low L3: Narrow scope (< 3 reasons spanning both sides)	9-11
L2	2-sided argument with limited application to the Singapore context via the use of relevant examples Low L2: No application to Singapore context &/or underdeveloped explanation	6-8
L1	Largely one-sided response Low L1: No application to Singapore context	1-5

Evaluation		
E2	For a well-reasoned judgement	3-4
E1	For an unexplained judgement	1-2

VICTORIA JUNIOR COLLEGE

2016 JC 2 PRELIMINARY EXAMINATION

H2 ECONOMICS – PAPER NO.9732/01

15 September 2016	8am - 10.15am
Thursday	2 hours 15 min

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.

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

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

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

Answer **all** questions.

At the end of the examination, fasten your work securely, by question, using the strings provided.

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

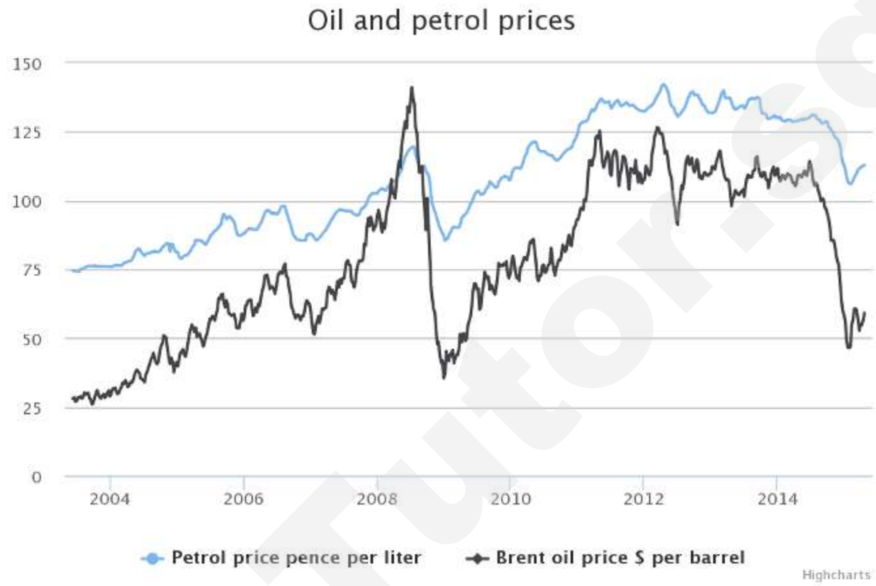
This document consists of **8** printed pages.

Answer **all** questions.

Question 1

Oil and Energy Prices

Figure 1: UK's Brent oil* and petrol prices



*Brent blend is a light crude oil (LCO), and is suitable for production of petrol.

Source: *Business reporter.co.uk*

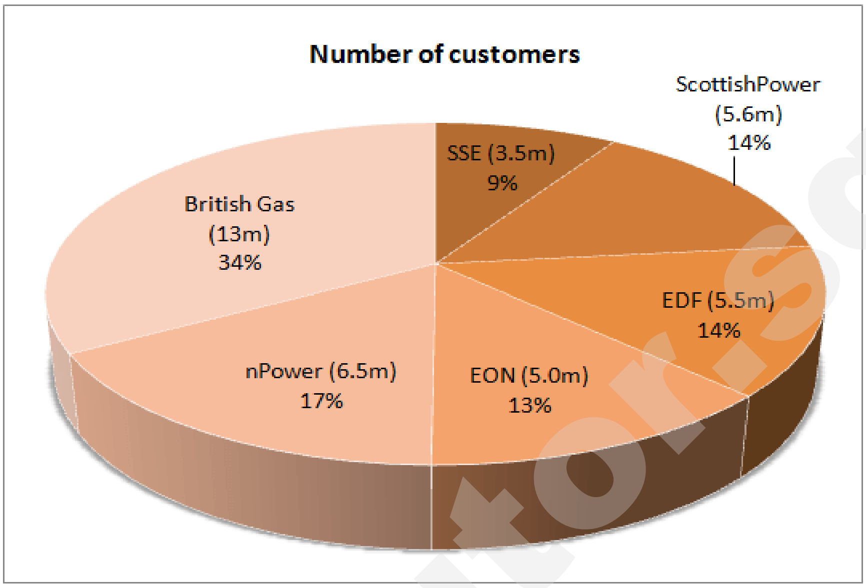
Extract 1: Oil price crash

The UK Chancellor, George Osborne, has said the government will be watching petrol distributors "very carefully" to ensure they pass on oil price reductions to customers. So why is it that the consumer fails to see the full benefits of cheap oil? It's simply a matter of the companies setting their price – they're not always willing to pass on their own savings to their customers. Electricity prices should have gone down dramatically as well, with the government urging the Big Six energy suppliers to pass the savings to households.

The trend in UK's energy market prices is part of a wider fall in global oil prices, which have plummeted by more than 50 percent this year. The drop is driven by an unprecedented global surplus in oil, caused by the shale revolution in America, and the country has ever since become the world's largest oil producer, combined with the decision by other major oil producers such as Saudi Arabia and the rest of OPEC to maintain their production levels. Weak economic activity has dampened oil consumption and a growing switch away from oil to other fuels has also affected the picture.

Source: Adapted from the *Economist*, Dec 2014

Figure 2: Market supply number for the Big Six Energy suppliers in UK (in millions)



Source: http://www.businesselectricityprices.org.uk/suppliers/

Extract 2: Energy firms accused of profiteering

The Big Six energy firms will double their profit margins in the next year increasing accusations that they are profiteering while millions of households are struggling to be able to afford to heat their homes. Ofgem, UK's energy regulator has told suppliers to explain to consumers why, when oil prices are falling, they are not seeing cuts in energy prices, which was one of the main reasons why Ofgem referred the energy market to the Competition and Markets Authority (CMA) for investigation earlier this year.

Ofgem said that its review had found that the behaviour of energy suppliers and the structure of the market were "acting against consumers' interests." Ofgem's review also found that tariffs are far too complicated, making comparisons between companies extremely difficult. It has found 'possible tacit co-ordination' on prices, with the Big Six firms apparently moving tariffs up and down at the same time.

Ofgem proposed that the Big Six be broken up, to allow more independent suppliers to compete on prices. The Federation of Small Businesses has also called for the Big Six energy companies to be broken up, adding pressure on regulators to refer the energy companies to competition authorities this week.

Source: *The Independent*, July 2014

Extract 3: Ofgem defends record of reform over Big Six energy firms' high prices

Ofgem has hit back at claims that it may be partly to blame for high prices, after a group of former regulators said it had presided over a weakening of competition in the energy market. The energy regulator said it had introduced the "most radical set of reforms" to protect consumers in the retail energy market since competition began. Among its regulations, Ofgem has banned differential pricing in a bid to stop customers of the same energy company paying much higher tariffs in different parts of the country. Extra layers of complexity such as discount structures will also be removed altogether.

Ofgem has been fighting accusations as to the appropriateness and effectiveness of a number of these interventions. The submission also goes on to raise the concern that regulation could instead increase costs for consumers; the lack of meaningful competition would mean many families and pensioners are paying as much as £250 a year too much, with a risk of suppliers cutting back on investment in the long term.

Source: *The Guardian*, August 2014

Extract 4: Lower oil prices on Singapore’s economy

Singapore was supposed to have emerged as a winner from the low oil prices, with 5 per cent of its gross domestic product coming from the oil industry. Lower global oil prices should stimulate global economic growth, according to the International Monetary Fund, in particular, countries which are net importers of oil, such as Singapore. Businesses and factories enjoy lower costs of input, especially industries heavily reliant on oil, gas and others such as airlines, transport companies and manufacturers of plastics. Consumers spend less on petrol and other energy-related expenses and thus saw an increase in their disposable income, contributing about 0.2 to 0.4 per cent in Singapore's economic growth.

However, initial cheer from energy cost savings appears to be turning into fear over a global economic slowdown. Dr Walter Theseira, senior lecturer at SIM University explained: “Rapidly declining oil prices suggest that global economic growth is slumping. That in turn has an effect on the economy that extends beyond the oil industry.

Source: Adapted from *The Straits Times*, Jan 2015

Questions

(a) **(i)** Compare the change in UK's Brent oil price with that of petrol price between 2010 and 2014. [2]

(ii) With the aid of a diagram, account for the change in petrol prices from 2014 onwards. [5]

(b) **(i)** Describe the type of market structure operating in the UK energy market. [2]

(ii) Explain why firms in the UK energy market are inclined to engage in "possible tacit co-ordination on prices". [3]

(c) Discuss the view that Singapore "was supposed to have been a winner from the low oil prices". [8]

(d) Discuss whether the set of reforms recommended by Ofgem in the energy market is justified.

[Total:30]

Question 2 Economic challenges in different economies

Extract 5: US hiked interest rate for the first time since 2006

The US Federal Reserve (Fed) hiked interest rate for the first time in nearly a decade, signalling faith that the US economy had largely overcome the 2008 financial crisis.

The Fed raised interest rate by 0.25 per cent in view of the projected rise in the rate of inflation to 2% in the medium term. With the economy performing well and expected to continue to do so, the Fed committee judges that a modest increase in the interest rate is appropriate. "Policy remains accommodative," Fed Chairman, Yellen said. "The US economy has shown considerable strength. Domestic consumer spending has continued to rise and investment by firms have risen".

Adapted from Reuters, 16 Dec 2015

Extract 6: China takes steps to transit to a knowledge-based economy

China posted its weakest economic growth in the fourth quarter of 2015, adding pressure on policymakers to take more steps to ward off a sharper slowdown that could jolt global markets.

The government could widen the budget deficit to about 3 percent this year as leaders turn to tax cuts and increased spending on infrastructure to support growth. While the government is expected to lean more on fiscal policy to support growth this year, the central bank may still need to ease monetary policy to help cushion the impact of structural reforms on the economy. The central bank has already cut interest rates six times since November 2014 to spur economic growth.

China intends to transit to a knowledge-based economy by encouraging its organizations and people to acquire, create and use knowledge more effectively for greater economic and social development. Strong economic incentives and institutions are required to enable organizations and people to adjust to changing opportunities in flexible and innovative ways.

The government plans to push forward "supply-side reforms" by cutting corporate tax, upgrading the information and communication technology (ICT) and R&D infrastructure and removing barriers to encourage domestic entrepreneurship and foreign direct investment in the services sector. There is a need to establish clear rule of law and property rights. They also strive to privatize big, highly inefficient state-owned enterprises into market-oriented institutions.

In the short term, the critical challenge for China is to ensure a smooth and efficient transition, minimizing unemployment that will inevitably result from the restructuring. Retraining also needs to be provided for millions of workers that may be displaced. Even though literacy rates had soared due to government's increased spending on education, there is still overemphasis on knowledge transfer rather than the development of imaginative and creative capabilities. This has proved to be a major hindrance to its education reforms.

Adapted from Asian Development Bank, World Bank & The Guardian, 9 May 2016

Extract 7: Singapore faces external headwinds

While manufacturing remained in the doldrums, Singapore's economic growth in the fourth quarter of 2015 was supported by public-sector construction activities, and the finance and insurance sectors. With no signs of external demand picking up yet, economists, however, were cautious about the outlook for the coming year despite the better-than-expected fourth quarter performance. Barclays' economist Leong said: "The US economy is strong but it is offset by China's growing weakness, precipitated by a weaker ability to import due to the weaker Chinese yuan."

DBS economist, Irvin pointed out the risks of potential capital flight that could result from further US rate hikes and fears of further economic slowdown in China. "Growth outlook in the next six to nine months will remain modest before an improvement in the later part of 2016," he added.

Adapted from *Today, 4 January 2016*

Extract 8: Singapore's top export partners

Singapore shipped US$346.8 billion worth of products around the globe in 2015.

The top 5 export markets are:
1. China: US$47.7 billion (13.8% of total Singapore exports)
2. Hong Kong: US$39.7 billion (11.4%)
3. Malaysia: US$37.8 billion (10.9%)
4. Indonesia: US$28.4 billion (8.2%)
5. United States: US$23.2 billion (6.7%)

Source: http://www.worldstopexports.com/singapores-top-import-partners/, 17 Apr 2016

Table 1: Macroeconomic Indicators (China)

	2011	2012	2013	2014	2015
Real GDP growth (% per year)	9.5	7.8	7.7	7.3	6.9
Rate of inflation (%)	5.4	2.6	2.6	2.0	1.4
Unemployment (% of labour force)	4.3	4.5	4.6	4.7	4.8
Government budget balance (% of GDP)	0.1	-0.3	-0.7	-1.2	-2.6
Current account balance (US$ billion)	136.1	215.4	148.2	219.7	330.6

Table 2: Macroeconomic Indicators (United States)

	2011	2012	2013	2014	2015
Real GDP growth (% per year)	1.6	2.3	2.2	2.4	2.0
Rate of inflation (%)	3.2	2.1	1.5	1.6	0.1
Unemployment (% of labour force)	9.0	8.2	7.4	6.2	5.0

Government budget balance (% of GDP)	-10.7	-9.3	-6.4	-5.8	-2.4
Current account balance (US$ billion)	-460.4	-449.7	-376.8	-389.5	-484.1

Table 3: Macroeconomic Indicators (Singapore)

	2011	2012	2013	2014	2015
Real GDP growth (% per year)	6.2	3.4	4.4	2.9	2.0
Rate of inflation (%)	5.3	4.5	2.4	1.0	-0.5
Unemployment (% of labour force)	2.9	2.8	2.8	2.7	2.8
Government budget balance (% of GDP)	1.2	1.7	1.1	-0.3	-1.2
Current account balance (US$ billion)	60.6	49.8	54.1	58.8	57.5

Source: *The Economist, World Bank (2015), http://stats.mom.gov.sg, 28 Apr 2016*

Questions

(a) **(i)** Compare the change in China's current account balance with that of the US for the period 2011 to 2015. [2]

(ii) Explain whether the US should be concerned about the changes to her current account balance. [2]

(b) Explain whether the US central bank's action of raising the interest rate is justified. [4]

(c) Explain how the slowdown in China's economic growth will affect its government budget balance. [4]

(d) With reference to the data, discuss the likely impact of China's monetary policy (Extract 6) on the Singapore economy. [8]

(e) Assess the effectiveness of China's supply-side reforms in facilitating a smooth transition to a knowledge-based economy. [10]

[Total: 30]

VICTORIA JUNIOR COLLEGE

2016 JC 2 PRELIMINARY EXAMINATION

H2 ECONOMICS – PAPER NO.9732/02

1 September 2016 8am - 10.15am

Thursday 2 hours 15 min

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.

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

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

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

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

Start each question on a **FRESH** sheet of paper.

At the end of the examination, fasten your work securely, by question, using the strings provided.

The number of marks is given in 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 Scotland's new food authority is prepared to take the hard-line on tackling obesity, with a sugar tax on sugary drinks and food, junk food tax and junk food advertising ban under consideration.

(a) Explain what is involved in rational decision-making both by consumers and by firms. [10]

(b) Assess whether governments necessarily fare better than the free market in resource allocation for goods with high sugar content. [15]

2 Amidst rising income, the Malaysian government implemented Goods and Services Tax (GST), which is a broad-based 6 percent tax on goods and services.

Source: Adapted from *The Straits Times and The Star Online,* 2015

Assess the impact of the above-mentioned changes on the market for different goods in Malaysia. [25]

3 The US courier and parcel delivery services industry has a combined annual revenue of about $90 billion and is steadily growing in the last few years. The major players are UPS, FedEx, DHL, Yamoto Holdings and TNT Express, who are constantly trying to obtain a bigger share through mergers and acquisitions.

(a) Explain the characteristics which determine the market structure that the courier companies operate in. [10]

(b) Discuss the extent to which actions of their rivals is the main factor affecting the behaviour of the firms. [15]

Section B

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

4 **(a)** Using AD-AS analysis, explain the possible relationships between inflation and unemployment. [10]

(b) To what extent do you agree that unemployment in the country affects the standard of living of the average Singapore citizen? [15]

5 United Kingdom's trade deficit with EU has hit £23.8 billion in the three months to February, 2016 while overall trade deficit with the rest of the world widened to £13.7billion, the biggest since March 2008.

Source: *The Daily Mail*, April 8, 2016

(a) Explain the adverse impact of a rising trade deficit on an economy. [10]

(b) Discuss whether demand management policy is the best way to address the economic problems caused by a rising trade deficit. [15]

6 The small island nation of 5 million people boasts the world's second-busiest seaport, a far higher per-capita income than its former British overlord, and a raft of number-one rankings on lists ranging from least-corrupt to most-business-friendly countries. So long as globalisation continues, Singapore thrives.

Source: Adapted from *TIME,* 28th May 2014

Discuss the extent to which globalisation has helped Singapore to achieve her economic aims. [25]

Essay Question 1

Scotland's new food authority is prepared to take the hard-line on tackling obesity, with a sugar tax on sugary drinks and food, junk food tax and junk food advertising ban under consideration.

(a) Explain what is involved in rational decision-making both by consumers and by firms.
[10]

(b) Assess whether governments necessarily fare better than the free market in resource allocation for goods with high sugar content.
[15]

Suggested answer to Part (a)

Introduction

All economies face the problem of scarcity, a situation where there are unlimited wants but limited resources. Thus, choices have to be made for the best allocation of resources in an economy. Similarly, consumers and firms also face constraints and thus must also make choices. As opportunity cost is incurred when making choices, societies will choose the particular assortment of goods and services with the objective of gaining the highest level of satisfaction with the least possible cost. Both consumers and firms makes rational decision where they aim to maximise their self-interest. In the case of consumers, utility maximisation while in the case of firms, it is profit maximisation. This can be achieved by weighing up the opportunity cost arising from an activity against the benefits, by considering the marginal effects of change.

Development - Marginalist principle applied to consumers
A rational consumer seeks to maximise net total benefits from consuming a good. Rational decision-making by consumers involves considering the marginal benefits and the marginal costs of consuming the good. The marginal benefit is the satisfaction derived from consuming an additional unit of the good while the marginal cost is the price paid for the good.

A rational consumer will buy an extra unit of a good as long as marginal benefit exceeds the price of the good because it increases the level of net total benefits from consumption i.e. consumers will consume up to the point where MB=P where the total net benefits are maximised. Consumers will not consume the additional unit where MB is less than prices as it lowers the net total benefits from consumption.

Since rational consumers will buy a product only if the MB exceeds or is at least equal to the price paid for it, it follows that the demand curve in a market represents the MB that consumers derive from consuming an extra unit of the good.

Development 2 – Marginalist principle applied to firms

A rational firm seeks to maximise total profits from the production and sale of a good. Rational decision making by firms means that firms will base their output decision on the marginal revenue and marginal cost. In deciding how many units of a good to produce, a profit maximising firm will produce up to the point where the additional cost from producing one additional unit of output equates the additional revenue from selling it.

A rational firm will produce and sell an extra unit of a good as long as MR > MC. Because this means that by producing that unit, there will be bigger addition to revenue (MR) than to cost (MC) and total profits will increase given that marginal profit is positive. When production by the firm is at an output where MC exceeds MR, producing that add more to cost than to revenue and hence reduce profit. Firms' profits can be increased by cutting back on production since marginal profit is negative. Firms thus produce up to the point where MR=MC where the total profit is maximised.

In perfect competition, MR=P. This means that the firms produce up to the point where P=MC. This also means that the firm's supply curve for the good, reflects the MC of the good.

Conclusion

The marginalist principle is adopted by both consumers and firms when they attempt to maximise their self-interest. When resource allocation is left to the price mechanism, goods are produced up to the point where demand matches supply. Since demand reflects MB and supply reflects MC, at the market equilibrium point, where demand matches supply, MB=MC and society's welfare is maximised.

Level	Descriptor	Marks
L3	For an answer that uses the ***marginalist principle*** to explain how both producers and consumers make their consumption and production decision.	7 – 10
L2	For a descriptive answer that recognises the ***marginalist principle*** is the basis of rational decision making but there are gaps in explanation. Or For a one-sided answer that only clearly explains rational decision making by the firms OR consumers.	5 - 6
L1	For some knowledge of the workings of the market.	1 – 4

Suggested answer Part (b)

Introduction

Allocative efficiency is achieved when the right amount of the right goods are being produced and productive efficiency occurs when the output is produced at the lowest cost. Under strict assumptions of perfectly competitive market, and for which no externalities are present, the interaction between rational producers and consumers result in an allocative efficient outcome and society welfare is maximised. However, should the market fail due to the presence of information failure or externalities, then the resource allocation will not be efficient and government intervention may result in a better outcome.

Thesis: Government may fare better

(1) Market fails as food with high sugar content is a form of demerit good

Food with high sugar contents tend to be over consumed due to consumer ignorance on the long term future costs to himself e.g. potentially high medical bills and lower quality of life when diagnosed with diabetes. Consumers over-value the true marginal benefits of consuming sugary foods and thus results in a divergence between his perceived marginal value and the true marginal value from consumption of these sugary foods. Demand is higher than the level that is socially desirable and can foods with high sugar contents can be over-consumed and produced if left to the free market.

Rational decision making by consumers who consume by considering only their own private cost and benefit may not generate the socially optimum level of consumption due to the presence of externalities. In the case of the market for foods with high sugar content, there are likely to be negative externalities, which are costs of consumption experienced by parties other than the producers or consumers themselves. For example, the consumption of junk food leads to higher occurrence of obesity, which is usually accompanied by a host of diseases, less productive labour force.

With the presence negative externalities, marginal social benefits is lower than marginal private benefits. As a result, decision based on private marginal costs and benefits will result in over consumption of the good. Too much resources are allocated to the production and consumption of these junk food.

(2) Government intervention leads to allocative efficiency

Intervention by the government achieves the socially desirable outcome. For example, the tax on junk food is likely to raise the cost of production and thus the shift MPC to MPC_1. Ceteris paribus, the higher price causes consumers to reduce consumption to socially ideal level of Q1 and government thus fare better resources are better channelled to other markets and the deadweight loss to society is removed.

Likewise, advertising ban may limit the misinformation and "correct" the perception of these foods, causing the demand for these high sugar content foods to fall back to a more accurate level of MPB (true).

Anti-thesis: Government may not fare better
Government intervention may not always lead to an improved outcome compared with the free market. Government intervention may sometimes exacerbate a problem or produce unintended negative results making the cost of government failure considerably greater than the cost of market failure.

Whether or not government fares better depends on various factors:

(1) Imperfect Information

- One factor which would affect the level of success of the government, even if it intervenes in the market with the intent of correcting market failure, is the accuracy of information. In the absence of perfect information to use when correcting the market failure, government may create more inefficiencies.

- For example, one solution to the overconsumption problem is to introduce indirect tax to raise MPC so as to get consumers to cut back consumption of high sugar content foods towards the socially optimum level. Without accurate information on the level of externalities and PED value, the government is not able to determine the indirect taxes required to bring the consumption level exactly to the socially optimum level.

- The government may overestimate the tax required, shifting the MPC to MPC_2. The new private equilibrium output will be at Q_2, lower than the socially optimum amount Q_S. The overcorrection therefore creates a new deadweight loss of abc. Should the new deadweight loss abc exceed the original deadweight loss of area xyz , government intervention makes the society worse off.

(2) Choice of policy considering the root cause of the failure and the trade-off

In addressing the market failures in the market for food with high sugar contents, the choice of policy is crucial in determining its success.
Equity
- In correcting the market failure using tax, government may end up worsening the problem of inequity. It is widely known that the poor spends a large proportion of their income on the "junk food" (for a few reasons, these foods tend to be relatively cheaper in both monetary terms and preparation time for these low income who takes on multiple jobs to survive). Therefore, a tax

which artificially raises the market price may affect the low income more adversely than the high income who are not the main consumers, thereby achieving efficiency at the expense of equity.

Root cause of market failure

- While both negative externalities and information failure are possible causes of the overconsumption of the foods with high sugar content, to fare better than the market, the government has to address each of the 2 sources of failure in a targeted fashion. For example, between taxing unhealthy food and subsidising the healthier food option, the impact of the latter may be more effective in moving the low income towards the healthier food choices.

- Likewise, given that children are the main victims of the overconsumption of high sugar content food and drinks, it may be more effective to introduce campaigns which shift their tastes and preferences by educating them on the damage and longer term implication of consuming these goods than to simply regulate the advertising ban.

(3) Administrative costs

Even if there were no serious information imperfection problem, government intervention can also produce inefficiency when administrative cost is high. Following from the above example, administrative cost of an indirect tax could include the wages paid to tax officers to monitor the companies. The reduction in deadweight loss from the cutback in consumption has to be weighed against the administrative cost incurred in the intervention. Should the administrative cost exceed the reduction in deadweight loss arising from overconsumption, government intervention makes the society worse off.

Synthesis and Conclusion

Weighing up the various factors, government is likely to fare better than market forces in the market for foods with high sugar content. There exists no visible incentives for firms to cut back on the production and sale of these high sugar foods or produce an equally priced healthier option for the market without clear government signals through intervention. If the government can collaborate with the firms to market fairly priced healthier food options and encourage the children in schools to eat healthily through, it might be more effective than market distorting measures such as taxes or politically unfavourable ones such as advertising bans.

Level	Descriptor	Marks
L3	For a 2-sided discussion supported by analytical approach and careful consideration of the ***various factors*** which will affect whether government can fare better.	9 – 11
L2	For a one-sided response to government faring better by addressing the market failure for a demerit good in discussion. OR For a 2-sided attempt but limited in scope and where there are some gaps in analysis.	6 - 8
L1	For some knowledge of the various policies government can implement to achieve efficient resource allocation.	1 – 5
E2	For an evaluative assessment of whether the government is likely to fare better by considering the criteria and the notion of “fare better”.	3 -4
E1	For an unsubstantiated judgement of whether the government will fare better.	1 - 2

Essay Question 2

Amidst rising income, the Malaysian government implemented Goods and Services Tax (GST), which is a broad-based 6 percent tax on goods and services.

Source: Adapted from The Straits Times and The Star Online, 2015

Assess the impact of the abovementioned changes on the market for different goods in Malaysia.
[25]

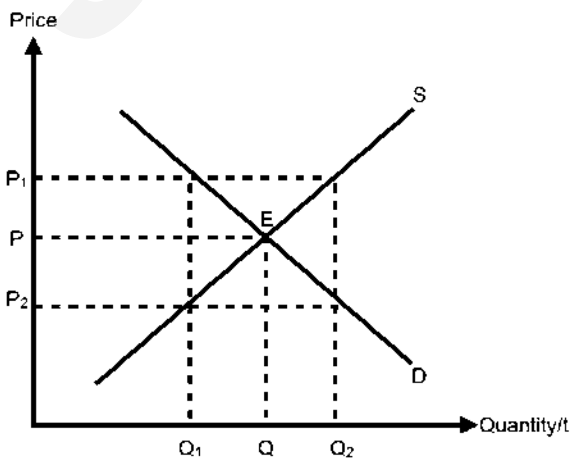
Suggested Answer

Introduction
To analyse the impact of the abovementioned changes on the market for different goods, I would make use of the demand and supply model along with elasticity concepts to aid in the analysis of what happens to the markets in terms of price, quantity, and expenditure, which is equals to price multiplied by quantity. The impact on different markets would differ based on the type of goods they are.

Body:
(If the explanation of the demand-supply model and elasticity is weaved into the explanation in the body paragraphs below, it's also acceptable)

The demand and supply model enables us to determine the equilibrium price and quantity of the market.

Demand is the willingness and ability of consumers to purchase a given good at a given price in a given time period, ceteris paribus. Supply is the willingness and ability of producers to provide a good for a sale at a given price, in a given time period, ceteris paribus. The intersection of the demand and supply curves will give us the equilibrium price and quantity.



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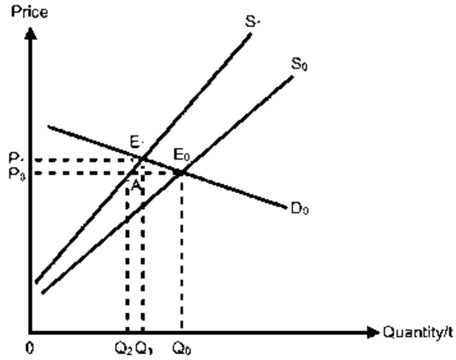
In the above diagram, the market equilibrium point is at point E, where demand curve D intersects supply curve S, giving us equilibrium price P and quantity Q. If price is at P_1, quantity demanded will be Q_1 and quantity supplied will be Q_2, causing a surplus of Q_1Q_2. This will lead to a downward pressure on price, until equilibrium is obtained again where demand equals supply. Similarly, if price is at P_2, quantity demanded will be Q_2 and quantity supplied will be Q_1, causing a shortage of Q_1Q_2. This will lead to an upward pressure on price, until equilibrium is obtained again where demand equals supply.

In order to analyse the impact on different markets, we will also make use of elasticity concepts, namely price elasticity of demand and income elasticity of demand.

Price elasticity of demand (E_P) measures the responsiveness of quantity demanded of a good to a change in its price, ceteris paribus. Demand for a good can be price inelastic or elastic. The main factors affecting price elasticity of demand of a good are firstly number and closeness of substitutes, and secondly, proportion of income spent on the good. The greater the number and closeness of substitutes, the more price elastic the demand for the good. Similarly, the greater the proportion of income spent on the good, the more price elastic the demand for the good.

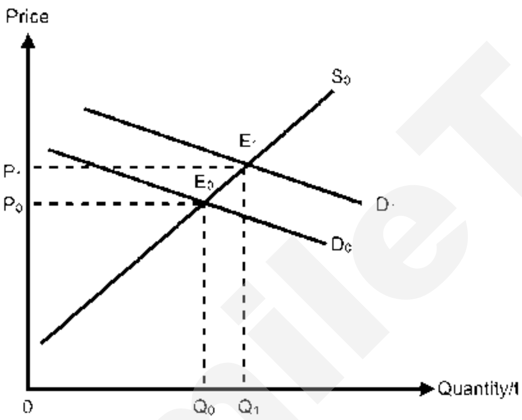
Income elasticity of demand (E_Y) measures the responsiveness of demand to a change in income, ceteris paribus. There can be 3 types of goods, which are inferior, necessity and luxury goods. For inferior goods, an increase in income will lead to a fall in demand. For necessities, an increase in income will lead to a less than proportionate increase in demand. For luxury goods, an increase in income will lead to a more than proportionate increase in demand.

Market 1: Branded bags (Luxury good)
When GST is implemented, it will affect the market through the supply curve. GST will cause the marginal cost of production for branded bags to increase, represented by an upward shift of the supply curve, which will cause equilibrium price to increase and equilibrium quantity to fall. The impact on total expenditure will depend on the price elasticity of demand for branded bags. The demand for branded bags is price elastic as it takes up a relatively huge proportion of consumers' income.



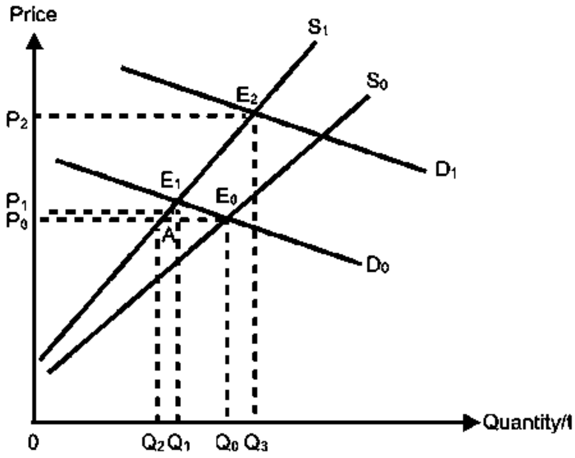
The initial equilibrium was at point E_0, where equilibrium price was P_0 and quantity Q_0. Implementation of GST will cause supply to shift leftwards from S_0 to S_1. At the initial equilibrium price of P_0, quantity demanded is Q_0 and quantity supplied is Q_2, resulting in a shortage of Q_0Q_2. Frustrated consumers will be willing to pay higher prices and quantity demanded will fall, as fewer consumers are willing and able to pay a higher price. This price signal to the producers will cause them to increase the quantity supplied. Quantity demanded will fall and quantity supplied will increase until demand meets supply again at point E_1, where equilibrium price is P_1 and quantity is Q_1. Given the price change of P_0P_1, we can see from the diagram that there is a more than proportionate change in quantity demanded of Q_0Q_1. The decrease in total expenditure resulting from a fall in quantity demanded ($Q_1AE_0Q_0$) is greater than the increase in total expenditure resulting from an increase in price ($P_1P_0AE_1$). Thus, total expenditure has fallen.

When there is an increase in income, it will lead to a more than proportionate increase in demand for branded bags, which are items that Malaysian consumers can do without during periods of falling income.

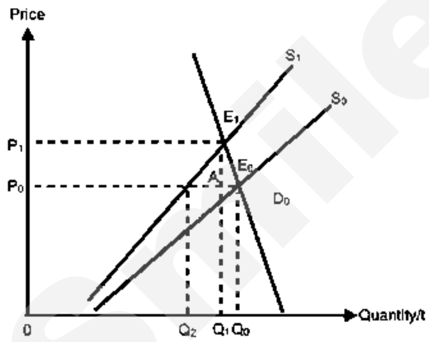


Initial equilibrium is at point E_0, with equilibrium price P_0 and quantity Q_0. An increase in demand is represented by a rightward shift of the demand curve from D_0 to D_1. This will cause a shortage and upward pressure on price, causing price to increase to P_1 and quantity to Q_1. The resultant impact will be an increase in total expenditure from $0P_0E_0Q_0$ to $0P_1E_1Q_1$.

Implementation of GST has caused expenditure to fall while increase in income has caused expenditure to rise. If the extent of increase in demand (from D_0 to D_1) is greater than the extent of fall in supply (from S_0 to S_1), then we will see an increase in total expenditure from $0P_0E_0Q_0$ to $0P_2E_2Q_3$

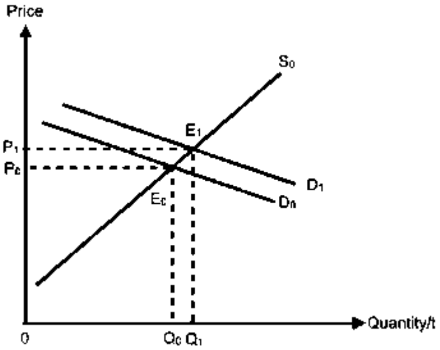


Market 2: Canned Food (Necessity good)
Similar to the market for branded bags, implementation of GST will cause the marginal cost of production for canned food to increase, represented by an upward shift of the supply curve, which will cause equilibrium price to increase and equilibrium quantity to fall. The impact on total expenditure will depend on the price elasticity of demand for canned food. Canned food has limited substitutes that offer as much convenience and therefore, its demand is price inelastic.



The initial equilibrium was at point E_0, where equilibrium price was P_0 and quantity Q_0. Implementation of GST will cause supply to shift leftwards from S_0 to S_1. There will be a shortage of Q_0Q_2 and prices will increase from P_0 to P_1. Given the price change of P_0P_1, we can see from the diagram that there is a less than proportionate change in quantity demanded of Q_0Q_1. The decrease in total expenditure resulting from a fall in quantity demanded ($Q_1AE_0Q_0$) is smaller than the increase in total expenditure resulting from an increase in price ($P_1P_0AE_1$). Thus, total expenditure has risen.

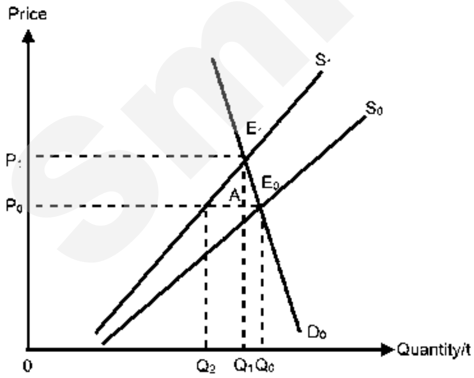
When there is an increase in income, it will lead to a less than proportionate increase in demand for canned food, which is deemed a necessity by Malaysians.



Initial equilibrium is at point E_0, with equilibrium price P_0 and quantity Q_0. An increase in demand is represented by a rightward shift of the demand curve from D_0 to D_1. This will cause a shortage and upward pressure on price, causing price to increase to P_1 and quantity to Q_1. The resultant impact will be an increase in total expenditure from $0P_0E_0Q_0$ to $0P_1E_1Q_1$.

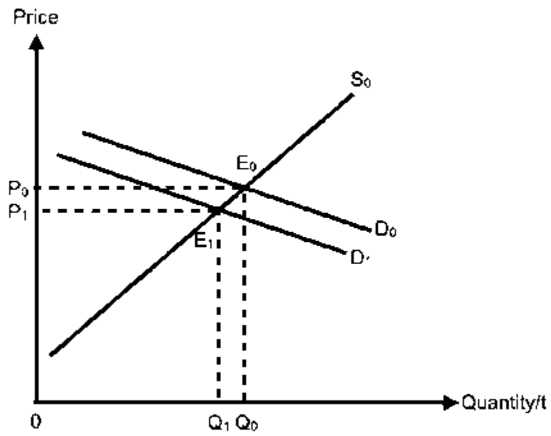
The combined effect of GST and increase in income on the market for canned food is that total expenditure will definitely increase.

Market 3: Non-smart phones/TVs (Inferior good)
Implementation of GST will cause the marginal cost of production for non-smart phones/TVs to increase, represented by an upward shift of the supply curve, which will cause equilibrium price to increase and equilibrium quantity to fall. The impact on total expenditure will depend on the price elasticity of demand for non-smart phones/TVs. Non-smart phones/TVs takes up a relatively smaller proportion of consumers' income so the demand is relatively price inelastic.



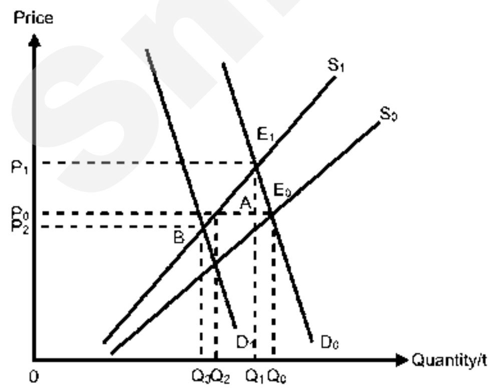
The initial equilibrium was at point E_0, where equilibrium price was P_0 and quantity Q_0. Implementation of GST will cause supply to shift leftwards from S_0 to S_1. There will be a shortage of Q_0Q_2 and prices will increase from P_0 to P_1. Given the price change of P_0P_1, we can see from the diagram that there is a less than proportionate change in quantity demanded of Q_0Q_1. The decrease in total expenditure resulting from a fall in quantity demanded ($Q_1AE_0Q_0$) is smaller than the increase in total expenditure resulting from an increase in price ($P_1P_0AE_1$). Thus, total expenditure has risen.

When there is an increase in income, it will lead to fall in demand for non-smart phones/TVs, which is deemed an inferior good by Malaysians.



Initial equilibrium is at point E_0, with equilibrium price P_0 and quantity Q_0. A decrease in demand is represented by a leftward shift of the demand curve from D_0 to D_1. This will cause a surplus and downward pressure on price, causing price to decrease to P_1 and quantity to Q_1. The resultant impact will be a decrease in total expenditure from $0P_0E_0Q_0$ to $0P_1E_1Q_1$.

Implementation of GST has caused expenditure to rise while increase in income has caused expenditure to fall. If the extent of decrease in demand (from D_0 to D_1) is bigger than the extent of fall in supply (from S_0 to S_1), then we will see an increase in total expenditure from $0P_0E_0Q_0$ to $0P_2BQ_3$



Conclusion

Summary/Stand: The impact on the different markets will differ, depending on price and income elasticity of demand of the various goods. With more information about the impact on supply due to GST and impact on demand due to increase in income, we will then be able to draw a more substantial conclusion about the extent of change in revenue.

Something Special: With the implementation of GST, we would see that the standard of living for the lower income might decrease. For this group of people, the Malaysian government could implement other policies like grants to aid this group of consumers, in order to maintain their current standard of living. This is especially important for Malaysia because there might exist a large group of people who will be affected quite substantially due to the changes

Level	Descriptor	Marks
3	Well-explained answer that recognizes: – the direction and extent of shifts in demand and supply curves, as well as the two elasticity concepts (both E_P and E_Y) – 3 markets – the change in total expenditure in the market as a result of change in BOTH demand and supply Well-explained answer that recognizes: – the direction and extent of shifts in demand and supply curves, as well as the two elasticity concepts (both E_P and E_Y) – 2 markets – the change in total expenditure in the market as a result of change in BOTH demand and supply	18-21 15-17
2	For an answer that recognizes the correct direction of shift in demand and supply curves, and used only one of the elasticity concepts in the analysis of the effect on total revenue/expenditure (Either E_P or E_Y) For an answer that recognizes the correct direction of shift in demand and supply curves, but omitted the use of elasticity concepts in the analysis of the effect on total revenue/expenditure	12-14 10-11
1	For an answer that shows irrelevant explanations of workings of market mechanism or change in ONLY demand OR supply without any mention of elasticity Mere listing of points/definitions	6-9 1-5
E2	For an evaluation judgment based on economic analysis, taking into consideration Malaysia's context	3-4

E1	For an unexplained assessment or one that is not supported by economic analysis or merely providing a summary and stand of the points brought up in the essay	1-2

Essay Question 3

The US courier and parcel delivery services industry has a combined annual revenue of about $90 billion and is steadily growing in the last few years. The major players are UPS, FedEx, DHL, Yamoto Holdings and TNT Express, who are constantly trying to obtain a bigger share through mergers and acquisitions.

(a) Explain the characteristics which determine the market structure that the courier companies operate in. [10]

(b) Discuss the extent to which actions of their rivals is the main factor affecting the behaviour of the firms. [15]

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Suggested answer to Part (a)

The type of market structure in which courier companies are operating in can be determined by examining the features of the industry, namely – the level of barriers to entry, the number of firms in the industry, the level of information and the nature of product.

In the courier services industry, the level of barriers to entry is high. For example, there are high set-up costs involved to enter the industry because an entrant would have to invest significant capital in purchasing delivery vehicles, planes and distribution warehouses. Potential entrants may not be able to afford this large capital required, or may not be willing to take on the high risk involved should the business fail. As such, potential entrants are deterred, leaving a limited number of firms in the industry.

As stated in the preamble given, there are 5 major players (UPS, FedEx, DHL, Yamato Holdings, TNT Express) in the US courier market. This suggests that there are a few dominant firms which control a large market share. The existence of a few dominant firms also suggests mutual interdependence, as the firms would be responsive to the influential actions of the other major players.

The level of information in the market is not perfect, as consumers do not have perfect knowledge of the quality of services available in the courier market such as the reliability of delivery. Courier firms also do not have perfect knowledge of the delivery processes (technology) of the other firms and their exact factor costs incurred.

While the nature of the service provided by the courier companies may be regarded as largely similar since they all provide delivery of parcels, there is likely to be some degree of differentiation. For example, there may be differences in terms of speed of delivery, or additional features such as the ability to track the parcel.

Therefore, based on the features of high barriers to entry, a few dominant firms which are interdependent, imperfect information and largely homogeneous services with some degree of differentiation, we can conclude that the US courier services market is likely to be an oligopoly.

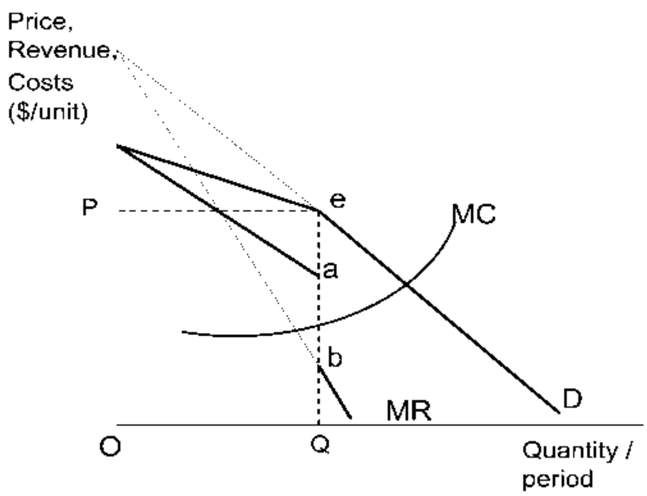
Level	Descriptor	Marks
L3	Well-developed explanation that links at least 3 of the 4 features of an oligopoly to the US courier market. For full credit, all 4 features must be explained.	7-10
L2	Under-developed explanation that links the features of an oligopoly to the US courier market. OR A theoretical explanation of the features of an oligopoly without any attempt at application to the US courier market.	5-6
L1	An answer that shows some knowledge of the features of a market structure.	1-4

Suggested answer to Part (b)

In an oligopoly, firms exhibit mutual interdependence which means that one firm's action will have a significant impact on the other firms and the other firms will respond accordingly. Given that the US courier firms are trying to obtain larger market shares through mergers & acquisitions, it suggests that the industry is operating as a non-collusive oligopoly. Assuming that the firms are profit-maximising, their behavior may be influenced by their rivals' actions and other factors.

Thesis 1: Price rigidity

If the product/service sold by the oligopolistic firms is sufficiently similar, the actions of one firm would warrant a response by the other firms. With this interdependence, firms may find their pricing decisions resulting in price rigidity in the market. This can be represented with the kinked demand curve model.



Assume that initially the market equilibrium price is P. If a firm raises its price above P, rival firms will not follow suit because customers will now increase demand for their products (substitutes) since they have become relatively cheaper. As such, this firm will lose substantial sales and experience a fall in revenue. This means its demand curve is price elastic above P.

If a firm lowers price below P, rival firms will quickly follow with price cuts as they would want to prevent a loss of sales and protect their market share. Being unable to lure customers away from rivals, this firm will see only a very slight increase in sales. This means its demand curve will be price inelastic below P, and this firm would experience a fall in revenue with a reduction of price.

Since both unilateral raising and cutting of price will lead to a loss of revenue, an oligopolist tends to avoid price changes as it takes into account its rivals' likely responses. Hence in an oligopoly, there is generally price stability (or price rigidity) at the prevailing price P.

Instead, oligopolistic firms tend to compete on the basis of non-price strategies like advertising and innovation given their ability to do so due to supernormal profits earned. Even then, firms would be responsive to such actions by their rivals as it would negatively impact the firm's demand, where the firm would likely respond with advertising and innovation of their own to protect their market share. Mergers and acquisitions may also sometimes be used as a strategy to expand market share by gaining an edge over rival firms such as through reaping economies of scale.

Anti-thesis 1: Entry deterrence

Rather than responding to rivals' actions, incumbent firms may instead act based on entry deterrence intentions. For example, if incumbent firms perceive a threat of another firm entering the market, they may engage in extensive advertising to build brand loyalty. This would raise the market penetration costs for new entrants, as they would also have to engage in costly advertising to be able to gain market share from the incumbent firms.

With higher entry costs due to the need to engage in mass advertising, entrants may be deterred as they may lack the capital to fund such a costly advertising campaign which has uncertain results. Furthermore, since new entrants produce a smaller output than larger incumbents, the entrant does not reap as much economies of scale as the incumbent and therefore the entrant is less able to compete against the incumbents due to a cost disadvantage. The entrant may therefore be deterred due to a lack of ability to compete against the incumbents.

Anti-thesis 2: Government intervention

Firms may also be subject to government intervention measures in the industry, making their behaviour being affected by government regulations rather than responding to rivals' actions. For example, the US government may apply anti-trust laws to disallow mergers and acquisitions that the courier firms wish to undertake to reduce the concentration of market power. Alternatively, the government may choose to nationalise the courier companies to take over production of the service directly. The government would then be the one setting the pricing and output behaviour of the firm, which would likely deviate from the profit-maximising levels. Such government intervention may be carried out with the aims of improving allocative efficiency or equity.

Conclusion

The actions of their rivals would likely be the main factor affecting the behaviour the US courier firms. This is because the degree of rivalry is likely to be high, given the close substitutability of the delivery services provided by the different firms as perceived by consumers.

Furthermore, there is a low likelihood of potential entrants overcoming the high barriers to entry for the industry, since high start-up costs would remain a constant feature due to the nature of the service. The likelihood of government intervention in the courier market is also low, since the market appears to be sufficiently competitive between the major players and the nature of the service does not warrant strong equity considerations. Therefore, entry deterrence and government intervention are likely to be less significant factors that may affect the US courier firms' behaviour.

**Note: This is a suggested answer that can realistically be completed under exam conditions. There are other valid points that can be discussed as well – price war, collusion, alternative objectives of the firm, price discrimination (arising from ability to segment the market), changes in market demand / changes in marginal cost due to external reasons (e.g. FOP price change).*

Level	Descriptor	Marks
3	Well-developed answer that examines how their rivals' actions and at least two other factors affect firms' behaviour.	9-11
2	Under-developed answer that examines how their rivals' actions and other factor(s) affect firms' behaviour. OR Well-developed answer that examines how their rivals' actions affect firms' behaviour.	6-8
1	An answer that shows some knowledge of firms' behaviour.	1-5
E2	For a substantiated judgement on the extent of influence of rivals' actions on US courier firms' behaviour.	3-4
E1	For an unsubstantiated assessment on whether rivals' actions is the main factor affecting firms' behaviour.	1-2

Essay Question 4

(a) Using AD-AS analysis, explain the possible relationships between inflation and unemployment. [10]

(b) To what extent do you agree that unemployment in the country affects the standard of living of the average Singapore citizen? [15]

–

Suggested Answer to Part (a)

Introduction

- Define inflation
  - Inflation refers to a sustained and inordinate rise in the General Price Level
- Define unemployment
  - Unemployment refers to a situation where available resources such as labour is not utilised in an economy.
- Identify components that affect AD and AS
  - AD is made up of expenditures from Households (C), firms (I), government (G) and trade (X – M)
  - AS refers to the ability and capacity of an economy to produce goods and services. It is dependent on the quantity and quality of her factors of production (FOP).

Body

- Explain the types of inflation
  - Demand-pull inflation occurs when the AD rises but the economy does not have spare capacity to meet the rise in demand
  - This is illustrated by a rightward shift in the AD curve near or at the vertical section of the AS curve
  - Cost-push inflation occurs when the cost of production rises. This could be due to rise in domestic costs or the rise in the cost of imports. Such a situation is illustrated by an upward shift in the horizontal section of the AS curve
- Explain the types of unemployment

- o Cyclical unemployment occurs when the AD is too low vis-à-vis the capacity of the economy to produce. In such a situation, the AD is at the horizontal portion of the AS curve, or has fallen to those levels
- o Structural unemployment occurs when unemployed workers are unable to find suitable jobs because they lack the required skills due to occupational immobility or are geographically immobile
- o Frictional unemployment refers to a situation where unemployed workers are in transition to another job or are looking for a more suitable jobs. Such unemployment are voluntary and temporary in nature.

- Explain inverse relationship between DD-pull inflation and cyclical unemployment
  - o As AD rises close to the vertical portion of the AS curve, cyclical unemployment is reduced. However, if the AD continues to shift rightwards, there will be DD-pull inflation even as cyclical unemployment falls. Thus, there is an inverse relationship between DD-pull inflation and unemployment
- Explain inverse relationship between DD-pull inflation and structural unemployment
  - o As AD falls, cyclical unemployment is likely to rise. If the unemployed is unable to find suitable jobs that match their ability (ie. mismatch of skills or occupational immobility), these group of unemployed may persist, leading to a rise in structural unemployment. This is particularly so if the fall in AD is due to a loss of comparative advantage
- Explain direct relationship between cost-push inflation and cyclical unemployment
  - o When there is cost-push inflation, the horizontal portion of the AS curve shifts upwards, resulting in a rise in GPL
  - o Economies with little natural resources and poor economic structure may face domestic cost pressures coming from rising rentals or face imported cost pressures if it is highly reliant on imported raw materials
  - o As the GPL rises, firms cut production resulting in unemployment. Thus, there is a positive relationship between inflation and unemployment.
- Explain the direct relationship between cost-push inflation and structural unemployment

- As output falls due to a rise in the cost of production, the unemployment may become structural if there is occupational immobility.
- The inability of the unemployed to retrain themselves, or find themselves ill-equipped to take up jobs in other industries will lead to structural unemployment

- Explain no relationship between inflation and frictional unemployment
  - Frictional unemployment is voluntary and is not directly dependent on the state of economy.
  - It is affected by the level of information in the economy on job opportunities. Improved knowledge of available job opportunities will help alleviate the temporary loss of jobs as such workers are able to transit between jobs faster. Hence, there is no relationship between inflation and this particular type of unemployment

Conclusion
Depending on the types of inflation and causes of unemployment, there may be a direct or indirect relationship between these two objectives. The relationships would also be dependent on the state of economy and nature of economy.

Level	Descriptor	Marks
L3	Able to explain the various relationships (both direct and inverse) between inflation and unemployment well with some use of examples / diagram to illustrate	7-10
L2	Able to explain at least ONE version of the relationships (either direct or inverse) inflation and unemployment well with diagram to illustrate OR Able to the direct and inverse relationships between inflation and unemployment BUT has gaps in the explanation	5-6
L1	Some attempt to explain the relationships or demonstrate some knowledge of the types of inflation and causes of unemployment	1-4

Suggested Answer to Part (b)

Introduction

- SOL should be material and non-material
  - Material aspect is usually measured by the change in national income (GDP or GNP). It is also measured in real terms to reflect the true purchasing power.
  - Real GDP per capita is used as a benchmark for measuring material SOL
  - Non-material aspects of SOL could be measured using stress levels, leisure, literacy rates, mortality rates, impact on environment etc
- SOL of average Singaporean
  - The change in population should also be considered – ie. per capita is usually used to reflect the impact on the average person in the economy. However, there may be poor distribution of benefits that is not reflected in the average figures. Thus, the GINI coefficient should be considered in order to show how the change in material SOL is distributed among the population.

Agree or disagree that unemployment affects SOL and demonstrate the extent using key considerations

- Explain how unemployment may affect SOL based on state of economy
  - Depending on the state of economy, rise in cyclical unemployment may be positive for material SOL since it reduces the erosion in the value of money.
  - If the economy is at the full employment level, there is no change in employment level but general price levels fall. This actually increases the real income. Holding all else constant, real GDP per capita actually rise.
  - If the economy is operating at the Keynesian range, unemployment will have a more significant negative impact as the unemployed lose the ability to consume goods and services.
  - Rising unemployment is also likely to have a negative impact on the unemployed due to the stress of looking for new jobs and losing the ability to maintain previous lifestyle and commitments
- Explain how unemployment may affect SOL based on type of unemployment
  - Depending on the type of unemployment, the impact may also be different.

- If there is a rise in structural unemployment, material SOL will fall in the short run. However, the impact in the long run depends on whether these unemployed workers are able to retrain / reskill themselves to meet the demand of new jobs.
- In addition, the unemployed who suffered due to the restructuring is likely to be for specific sunset industries and as such, may not be widespread. As such, the impact on average may not be significant.
- If there is frictional unemployment, there may not be any significant change in SOL.
- In addition, the unemployment figures may not accurate reflect the incomes of households. The presence of underground economy will affect the true extent of unemployment on the material SOL.

- Explain how unemployment may affect SOL based on extent of Government involvement
  - If the government provides unemployment benefits, the immediate impact for the unemployed may not be significant. Thus, the material SOL may not fall significantly.
  - However, the Singapore government does not provide any unemployment benefits.
  - In addition, with the rise in unemployment, government tax revenue is likely to fall, affecting its ability to provide public amenities. Thus both the material as well as non-material aspect of SOL may fall. Eg of material aspects such as the number of hospitals or schools or playgrounds provided. Eg of non-material covers the quality of these provisions (mortality and literacy)
  - Government schemes in place may also help reduce the long term negative impact on material SOL of structural unemployment as the retraining and redesign of jobs help the unemployed obtain jobs.

- Explain other factors besides unemployment that affect SOL
  - Cyclical unemployment correlates positively with GDP, which reflects the purchasing power of households
  - Real GDP relies on inflation rate as well. A rise in inflation rate for a given level of GDP implies that there will be a fall in the purchasing power. This would reduce the material SOL.
  - Population changes affects the Real GDP per capita. Using such a benchmark provides only an average that does not fully reflect the distribution effect of any form of unemployment or GDP changes. As

such, GINI coefficient should also be considered to measure the impact on material SOL.

- o In addition, the severity and duration of unemployment also play a part in determining the extent of impact on SOL of an average citizen. A high rate of unemployment implies that the negative impact is likely to be more significant and widespread.
- o Non-material aspects of SOL such as crime rates, pollution etc should also be considered to ascertain the impact on the SOL of an average citizen.

Conclusion

- The additional use of HDI or MEW would be better to ascertain the SOL of an average citizen.
- Everyone places different values on the trade-off between leisure and work; between material and non-material aspects. Hence, it is difficult to use unemployment figures to determine the SOL

Level	Descriptor	Marks
3	Balanced answer that demonstrates the extent of unemployment affecting SOL covering at least 3 arguments - state of economy, causes of unemployment and extent of government involvement, income distribution or consideration of other macro goals	9-11
2	Gaps in the explanation despite knowledge of the links between material and non-material SOL versus unemployment OR Well explained answer that lacks scope of analysis (ie. only 1 or 2 of the 3 arguments - state of economy, causes of unemployment and extent of government involvement, income distribution or consideration of other macro goals)	6-8
1	Attempts to explain SOL without clear links on how different types of unemployment play a part in affecting SOL OR Show knowledge of SOL and/or unemployment	1-5
E2	Conclusion that is well-substantiated ie. able to contextualize and provide various scenarios for substantiation of conclusion	3-4
E1	Conclusion without substantiation ie. superficial conclusion without depth in the explanation to substantiate	1-2

Essay Question 5

United Kingdom's trade deficit with EU has hit £23.8 billion in the three months to February, 2016 while overall trade deficit with the rest of the world widened to £13.7billion, the biggest since March 2008.

Source: *The Daily Mail*, April 8, 2016

(a) Explain the adverse impact of a rising trade deficit on an economy.

[10]

(b) Discuss whether demand management policy is the best way to address the economic problems caused by a rising trade deficit.
[15]

Suggested answer to Part (a)

Trade deficit occurs when a country's revenue from the export of goods is less than the expenditure on imported goods. The impact on an economy can be seen in terms of effect on level of real national income, level of employment of resources, overall balance of payment, exchange rate and economic growth in the long term. The extent of the impact of the rising trade deficit on the economy will also depend on whether it is persistent and large.

The most immediate impact of a rising trade deficit on the economy is through effect on the economy's aggregate demand (AD). The components of aggregate demand are consumption expenditure (C), investment expenditure (I), government expenditure (G) and net exports (X- M). A trade deficit means that (X-M) is now negative. Assuming other things remain unchanged, this will mean a fall in AD. AD curve will shift to the left from AD1 to AD2.

This leftward shift of AD will have an adverse effect on the economy if it is operating at or near full employment. With the fall in AD, inventory builds up and firms will cut back on production. There will be a fall in real national income from Ye1 to Ye2 as seen in the diagram. The level of employment of resources will also fall as demand for resources is derived from demand for the final output. The economy move further away from the full employment level and is experiencing demand deficient/cyclical unemployment.

GP

AS

AD^1

AD^2

Real GDP / t

Ye^2 Ye^1 Yf

The extent of the contraction of the economy will depend on the relative size of the (X-M) in the economy’s AD. In an economy which is highly dependent on trade to generate output and employment such as Singapore, a given fall in trade value will result in greater fall in national income and employment as compared to an economy where (X-M) is relatively small in relation to the other components of AD.

A rising trade deficit will have an adverse effect on the overall position of the country’s balance of payment. Assuming the other components of balance of payment remain unchanged, a rising trade deficit will result in a worsening of the overall position leading to a deficit or worsening deficit on the overall balance of payment.

Over time, a persistent trade deficit will reduce the attractiveness of the economy to foreign investors as the rate of return on investment projects will be reduced and often uncertain. The lower level of foreign investment will adversely affect growth and employment. The inflow of foreign direct investment contributes to investment expenditure, a component of AD. With the fall in investment, AD falls and output and employment will fall. In the longer term, there will be slower expansion of productive capacity leading to slower shift of the aggregate supply curve and thus slower potential growth.

The rising trade deficit, if persistent, will also have adverse effect on exchange rate (such as those on managed float and fixed exchange rate). The deficit will lead to a depreciation of the currency due to the higher supply and lower demand for the currency in the forex market. A fall in the exchange rate could lead to higher price of imports in terms of domestic currency. Cost of production will increase especially if the economy is highly dependent on inputs for production which will affect their export price competiveness if it is a very large proportion of unit cost of production. This will further worsen trade deficit and negatively affect growth and employment.

A rising and persistent trade deficit (which worsens the overall BOP) may lead to other problems such as depletion of foreign exchange reserves if the economy adopts a managed or fixed exchange rate system. This may eventually lead to the need to borrow in order to finance the deficit. Borrowing will result in greater burden on the economy as it has to service the debt. This will mean fewer resources will be available for future investment and spending on training leading to a slower shift of the AS curve to the right. Potential economic growth will be impeded with a potential rise in structural unemployment.

Level	Descriptors
L1	For an answer that shows some knowledge/listing of the effect on only 1 SOL from changes in AD or AS with little links to adverse trade deficit.
L2	Only one very well developed impact (eg only on economic growth, with relative size of trade to overall GDP is considered) Or An under-developed explanation in some parts of the 2-3 adverse impact f on the economy.
L3	Well-developed explanations of the impact on economic growth, unem payment with use of the multiplier. Recognised both domestic and external impact such as on exchange rat actual and potential growth, deplete government reserves

Suggested answer to Part (b)

Introduction

A rising trade deficit brings about various economic problems as seen in part (a). Given these problems, government could adopt various policies such as demand management policies, supply-side policies and trade policies to reduce import expenditure and increase export revenue. Whether demand management policy is the best to address the economic problems will also depend on whether the rising trade deficit is persistent and large in relation to the overall GDP. The various economic problems caused by the rising deficit could be addressed first by demand management policy.

Body:

Thesis: Demand management policy is the best policy to address economic problems of rising trade deficit.

Cause of a rising trade deficit: Rise in import expenditure leading to a fall in net exports, causing a fall in AD.

Demand management policy refers to actions taken by the government to adjust the level of aggregate demand in order to achieve various macroeconomic aims. In this case, demand management policy can be used to reduce problem of demand deficient unemployment experienced as a result of rising trade deficit. Expansionary fiscal or monetary policy can be used to increase aggregate demand. In the case of expansionary fiscal policy, government could increase its own expenditure on infrastructure and cut direct taxes, like reduce income tax for households and corporate tax for firms. Reduction in income taxes will increase disposable income of households. This will increase their ability to consume. Consumer expenditure of domestic goods will increase. Reduction in corporate tax for firms will increase rate of returns of investment projects (their post-tax profits) assuming other things unchanged. This will induce higher level of investment. With increase in consumption and investment, aggregate demand will increase. With higher aggregate demand and there is excess capacity, producers will react to the fall in inventory and hire more factors of production like labour. (labour is a derived demand) Real output and employment will increase. This will address the economic problem of demand deficient unemployment. However, part of the increase in consumption and investment will result in increase in imports thus worsening the trade deficit and would aggravate the other economic problems caused by the deficit.

To address the economic problems caused by trade deficit, government could adopt policies targeted at reducing imports expenditure directly. Expenditure reducing policy such as contractionary fiscal and monetary policy could be used to deflate the economy. Contractionary fiscal policy influences the level of aggregate demand through an increase in income tax and reduction in government expenditure. The increase in income taxes will reduce households' disposable income and hence cause consumers to reduce consumption of imported goods. A reduction in government expenditure will also mean that less may be spent on imported goods by the government. This would reduce import expenditure. Net exports will improve (assuming no change in export revenue) reducing the rising trade deficit. This could reduce the problem of balance of payment deficit (assuming no change in capital account) and the consequences of exchange rate depreciation for an economy with large demand for imported inputs.

However, the deflationary policy through the contractionary fiscal policy may not address the unemployment problem. A reduction in disposable income would cause not only import expenditure to fall but also expenditure on domestically produced goods to decrease. Hence, domestic production would decrease and may lead to higher level of demand deficient unemployment. Thus demand-management policies may not be an appropriate policy to resolve the economic problems caused by the rising trade deficit.

Anti-thesis: Demand management policy is not the best way to address the economic problems caused by a rising trade deficit.

Cause of rising trade deficit: Loss of export competiveness or quality of exports, leading to a fall in export revenue and thus rising trade deficit.

Measures to improve export revenue could be more effective in dealing with trade deficit and addressing the various economic problems caused by it. These measures include supply-side and trade policies.

However, this policy might be ineffective if the foreign country retaliates by imposing tariffs on the given country's exports as well. There is also the possible feedback effect. The fall in import expenditure will mean a fall in export revenue of the trading partners. This will lead to a fall in their national income thus reducing their ability to import. This is the beggar-thy neighbour effect. All these will render the policy ineffective.

One of the main causes of the rising trade deficit is the loss of export competitiveness leading to a fall in export revenue and thus trade deficit.

Measures to improve export revenue could be more effective in dealing with trade deficit and addressing the various economic problems caused by it. These measures include supply –side policies and trade policies.

Supply–side policies refer to actions taken to influence aggregate supply. Examples of such policies include government spending on infrastructure, investment in human capital, tax incentives to promote research and development and to attract foreign direct investment.

In order to increase export revenue, it is necessary to improve both price and non-price competitiveness of the exports. Government could provide tax incentives for firms to invest in acquisition of new capital goods with new technology, undertake R&D to improve product quality/innovation or to improve methods of production. Improvements in these areas will reduce costs of production thus improving price competitiveness of exports while product innovation will improve non-price competition.

With rapid changes in technology and increasing globalisation, there are changes in pattern of comparative advantage. In order to improve export revenue, the economy needs to find new niche areas as their existing comparative advantage gets eroded. Government could identify new areas of growth and support the development of these areas. Support could be in the provision of new infrastructure to cater to the new industries for example in the case of Singapore, government build new infrastructures such as One North, Biopolis, and Fusionpolis to support new industries. Reduction in corporate taxes, provision of various tax incentives on R&D expenditure will induce firms to increase R&D activities leading to new exports and higher value exports. In Singapore, the Productivity and Innovation Credit Scheme (PIC) was also used by business firms to embrace technology to raise productivity to enhance price competiveness for exports. Taken as a package, improvement in infrastructure and provision of tax incentives will also improve the rate of returns on investment.

This will improve the investment climate for foreign investors leading to increase in foreign direct investment. Government expenditure on training and retraining of workers will allow workers to upgrade their skills or equip them with new skills set relevant in the new areas of growth to reduce structural unemployment. With skills upgraded, labour productivity will increase and cost of production will fall leading to greater price competitiveness of exports. With the acquisition of new skills set relevant to new export industries allow for the expansion of these industries to further increase exports. All these could lead to an increase in export revenue. Rising trade deficit will decrease, national output will increase with the increase in net exports (assuming no change in import expenditure) and foreign direct investment and employment level will increase.

In the long run, with improvement in quality of factors of production, there will also be sustainable growth with rise in AS. With the improvement in trade position, the exchange rate will improve.With the improvement in trade position, the exchange rate will improve.

However, the main limitation of using supply-side policies is the long time period required for the policy to be effective and the outcome from R&D investment is often uncertain. Government expenditure on infrastructure, tax incentives and provision of R&D grants require huge amount of tax revenue which may be a great strain on government budget which could lead to budget deficit.

The government can also introduce trade policy to increase demand for exports by seeking new export markets. Singapore achieved much macro benefits through signing of more free trade agreements. Free Trade Agreements are binding agreements between two or more countries to reduce or remove trade barriers and to facilitate cross border movement of goods and services between the territories of the parties. They typically include reducing tariffs on imports and relaxing restrictions on capital flows. Gains from trade are from theory of comparative advantage. Specialisation and free trade has expanded production and consumption possibilities for countries. The production will be greater and there will be economic growth, overcoming the economic problems from rising trade deficit.

Gains from free trade agreements include the diversification to avoid overdependence on any particular trade partner. Being a trade-driven economy, Singapore is highly susceptible to external shocks from her trade partners. For example, if China experiences an economic downturn, demand for Singapore's exports may be reduced. A reduction in Singapore's exports will reduce net exports, which in turn reduces AD, and economic growth and demand deficient unemployment will rise. Having a closer economic integration with more other economies in the event of a regional downturn, Singapore's exports demand may still be supported by other markets.

To reduce imports, the government could also impose tariffs on imported goods. This would cause the price of imports to become relatively more expensive compared to domestically produced goods. Hence consumers would switch away from imports to domestically produced goods if they are of equal quality. This increase consumption will increase aggregate demand leading to higher level of employment of resources. Economic problem of demand deficient unemployment will fall.

However, this policy might be ineffective if the foreign country retaliates by imposing tariffs on the given country's exports as well. There is also the possible feedback effect. The fall in import expenditure will mean a fall in export revenue of the trading partners. This will lead to a fall in their national income thus reducing their ability to import. This is the beggar-thy neighbour effect. All these will render the policy ineffective.

Conclusion:

Stand/Substantiation: Demand management policy is a good policy to address the economic problems caused by a rising trade deficit but it is not able to overcome all the effects arising from the rising trade deficit and the root cause of the rising trade deficit. The use of only demand management policy can also lead to unintended macro consequences. A combination of policies are more suited, and the government when faced with multiple negative macro effects will need to implement other policies like expenditure reducing, supply side, trade policy and possible even deflationary fiscal policy. The Timbergen rule will apply here to overcome unintended consequences from multiple macro problems tackled with limited policies that might only address AD and not AS or short run and not the long run cases. There is also the need to consider the nature of the economy such as the trade reliance ratio to total real GDP.

Level	Descriptors	Marks
L1	An answer with some knowledge of demand management policy and another policy to address economic problems from rising trade deficit with limited consideration for their causes.	1-5
L2	Well-developed explanation on the use of demand management policy to tackle economic problems arising from trade deficit and its limitations. OR An under-developed analysis of demand management policy with 1-2 other policies to address the economic problems of rising trade deficit.	6- 8
L3	Well-developed analysis of demand management and other policies to address economic problems with due consideration for the nature of the problems	9 -11
E1	Unsubstantiated evaluation.	1-2
E2	Substantiated evaluation.	3-4

Essay question 6

The small island nation of 5 million people boasts the world's second-busiest seaport, a far higher per-capita income than its former British overlord, and a raft of number-one rankings on lists ranging from least-corrupt to most-business-friendly countries. So long as globalisation continues, Singapore thrives.

Source: Adapted from *TIME,* 28th May 2014

Discuss the extent to which globalisation has helped Singapore to achieve her economic aims. [25]

Suggested answer

Introduction

Globalisation is the increased integration of economies around the world, through the movement of goods, services, capital, labour and knowledge across international borders. Singapore has adopted an open approach towards development, and globalisation has led to both positive and negative impact on Singapore's aims. Singapore's aims would include both microeconomic aims (efficiency and equity) as well as macroeconomic aims (sustained growth, low inflation, healthy balance of payments and low unemployment).

Define the different economic aims.

- Sustained growth refers to growth at low inflation rates. This would involve actual growth (which refers to an increase in national income) as well as potential growth (an increase in productive capacity).

- Unemployment refers to factors of production not being used in the production of goods and services. Therefore, people in the labour force who are without work but are actively seeking jobs.

- Inflation refers to a sustained increase in the general price level.

- BOP is a statement of all the international transactions of a country with the rest of the world over a period of time, usually a year. The BOP comprises of the current account as well as the capital account.

- Efficiency refers to both productive and allocative efficiency. Productive efficiency would mean that firms are producing at the lowest cost possible. Allocative efficiency means that the right amount of the right type of goods are produced such that society's welfare is maximised.

- Equity in income distribution refers to a distribution of income that is fair and just.

Thesis: Greater trade and capital flows has helped Singapore to achieve higher actual growth and lower unemployment, and a healthy BOP

Globalisation has led to reduced trade barriers, such as removal of tariffs through free trade agreements. This has led to greater trade, and a higher amount of exports and imports for Singapore. With a larger market to sell her goods to, this has enabled Singapore's exports to increase. Due to her skilled workforce, Singapore has a comparative advantage in high value-added goods and services and is able to produce these goods at a lower opportunity cost. Examples of such goods are refined petroleum, pharmaceutical products and integrated circuits. This has led to higher net exports for Singapore, especially as Singapore has a small domestic market. By producing more for the global market, this has enabled firms in Singapore to reap internal economies of scale due to reasons such as indivisibilities of capital, which enable the firms to produce at lower unit cost, and pass it on to consumers in terms of lower prices. This allows Singapore's exports to achieve price competitiveness, leading to higher export revenue.

With greater capital flows, there has also been an influx of foreign investments into the country. Multi-national companies (MNCs), such as Rolls-Royce and Novartis can choose to set up production plants in Singapore. Firms might be attracted to carry out their production activities in Singapore due to her skilled labour, good infrastructure as well as pro-business policies. This would lead to an increase in investments.

With an increase in net exports and investments, this leads to higher Aggregate Demand, as AD = Consumption (C) + Investment (I) + Govt spending (G) + Net exports (X-M). Firms face an unplanned decrease in inventories, and this is a signal for firms to increase production. Firms would then hire more factors of production such as workers. Workers then experience higher income, and will spend a part of the increase in income on domestic goods and services. This would then lead to unplanned fall in inventories for other firms, and the cycle repeats. This would eventually lead to a multiple increase in national income, hence actual growth.
Therefore, an increase in net exports leads to a rightward shift of the AD curve from AD0 to AD1, and a multiple increase in national income from Yo to Y1, as shown in Figure A below.

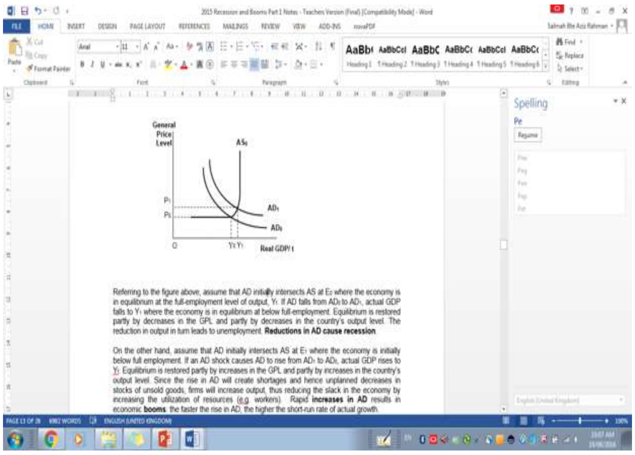


Figure A

As Singapore is an export-oriented economy, this impact is significant as X+M takes up a large proportion of Singapore's GDP. As demand for workers is a derived demand, and more workers are hired due to greater production of goods and services, this would lead to lower demand-deficient unemployment. Higher net exports would also lead to an improvement of the current account under BOP.

Thesis: Higher amount of imports has helped Singapore to achieve lower inflation and facilitates export-oriented growth

Due to lack of natural resources, Singapore is heavily dependent on imports for final goods as well as inputs for production. With the removal or reduction of trade barriers, Singapore is able to import more goods. Singapore can import goods which require labour-intensive or land-intensive production, such as agricultural products e.g. vegetables and fruits. Therefore, Singapore imports such products from land-abundant and labour-abundant countries like Thailand and Malaysia.

With lower prices of imports, this would lead to lower marginal costs of production. Therefore, as seen in Figure B below, the horizontal portion of the AS shifts downwards. This leads to lower cost-push inflation in Singapore.

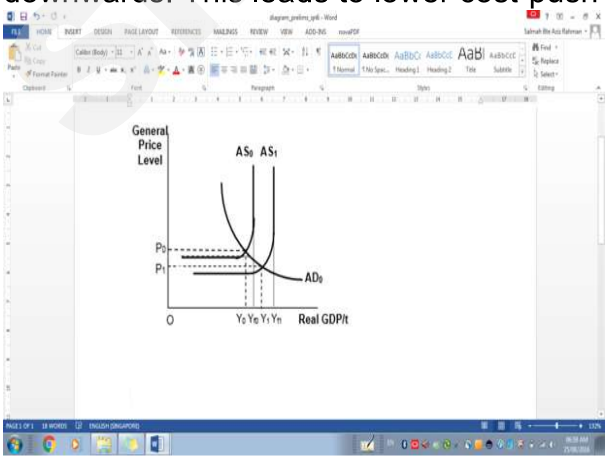


Figure B

Imports also enables Singapore to overcome her resource constraints. Although Singapore is not endowed with natural sources of oil, she is able to produce refined petroleum by purchasing crude oil imports from other countries. There is a high proportion of imported inputs in Singapore's exports, therefore imports also help to boost Singapore's growth through enabling greater production of exports.

Thesis: Labour flows and capital flows has helped Singapore to achieve sustained growth (labour and capital flows) – lack of domestic capital, small population

Globalisation has also led to relaxation of immigration laws and introduction of schemes, such as employment passes, to allow foreigners to work in the country. This helps to overcome Singapore's constraint due to her small population, and an ageing population. This would lead to a tight labour market and push up wage costs, leading to higher costs of production and loss of competitiveness for Singapore firms.

With more foreigners coming to work in Singapore, this has led to a increased quantity of labour in Singapore. This has led to a rightwards shift of the vertical portion of the AS curve, as the productive capacity (max amount of goods and services an economy can produce) has increased. This has led to potential growth in Singapore, enabling sustained growth (growth at low rates of inflation) to occur. This is important especially, as Singapore economy is operating near full-employment, and is hence vulnerable to demand-pull inflation.

The influx of foreign labour, ranging from low-skilled labour such as construction workers and cleaners, to high-skilled labour such as nurses and scientists, has helped to ease the manpower crunch. This has prevented wages from rising further due to a tight labour market, hence leading to lower marginal costs of production. The horizontal portion of the AS curve would shift downwards.

With foreign direct investments, this would lead to technological transfer as MNCs would bring in new technology and methods of production. This would lead to greater productivity as more output can be produced with the same amount of inputs. With greater amount of capital, this would also lead to higher quantities of factors of production. This would lead to potential growth, as productive capacity has increased.

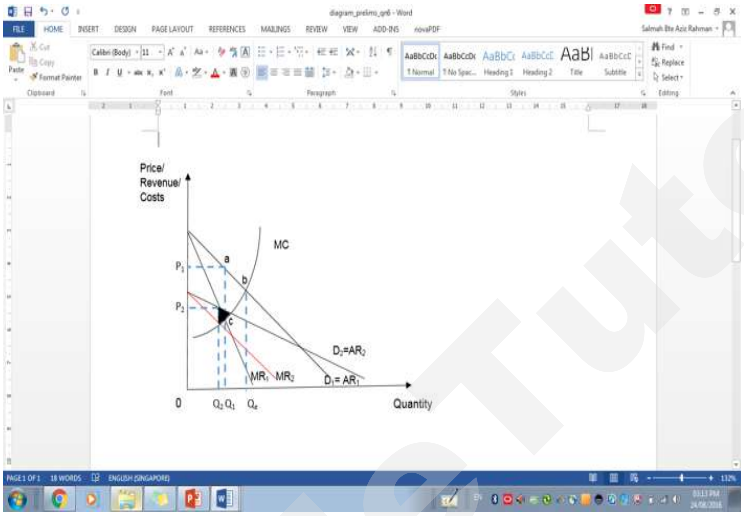
As seen in Figure B above, the overall effect would be a shift of the AS curve from AS0 to AS1. This has led to lower cost-push inflation, and a fall in the general price levels from Po to P2.

Thesis: Greater trade flows has helped Singapore to achieve greater efficiency (competition from MNCs)

The reduction of trade barriers would also mean that local firms are exposed to foreign competition. Therefore, firms are incentivised to compete on the basis of price as well as quality of goods. If local firms are less competitive, they would lose out in the export market or local consumers would switch to consuming imports instead. This would lead to a fall in revenue as well as profits for the firm, ceteris paribus. Hence, firms would embark on R&D projects to use more technology to enable them to increase productivity and able to produce at lower cost, so that they can pass it on to consumers in terms of lower prices. This would lead to greater efficiency.

As domestic firms are exposed to global competition, they may experience a fall in the demand for their own products as well as increased price elasticity, as consumers turn to imported goods. This would lead to a fall in welfare loss due to market dominance.

Assume that domestic firms were initially producing at MR= MC at price P1 and quantity Q1. A fall in demand shifts their demand curve from D1 to D2, ceteris paribus. This would lead to a new price P2 and quantity Q2. The amount of welfare loss has fallen to the shaded area from the bigger area of abc.



Trade also enables countries to specialise based on their comparative advantage(CA), resulting in a more efficient allocation of resources. A country possesses comparative advantage in a particular good if it can produce the good at a lower opportunity cost, hence allowing for mutually beneficial trade to occur between countries. Singapore possesses CA in capital-intensive production due to her high-skilled labour and would hence produce goods such as refined petrochemical products as well as pharmaceuticals. Singapore would import goods which require labour-intensive production, such as textiles from China. This would enable the production of goods to be carried out by the relatively more efficient producer, hence improving efficiency in the allocation of resources.

Anti-Thesis: Globalisation has led to higher income inequality

Globalisation has also led to greater exposure to foreign competition. Certain industries might expand if they are able to cope with foreign competition while certain industries might suffer due to greater foreign competition. The factors of production in these two sectors will be subject to increasing and decreasing demand respectively.

Since Singapore's comparative advantage is in high-tech manufacturing and financial and consultancy services, demand for skilled labour, in particular, will rise, whilst demand for low-skilled labour will fall. Furthermore, with the influx of low-skilled labour from other countries, this has depressed the wages of low-skilled workers, such as cleaners.

Taken together, a further increase in demand for skilled labour and decrease in demand for unskilled labour widens the income gap between the two groups.

Anti-Thesis: Globalisation has led to higher structural unemployment

Globalisation could also lead to higher structural unemployment. With the rise of emerging economies, Singapore lost her comparative advantage in producing labour-intensive goods such as garments and textiles, as the emerging economies were able to produce such goods at lower opportunity cost due to abundance of labour. This led to unemployment in such industries.

As Singapore moved towards a knowledge-based industry and more jobs were created in the finance and pharmaceutical industries, the unemployed workers were unable to find jobs in such sectors due to a mismatch of skills. Therefore, this led to higher structural unemployment.

Anti-Thesis: Globalisation has led to lower growth and higher inflation

Singapore's heavy dependence on exports and FDI has also made her vulnerable to external shocks. For example, during the 2008 US subprime crisis, which led to a fall in national income in many countries. As countries experienced a fall in national income, consumers would cut back on spending and spend less on imports. This would lead to a fall in net exports for Singapore, leading to a fall in actual growth due to a multiple fall in national income. Foreign firms would also withdraw their investments in Singapore, threatening actual as well as potential growth.

Singapore's reliance on imports also makes her susceptible to imported inflation. If there is a supply shock such as conflict in oil producing countries that lead to an increase in prices of oil, this would lead to higher prices of imports, leading to higher costs of production. This would lead to higher cost-push inflation.

Conclusion

Globalisation has helped Singapore to achieve her economic aims to a large extent. This is due to her small domestic market and lack of natural resources that necessitates an open approach towards development. Other factors such as pro-business policies (e.g. low corporate tax rate), a strong intellectual property rights framework, excellent infrastructure and a skilled workforce has helped to attract FDI to Singapore.

While Singapore does suffer from greater vulnerability to external shocks and imported inflation, there are policies that the government can implement to mitigate such effects. An example would be signing of FTAs with many countries to diversify her trade partners, as well as the use of XR policy to keep the Singapore dollar strong to curb imported inflation. Subsidies to send workers for retraining could also help to address structural unemployment and schemes such as the Workfare Income Supplement scheme could be used to provide additional income for low-skilled workers wo are adversely affected.

Level	Descriptors	Marks
Level 1	A brief explanation about globalisation. Listing of a few impact of globalisation on Singapore's economic aims.	1-5 6-9
Level 2	An explanation which discusses at least 2 types of flows (trade, capital, labour flows) and the impact (positive and/or negative) on Singapore. Lack of clear links made to economic aims. Answer demonstrates some use of Economic concepts, but explanation is under-developed. Above + some effort made to link arguments to economic aims.	10-11 12-14
Level 3	Well-developed explanation of how globalisation would impact Singapore's economic aims, both in a positive as well as negative manner. Coverage of points include trade flows, capital flows as well as labour flows. Good use of Economic concepts and answer demonstrates understanding of the Singapore context. Above + impact on microeconomic aims (either efficiency or equity) are also discussed.	15-17 18-21
E1	For an unexplained assessment, or one that is not supported by economic analysis.	1-2
E2	Judgement is based on economic analysis and adequately substantiated.	3-4

2016 Prelim H2 Case Study 1

Suggested answer

(a) (i) Compare the change in UK's Brent oil price with that of petrol price between 2010 and 2014. [2]

Overall, both prices of Brent oil and petrol rose but start to fall in 2014.
However, Brent oil prices rose as well as fell more than that of petrol price.

(ii) With the aid of a diagram, account for the price change in petrol price from 2014 onwards. [5]

The fall in petrol prices from 2014 onwards was due to a dampened demand and a rise in world supply of oil.

[A] A weakened global demand for petrol has led to a fall in petrol prices.
[C] Given the economic slowdown especially in China and the Europe reeling from the Eurozone crisis, as income growth dampened, demand for transportation of goods will fall, leading to a fall in demand for petrol.
[E] Extract 1 supports that weak economic activity is one of the few factors causing the slowdown in demand for petrol.

OR

[A] A shift in preference for cleaner energy source has led to a fall in petrol prices.
[C] Due to the availability of renewable energy and the awareness to reduce carbon footprints, more firms and households are slowly switching from traditional fuel to cleaner energy. As such, demand for oil, thus petrol will be dampened.
[E] Extract 1 mentioned the trend of growing number switching to other forms of cleaner energy source.

[A] A rise in US oil production has led to a fall in petrol prices.
[C] US's shale revolution means that US is using innovative techniques to unlock vast quantities of oil from shale rocks, causing excess supply to the rest of the world. Since marginal cost of production of petrol has fallen, supply of petrol would have increased.
[E] Extract 1 supports the success of US's shale revolution to allow US to overtake Saudi Arabia as the largest oil producer.

[A] <u>Given a rise in supply and a **fall** in demand on petrol</u>, petrol prices will fall.
[C] As seen in Figure below, the rise in supply to S1 for petrol and the fall in demand to D1 for petrol will cause a surplus at existing equilibrium price P, leading to a downward pressure on price. Given the price inelasticity of both demand and supply, the fall in price is significant.

Price
S
S1
Surplus
P
P1
D
D1
Quantity/t

(b) (i) Describe the type of market structure operating in the UK energy market. [2]

The UK energy market is operating as an Oligopoly market structure.

The industry consists mainly of a few large producers. With reference to the Figure 2 , the market place is being dominated by Britain's six largest energy companies

(ii) Explain why firms in the UK energy market are inclined to engage in "possible tacit co-ordination on prices". [3]

Being in an oligopolistic market structure where there are a few large firms each with substantial market share and they are of close rivals, the UK energy firms tend to avoid price competition because they are mutually interdependent and there is no 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 suit.

able to collude as a cartel to fix price at a level close to the level that would be expected from a monopoly.

(c) Discuss the view that Singapore "was supposed to have been a winner from the low oil prices". [8]

Approach: Falling oil prices seem to bring about positive impact on Singapore's economic growth since Singapore is a net importer of oil. However, as mentioned in Extract 4, Singapore's oil industry with oil-related firms e.g oil rig and marine companies involved in oil exploration may be directly affected by the falling oil prices. The use of AD-AS model will be needed to explain the effect of falling oil prices on economic growth and thereby conclude if Singapore would have been a winner from the low oil prices.

Thesis: Falling oil prices can have positive impact on Singapore's economic growth

Development 1:

[Extract 4, Para 1] Many industries in Singapore such as airlines, transport and shipping companies and manufacturers of chemical products use crude oil to process many types of manufacturing goods, and these sectors contribute much to the economic growth in Singapore via exports. The lower crude oil prices cause cost of production to fall as input prices fall, promoting more of such industrial production in the economy. As Aggregate supply rises due to the lower cost of production, prices of goods and services from these sectors will fall, leading to a rise in quantity demanded for exports of goods and services. Given Ep>1, this will lead to a rise in export earnings, resulting in a rise in national income.

Development 2:

[Extract 4, Para 1] suggested that for the end consumer, relief has come through in the form of smaller electricity bills and petrol costs.
As price of crude oil falls, cost of producing electricity and petrol will fall. This will lead to cost savings passed to end users of electricity in houses and individuals who drive for instance. Given that Ep < 1, a price drop in electricity and transport will cause a less than proportionate rise in quantity demanded, resulting in a fall in consumer expenditure. As mentioned in Extract 4, the cost savings from electricity and petrol spending will enable consumers to have more disposable income for domestic consumption of other goods and services. As induced C rises, it leads to a movement along AD as well and therefore national income rises.

[Evaluation for thesis above] The effect on national income via increased in C is not very significant [Extract 4: higher spending resulted in an increase of about 0.2-0.4 per cent in Singapore's economic growth].

Anti-thesis: falling oil prices may have adverse impact on Singapore's economic growth

If the rapidly declining oil price is evident slower growth/recession in the global economy [Extract 4, Para 2], then the current slump in oil prices may not prop up consumer spending in the manufacturing sectors. In this case, the slump in global trade is likely to negate the benefits of cheaper oil.

As Singapore is hit by weaker global economic condition, industries such as the petrochemical industry has seen a decline in export revenue due to lower global demand. Therefore even with cheaper input prices leading to such industries offering their goods more price competitively, the gains may be offset by a fall in demand for their goods. Instead of seeing a rise in national income, the fall in demand for overall exports would have contributed to a fall in AD, thus a fall in national income via multiplier.

Singapore's economy is exposed to the entire supply chain of oil, from marine industry to the petrochemical sector. Sustained lower oil prices have dampened oil related activities such as oil exploration and rig-building in the oil industry in Singapore. As demand for crude oil falls, the demand for oil exploration and oil rig building will fall since these are derived demand. With a fall in demand for export of these services, AD will fall, causing a fall in national income via multiplier. Job losses are expected as well, mentioned in Extract 4, since labour is demand derived.

Synthesis and conclusion:

(Stand, Summary) In Singapore itself, businesses and households outside of the oil and gas sector have on the whole benefited from lower cost of living from lower utility and fuel-related costs. For example, those in the chemicals sector, airline and shipping companies have benefitted from cheaper fuel, which on the whole has helped to spur the economy.
(Special) As to whether Singapore will emerge as a winner from low oil prices depends largely on what leads to the falling oil prices. If the falling price of oil is largely due to a lower demand for energy, then Singapore may not benefit to the full extent due to the sluggish economy. Ultimately, falling oil prices is seen as a mixed bag for Singapore's economy but with more believing that a supply-driven drop in oil prices would then render Singapore a winner, particularly to net oil importers like Singapore.

Level	Descriptors	Marks
L1	A brief explanation on why falling oil prices may benefit Singapore i.e. in terms of growth.	*1-2*
L2	Thorough discussion of the benefits of falling oil prices on Singapore's economic growth. Or Discussion on both-sides of the arguments but lack thorough discussion.	*3-5*
L3	Well- discussed, 2-sided argument on the impact on Singapore's economic growth due to falling oil prices with good reference to evidence	*6-7*
E1	*Conclusion with substantiated conclusion.*	*+1*

(d) Discuss whether the set of reforms recommended by Ofgem in the energy market is justified. [10]

Introduction:

The set of reforms recommended includes i) breaking up of the Big Six ii) to ban differential pricing in terms of 3rd degree price discrimination and getting rid of pricing complexity such as discounts to allow more transparency. In the context of UK's energy market, it is dominated by 6 largest firms which highlight the presence of huge market power thus the accusation of profiteering and consumers paying more for energy power despite falling oil and fuel prices. Therefore the justification is centred mainly on consumer welfare.

Thesis: Breaking up the Big 6 and introducing more competition will help to lower prices for consumers

[A] Figure 2 suggests that the UK energy market is oligopolistic and also from Extract 2, it also suggest the presence of cartel formation through price fixing. Therefore breaking up the Big Six in order to reduce market power is justified.

[C, E] As seen in Figure A below, a profit maximising UK energy firm will produce at the point where the rising marginal cost (MC) will intersect with marginal revenue (MR) curve at Qm and therefore charge at Pm, way above the marginal cost. Given the inelastic demand for energy, the price charged to consumers will be much greater. Despite the falling fuel prices, it is very likely that energy companies will continue to charge at Pm through forming a cartel [Extract 2] and behaving as close as a monopoly in terms of pricing. At Qm, total revenue will therefore be given by 0PmQm while total cost is 0PcCQm. This explains the huge profits enjoyed by energy companies as mentioned in Extract 2.

As a result, Ofgem recommends that increased competition which will bring the market closer competitive market outcome - reduced price from Pm closer to Pc.

<u>Thesis: Breaking up the Big 6 will help to improve productive and dynamic efficiency</u>

Greater competition will also ensure greater discipline in managing costs rather than remaining complacent therefore reducing productive inefficiency as well. This drives energy prices down and thereby increasing the level of consumer welfare. Greater competition 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.

re A

AC

Pc C

0

[Anti-thesis for breaking up the Big 6]

The extent to which consumer welfare can be increased via lower prices is limited in the context of energy market because as the top 6 UK energy firms are able to reap substantial amount of economies of scale (EOS) compared to the smaller energy retailers in the market, which allows them to enjoy lower average costs of production. By breaking up the Big Six, these firms may not be able to reap much EOS as before hence with a higher marginal cost, the consumers may end up paying more despite the greater competition in the market.

In the energy industry, MES is usually high relative to market share hence competition could result in wastage of resources. Eventually, some especially the smaller energy firms will have to exit unless the government covers the losses but then this will further lead to the wastage of resources. The top 6 UK energy firms will regain their market share, providing them with greater ability to restrict output and control prices once again.

Furthermore, 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. The lack of incentive and ability to engage in R&D may result in productive inefficiency, causing cost of providing the electricity to increase.

This is supported in Extract 3, whereby the lack of meaningful competition could mean many of them are paying as much as £250 a year too much and also with a risk of suppliers cutting back on investment in the long term.

Other suggested points forming the thesis: Removing the complex pricing will help consumers make more informed choices

Ofgem also decided to get rid of the complex pricing structure that each energy firm has implemented so that imperfect information can be reduced.

[Extract 3] By helping consumers making more informed choices in terms of choosing the tariff contract that best suit their needs, consumer welfare can be increased.

Removing differential pricing means the energy firms can no longer practice 3rd degree price discrimination. With firms no longer being able to earn higher profits from 3rd degree PD, it will result in improved equity.

Conclusion:

The claims of Big Six profiteering through market dominance may be valid for Ofgem to intervene mainly to protect consumer's interest, and through these short term measures, consumers would be well protected by paying too much for electricity despite the falling fuel prices. However, it is important to note that the very nature of this industry requires a firm to be large to enjoy substantial EOS; in order to offset the high fixed cost hence breaking up the Big 6 could backfire. Given the context of global warming, the country may need the existence of larger energy firms in order to have the capacity and resources to develop renewable energy and perhaps better technology that could help lower prices in the long run. By recommending this set of reforms can be seen as justified in terms of increasing consumer welfare in the short run but more needs to be thought out carefully to justify them for better long run outcomes.

Level	*Descriptors*	*Marks*
L1	Unexplained assertions of impact of the reforms.	*1-3*
L2	Developed explanation of the impact of the reforms on efficiency and equity with limited evaluation and/or lack of reference to extracts.	*4-6*
L3	Well-developed analysis of the reforms and their impact on efficiency (static and dynamic) and equity, with good attempt to draw reference from the extracts.	*7-8*
E1	*Conclusion with little or no justification.*	*1*
E2	*Conclusion with substantiated conclusion.*	*2*

2016 Prelim H2 Case Study 2

<u>Suggested Answers</u>

(a) (i) Compare the change in China's current account balance with that of the US for the period 2011 to 2015. [2]

The current account balance was consistently in surplus for China whereas for US, it was consistently in deficit.

US current account deficit worsened whilst China current account surplus increased from 2011 to 2015.

OR

However, there is a difference in magnitude: China's current account surplus increased substantially (by 142.9%) during the period whereas US current account deficit worsened marginally (by 5.1%).

(ii) Explain whether the US should be concerned about the changes to her current account balance. [2]

US will be concerned about its current account deficit due to the persistence and size of the deficit. If the size of the deficit is large relative to the country's GDP, the country will not be able to service the deficit and over time, the need to borrow rises eventually leading to debt accumulation.

Such debt financing / accumulation implies that the future standard of living of the country will fall as future incomes will need to be used for debt repayments i.e. borrow to finance current consumption at the expense of future living standards.

(b) Explain whether the US central bank's action of raising the interest rate is justified.

The policy was justified to anticipate and prevent imminent demand-pull inflation. Extract 5 'domestic consumer spending has continued to rise and investment by firms have risen' suggested that there will be continued pressure for AD to increase in the successive quarters. Since the economy is operating near the full-employment level, any further increase in AD will lead to a sustained increase in the general price level.

It may not be justified since the rate of inflation of 0.1% in 2015 is low, far from the central bank's 2% target. Moreover, the current account balance has worsened in 2015 which will also dampen the rise in AD caused by the rise in C & I.

(c) Explain how the slowdown in China's economic growth will affect its government budget balance. [4]

As the economy slowed down from 9.5% in 2011 to 6.9% in 2015, China's government budget balance as a percentage of GDP worsened from an initial budget surplus of 0.1% of GDP in 2011 to a budget deficit of 2.6% of GDP in 2015 or widened the budget deficit to about 3%.

The budget balance has worsened due to a fall in government revenue and a rise in government expenditure. From Extract 6, China's slowdown has 'add pressure on policymakers to take more steps to ward off a sharper slowdown'. This implies that the fall in C, I, G or (X-M) may have been countered somewhat by China's effort to lean more on fiscal policy to support growth this year. This will result in a fall in government revenue as a result of tax cuts. There is also an increase in government expenditure as a result of "increased spending on infrastructure".

(d) With reference to the data, discuss the likely impact of China's monetary policy (Extract 6) on the Singapore economy. [8]

Introduction

China adopted an expansionary monetary policy approach which aims to boost actual economic growth via cutting interest rates (Extract 6: 'Central bank may still need to ease monetary policy'). With lower interest rate, the return to savings will be lower, so households will be encouraged to raise consumption (C) of domestic goods and services and imports.

Impact on Singapore BOP

Current Account Balance

With the lower interest rate in China, consumption of imports from Singapore will rise. Since China is Singapore's top trading partner, demand for Singapore exports will rise and assuming import expenditure remains unchanged, there will be an improvement in Singapore's net export revenue and current account balance.

The impact on the current account balance will be significant since China is Singapore's largest export market, making up 13.8% of total Singapore exports according to Extract 8.

Evaluation

In China, the central bank adopted a managed-float exchange rate regime where it may allow the currency to depreciate in value as a result of the increase in the supply of Chinese yuan in the forex market (short-term capital outflows as investors search for higher rate of returns overseas) to boost her export competitiveness in view of China posting its ‘weakest economic growth in the fourth quarter of 2015’.

Due to the weaker Chinese yuan, the price of Singapore exports in terms of Chinese yuan will increase. So the Chinese consumers will purchase less of the Singapore exports, causing demand for Singapore’s exports to fall. This results in a fall in export revenue.

On the other hand, the residents of Singapore will now find imported goods (e.g. China) cheaper in terms of S$. This leads them to purchase more foreign imports. If demand for imports is price elastic, expenditure on imports (in S$) will rise as there will be a more than proportionate increase in quantity demanded for imports. With export revenue falling and import expenditure rising, current account worsens.

Higher interest rate in the US means higher returns to savings, so households may save more instead of buying imports from Singapore, so the net improvement in Singapore current account balance may not be significant.

Capital Account Balance
If China buys more exports from Singapore and net export revenue rises, boosting Singapore economic growth since China is her largest trading partner and export revenue is a large component of Singapore GDP, the positive business outlook may spur capital inflows.

<u>Evaluation</u>
However, from Extract 7, there are ‘risks of potential capital flight that could result from fears of further economic slowdown in China’. China’s economic slowdown may lead to poor business outlook by foreign investors on the Singapore economy due to the country’s high dependence on China as an export market. This may result in **long-term capital flows** out of Singapore to other developed markets such as US which has a lower reliance on trade.

From Extract 7, there are ‘risks of potential capital flight that could result from further US rate hikes’. As US real interest rate increases, rewards earned by the owners of USD-denominated capital will increase. There will be **short-term capital flows** into the US from Singapore as funds in Singapore chase after the relatively higher rate of returns in USD-denominated financial assets.

<u>Overall impact on BOP</u>
Depends on the impact of China’s expansionary monetary policy on its exchange rate which affects price competitiveness of Singapore exports.

Impact on EG, Unemployment & Inflation

Extent of impact on economic growth, employment will depend on the extent of the rise in (X-M). If the net export revenue rises, it will result in a rise in AD and at the initial equilibrium national income level, firms in the export sector will experience a fall in unplanned inventories. Firms will raise production and employment of resources causing the national income to rise by a multiplier and a fall in demand-deficient unemployment.

The extent of the rise in real GDP will depend on the initial state of the economy. From Table 1, Singapore's unemployment rate is at 2.8% in 2015 which suggests that Singapore is operating close to the full employment level. Therefore, the rise in AD is likely to lead to inflationary pressure. However, the impact may be cushioned by 'public-sector construction activities' (Extract 3) which help to boost potential growth.

Conclusion

China easing of monetary policy may result in a rise in purchase of imported goods and services from Singapore, boosting Singapore's trade balance, economic growth, and employment. However, the extent of the impact on Singapore economy will depend on the effect of the fall in interest rate on the Yuan which in turn will affect Singapore's export competitiveness. The rise in US interest rate may also have a negative impact on the Singapore economy since Singapore is an interest rate taker.

Level	Descriptor	Marks
L1	Some knowledge on the impact of China's monetary policy on the Singapore economy.	1-2
L2	An under-developed discussion of the impact of China's monetary policy on the Singapore economy.	3-5
L3	A well-developed discussion of the impact of China's monetary policy on the Singapore economy, which examines the effects on BOP, economic growth, inflation and unemployment with good use of the evidence from the data.	6-7
E	For an evaluative assessment based on economic analysis on the extent of impact on the Singapore economy.	+1

(e) Assess the effectiveness of China's supply-side reforms in facilitating a smooth transition to a knowledge-based economy. [10]

<u>Introduction</u>
A knowledge based economy places more reliance on intellectual capabilities like creativity and innovation to produce products that are more knowledge intensive. These products will be of higher value and so generate more exports revenue and economic growth.

<u>Explain the impact of China's supply-side reforms</u>
Impact of corporate tax cuts and infrastructure upgrade and effectiveness

From Extract 7, the cut in the corporate tax would lead to capital accumulation as it encourages both domestic and foreign direct investments (FDI). Local and foreign firms find it more attractive to invest in the country because they are able to retain a relatively larger portion of their profits earned (i.e. higher expected rate of return). FDI in the capital and service industries will help China to transit faster into the knowledge based economy.

The government also directly spends on 'upgrading the information and communication technology (ICT) and R&D infrastructure' which will increase the capital stock and productive capacity.
By boosting G and I, AD will rise, resulting in a multiplied rise in national income, hence achieving actual growth in the short-run. AS will also increase as there is increased accessibility and connectivity within China and with the rest of the world via an upgrade to the 'ICT and R&D infrastructure'. This will reduce business costs and improve productivity. Moreover, it will enhance the competitiveness of firms and attract FDI to invest in the knowledge-based economy. In addition, the growth in labour productivity from using better machineries and/or technology will raise the output produced per man hour and productive capacity.

However, as China is a large country, an effective ICT infrastructure will be very costly and will take time to develop. Moreover, both domestic entrepreneurs and foreign firms may be hesitant to invest if they are not able to rely on the 'clear rule of law and property rights' to protect the proprietary knowledge created.

Impact of removing barriers to encourage domestic entrepreneurship and FDI and effectiveness

With the removal of barriers such as limits on foreign ownership, complex rules, and regulations to start a new business and screening procedures on inward FDI, both local and foreign enterprises would now find it easier and more profitable (lower bureaucratic costs) to invest in different sectors of the economy, bringing much needed capital, skills, and technology.

The advantage of relying more on FDI in addition to domestic sources of capital accumulation is that FDI not only often brings in foreign capital, but also foreign technology and knowledge which can be transferred to the local workforce and facilitate China's transition to a knowledge-based economy.

Impact of privatization and its effectiveness
From Extract 6, the government 'strive to privatize big, highly inefficient state-owned enterprises into market-oriented institutions'. The profit motive of private firms would lead to greater efficiency in production as these firms would look to reduce costs and develop better quality goods and services to increase profits. Market-oriented institutions will be more competitive as they are profit maximisers as compared to state-owned enterprises which may be X-inefficient as they are less profit-driven. These private firms also have higher tendency to innovate and move into growth industries such as the knowledge based industries.

However, privatisation of state owned enterprises may lead to higher unemployment as excess workers might be laid off to cut costs to stay competitive. In addition, the inefficient state firms may be unable to compete and face a declining industry. This will result in unemployment as firms' demand for labour falls. Thus, the Government will need to come up with retraining program to equip workers with the requisite skills in order to enable them to move into the growth industries such as the knowledge based industries.

Impact of education reforms and effectiveness.
Even though literacy rates had soared with higher spending on education, there is still overemphasis on knowledge transfer rather than the development of imaginative and creative capabilities. To move into a knowledge based economy, it is insufficient to just have the infrastructure but the soft-skills are needed as well. Without the skilled manpower, it will be difficult to move into an economy that relies on knowledge to create value.

Education will improve the skills of the workforce, increase their ability to adapt to new knowledge and improve productivity. However, education takes time and China will have to upgrade its curriculum to focus on imagination and creativity, without which it is difficult to transit into a knowledge based economy.

<u>Conclusion</u>
Whilst the supply side reforms provide some impetus for the transition into the knowledge based economy, more specific policies need to be implemented to enable China to move into a knowledge based economy.

The Chinese government needs to identify the type of knowledge based industries that the country is moving into and provide the institutional supports such as an advanced financial system, good network of high speed ICT infrastructure, educational reforms with a focus on innovation and creativity to develop a pool of skilled workforce. However, there may be huge inertia for state-owned enterprises to embrace the reforms due to their private interests. In addition, these policies often have a long gestation period and require a large financial outlay which will worsen China's budget balance.

Based on the case evidences, the effectiveness of the policies in helping China to transit into a knowledge based economy is limited.

Level	**Descriptor**	**Mark**
L1	Some knowledge on China's supply-side reforms	1-3
L2	An under-developed discussion of the impact of China's supply-side reforms in facilitating its transition to a knowledge-based economy.	4-6
L3	A well-developed discussion (with limitations i.e time, funding, education constraints, IPR) of the impact of China's supply-side reforms in facilitating its transition to a knowledge-based economy, with good use of the evidence from the data.	7-8
E	For an evaluative assessment based on economic analysis on the effectiveness of the policies by considering the context of China's economy. SR versus LR: Budget balance; R&D uncertainty/time; SOE; Worker's reluctance	+2

YISHUN JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATION 2016

H2 ECONOMICS
9732/01
PAPER 1
15 AUGUST 2016

1400 – 1615 hrs

TIME 2 hour 15 minutes

Additional Materials: Writing Papers

READ THESE INSTRUCTIONS FIRST

Write your name and CTG 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.

Answer **all** 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 **7** printed pages, including this cover page

Answer **all** questions.

Question 1

Utility Market

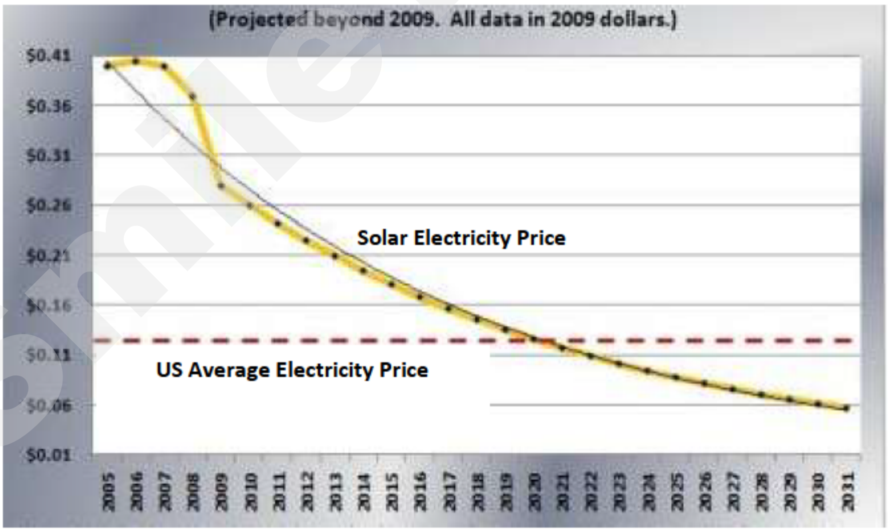
Extract 1: Power growth slows

Utility companies operating in competitive U.S. utility markets are struggling to make money as falling electricity consumption threatens their profits and forces the utility firms to rethink their long-held business models.

For decades, utility demand climbed steadily, often in lock-step with the economy, providing utility firms with a reliable increase in sales plus a profit that is typically set by state regulators. But the economic crash in the last decade has poked a hole in that business model. Power demand is flat lining, energy efficiency programmes are eroding the likelihood of future growth and the spread of rooftop solar systems is serving as a warning to large utility suppliers that they no longer hold their customers captive. However, it is unlikely and uneconomic for a large number of customers to go from the traditional power supply to solar systems without any subsidies until 2030 or beyond.

Source: Darius Dixon, http://www.politico.com/, 24 October 2014

Figure 1: Prices of solar power vs. average electricity prices



Source: DOE NREL Solar Technologies

Extract 2: Exelon Will Acquire Pepco and Form Largest Utility Firm in the US

Exelon Corporation announced on Wednesday that it will acquire Pepco Holdings in a $6.8 billion all-cash transaction to create a mega-utility serving the Mid-Atlantic and Midwest.

Exelon and Pepco already have regional synergies in the Mid-Atlantic that should allow the companies to streamline some back office functions and share lessons learnt across the two companies' urban utility firms that have invested in technologies such as smart meters, distribution automation and advanced outage management systems. Expanding regulated businesses and diversifying operations reduce risk profiles. Many utility firms look to expand their regulated businesses to increase the stability and predictability of cash flows, while also maximising operational efficiency and spreading operating and maintenance costs over a wider customer base.

The merger is subject to approval from the Federal Energy Regulatory Commission, an antitrust review, and approval by public service commissions in the states where Pepco operates. The companies hope to close the deal in the second or third quarter of 2015.

Source: Katherine Tweed, http://www.greentechmedia.com/, 30 April 2014

Extract 3: Revenue Decoupling for Utility Firms

Electric utility firms are responsible for delivering electricity to every home, business, and public building in the United States. It’s no easy task, especially when outside forces—technology, innovation, and policy and economic changes—make the old ways of doing business obsolete.

Utility firms are facing this dilemma today. The old business model—one based on selling more and more electricity—doesn’t work anymore. As demand for energy falls, it will take a suite of policy and business tools to keep utility firms strong and dependable—and keep the lights on for consumers.

Revenue decoupling is one way to work around this problem. At a basic level, revenue decoupling is an accounting tool that ensures utility firms collect the amount of revenue they are allowed by state regulators. Decoupling essentially separates the link between utility profits and its sales revenue to create profit sustainability for utility firms.

What we pay for electricity depends on a rate approved by regulators. This rate is based on the anticipated amount of energy customers will use in the future; regulators and utility firms must plan ahead so that they can develop a plan to provide steady power that covers their cost of production at the same time. Without decoupling, utility firms will collect revenue based on only predicted usage numbers.
But the actual amount of energy customers use and the actual amount of money utility companies bring in may be higher or lower than forecasted for a host of reasons, including the implementation of energy efficiency measures, increased energy conservation, local power generation like small wind and solar, and even weather.

For example, if states have a decoupling policy in place, and actual electricity sales were higher than expected, the company would lower rates slightly the next year to refund customers the extra money they paid. If electricity sales were lower than what the utility firms and regulators expected, the company increases rates slightly the next year to make up the difference.

Decoupling benefits utility firms by relieving the need to sell increasing amounts of energy to cover the costs of generation and infrastructure investments and the costs of providing electricity to customers. It also encourages greener technologies. Reduced energy consumption caused by energy efficiency can help reduce carbon dioxide emissions and protect against climate change. Decoupling allows these to exist without harming the companies' finances.

In our rapidly changing energy world, it is unclear what the utility market of the future will look like, and what types of services it will provide. However, it's clear that the current business model which relies on selling more and more electricity is no longer compatible with today's energy landscape. Furthermore, a utility firm which is increasingly worried about selling certain amounts of energy to cover its operating costs will be more and more resistant to changes to its business model in the future.

Decoupling can break this reliance on increasing electricity sales revenue and open the door to new ways for utility firms to remain economically strong.

Source: http://fresh-energy.org/, 3 October 2014

Extract 4: U.S. state policies to reduce carbon emissions from power plants

Power plants are currently the nation's largest source of greenhouse gas emissions — especially the dangerous carbon emissions known to increase global warming. In June 2014, President Obama proposed the Clean Power Plan, which will require states to reduce carbon pollution from power plants, cutting emissions to 30% of 2005 levels by 2030. These 50 states must adopt and enforce effective carbon pollution reduction measures for its own electricity sector. These approaches include:

- Emission caps. Plant-level greenhouse emissions to be reduced by caps and targets that set specific reduction goals.
- Public benefit funds. This invests in research and development for energy efficiency and renewable power
- Plant-level reductions in dangerous emissions have happened in states with decoupling programme that separates the link between utility profits and its sales revenue

Some policies adopted by the states may have been ineffective because they are too vague or insufficiently publicised and enforced. More successful policies tend to have specific, concrete goals that can be objectively measured. Of course, it is important to acknowledge that emission levels are influenced by the characteristics of power plants themselves, as well as by state policies. On average, plants that are older or rely primarily on coal for fuel have significantly higher emissions. In contrast, lower emissions on average occur at plants with independent system operators and at plants that are part of regional transmission organisations where energy transfers are more efficient.

Source: Journalist's resource, 15 October 2014

Questions

(a) Compare the price of the solar electricity with that of the average electricity price in US from 2010 to 2030. [2]

(b) Explain how the provision of subsidy to the producers of solar systems will affect the following markets:

(i) Solar power

(ii) Traditional power supply [4]

(c) Explain two possible sources of market failure that exist in the utility market. [6]

(d) Discuss the likely factors that Exelon Corporation would have considered when deciding to acquire Pepco Holdings. [8]

(e) With reference to the data where appropriate, discuss whether revenue decoupling such as that proposed in the US would be the most appropriate way of reducing carbon emission by the power plants. [10]

[Total: 30]

Question 2

Emerging Asia

Extract 5: Asia to remain the Global Growth Leader

Growth in Asia-Pacific will continue to outperform the rest of the world thanks to robust domestic consumption spurred by healthy labour markets, low interest rates and the recent fall in oil prices, according to the International Monetary Fund (IMF). Furthermore, the global recovery, albeit moderate and uneven, will continue to support demand for Asia's exports.

There are reasons to be cautious, however, with the balance of risks tilted to the downside, the IMF warned. Risks include significantly slower-than-expected growth in China or Japan and persistent U.S. dollar strength, which could ramp up debt servicing costs for firms with sizable dollar-denominated debt and curtail demand.

"Debt levels — including foreign currency-denominated debt—have increased rapidly in recent years, and Asia is now more vulnerable to financial market shocks," the IMF said.

On the flip side, lower energy prices present an upside risk for Asia's growth if more of the savings on oil import bills is spent. "The decline in oil and food prices provides a window of opportunity to further reform or phase out subsidies, thereby improving spending efficiency and shielding public spending from future commodity price fluctuations," it said.

Source: Ansuya Harjani, IMF: Asia will remain the global growth leader, www.cnbc.com, accessed 06 May 2015

Extract 6: Policy Priorities for Emerging Asia

Emerging Asia (Southeast Asia, China and India) has made remarkable progress over the past four decades. To ensure that the new growth strategies do indeed lead to sustained growth, countries in Emerging Asia need to shift away from growth that is driven primarily by factor accumulation, to growth based on productivity increases driven by improvements in the quality of human and other capital and by innovation.

It is therefore critical for Emerging Asia to undertake the necessary reforms to ensure sustained and robust productivity growth. Some of the policy priorities that will help Emerging Asia to sustain long-term growth and consequently become advanced economies include:

Institutional development

- Institutional capacities to provide human capital, infrastructure and innovation need to be created and strengthened to support the transformation to increasingly sophisticated industries.
- Institutions that support efficiently functioning markets, competition, and a favourable investment and business development climate are critical.
- Institutional capacities to sustain financial and macroeconomic stability are equally important to ensure that resources are allocated efficiently.

Change in the character of "Factory Asia"

The development of middle-income ASEAN countries and China has been characterised by a high reliance on exports of manufactured goods to advanced economies whose production is distributed across regionally-based global value chains ("Factory Asia").

The participation of most middle-income Emerging Asia economies in global value chains is still largely limited to assembly and other less sophisticated, lower-productivity stages. Furthermore, there is need to intensify efforts to assist small and medium enterprises (SMEs) in accessing credit and in integrating into global value chains.

While a number of forces, including rapidly rising wages in China and most ASEAN countries, may curb the growth in demand from advanced economies for manufacturing exports, that trend is likely to be at least partly offset Emerging Asia's rising share of world consumption, and growing economic integration among Asian countries. As a result, Factory Asia is likely to remain of major importance in world manufacturing and a major contributor to regional GDP and economic growth. It will, however, probably evolve towards greater emphasis on supplying regional markets.

Service sector development

Development of the services sector, especially in modern services, will be critical to the success of efforts by middle-income ASEAN countries to become advanced economies. Services provide critical support to their participation in the global value chain, and modern services are essential to their ability to move up the value chain. Service sector development will also be important to the achievement of broader goals, such as reducing poverty and meeting the needs of the growing middle classes. The potential contributions of services to economic development have been further increased by technological changes and liberalisation of trade and investment that have greatly expanded the scope for international trade in services.

Regulatory barriers that limit entry, stifle competition and inhibit investment have been major obstacles to the development of services sectors in developing Asian countries.

Regional co-operation and integration

Regional initiatives to promote co-operation and greater integration can potentially increase the prospects for Emerging Asia in becoming high-income advanced economies.

- Regional integration will enable more efficient division of labour and allocation of resources in the region.
- Regional integration can help to make up for the constraints arising from the limited scale afforded by domestic markets alone.
- Regional co-operation and integration will help to facilitate capital account liberalization.
- The regional initiatives provide incentives for national liberalisation efforts. For example, the prospect of cross-border competition in banking is already spurring banks and their supervisors in individual countries to greater efforts to improve their efficiency and competitiveness.

Source: Economic Outlook for Southeast Asia, China and India 2014: Beyond the Middle-Income Trap

Table 1: Selected Data for China, India and Vietnam, 2014

	China	India	Vietnam
Final Consumption Expenditure (% of GDP)	51	69	70
Gross Capital Formation (% of GDP)	46	32	27
Exports (% of GDP)	22.6	23.2	86.4
Imports (% of GDP)	18.9	25.5	83.1

Source: World Bank

Questions

(a) Using economic analysis, explain how each of the following drives growth in Asia.

(i) low interest rates

(ii) fall in oil prices [4]

(b) With reference to Extract 5, state how the 'persistent US dollar strength' affects the capital and financial account on the balance of payments of Asian countries. [1]

(c) The decline in oil and food prices provides a window of opportunity to further reform or phase out subsidies' (Extract 5).

Explain **one** benefit of the phasing out of fuel and food subsidies to governments of the Asian economies. [2]

(d) Using the information contained in Table 1, explain how current and future living standards of the three countries may be affected.

(e) Assess whether a smaller country such as Vietnam benefits more from a greater regional cooperation and integration than larger economies like China and India, using both the case study and your own relevant knowledge. [8]

(f) Discuss the view that Emerging Asian economies need to shift to growth based on productivity increases driven by improvements in the quality of human and other capital and by innovation in order to achieve sustained growth. [10]

[Total: 30]

<u>H2 Case Study Suggested Answers</u>

Question 1

(a) Compare the price of the solar electricity with that of the average electricity price in US from 2010 to 2030. [2]

- Price of solar electricity falls while the average electricity price remains constant.
- Before 2020, price of solar electricity > average electricity price but after 2020, it's the other way.

(b) Explain how the provision of subsidy to the producers of solar systems will affect the following markets:

(i) **Solar power**

- With the subsidy given to producers, COP of solar power will fall → SS of solar power rises. [1m]
- Price of solar power falls while quantity transacted rises. [1m]

(ii) **Traditional power supply** **[4]**

- Traditional power supply and solar power are substitutes, hence as price of solar power falls, consumers will switch from using traditional power to solar power → demand for traditional power falls. [1m]
- Price of traditional power falls, quantity transacted falls. [1m]

(c) **Explain two sources of market failure that exist in the utility market.** **[6]**

- Two sources of market failure:
  - due to presence of negative externality
  - market dominance.
- Clear explanation of how each source lead to market failure.
  [3m for each source of market failure.]

- Presence of negative externality:
  - State the negative externality presence and therefore the divergence between MPC and MSC. [1m]
  - State the free market and socially optimum output equilibrium. [1m]
  - Explain the welfare loss due to over production and there leading to market failure. [1m]
- Market dominance
  - State that utility firms have large market power due to high BTE. [1m]
  - State the free market and socially optimum output equilibrium. [1m]
  - Explain that P>MC and the welfare loss due to under production and therefore leading to market failure. [1m]

(d) **Discuss the likely factors that Exelon Corporation would have considered when deciding to acquire Pepco Holdings.** **[8]**

- Exelon wants to acquire Pepco likely because it wants to increase its profits, hence it has to consider how the acquisition can lower its costs and increase its revenue.
- Factors to consider to reduce costs:
  - The extent of fall in its COP due to the possible sources of EOS reaped.
    - Technical, Managerial, Financial
  - The potential increase and availability of funds for R&D, such as greener technologies (Evidence from Extract 2 and 3)
- Factors to consider to increase revenue:
  - The potential increase in market share → higher demand
- At the same time, Exelon also has to consider the possible adverse impact on the company:
  - Possibility of diseconomies of scale as the firm gets too big → increase the costs
  - The possible increase in government intervention to prevent consumers being exploited as the firm's market power rises.

- If at the time of acquisition, Pepco is not doing too well, the potential increase in funds may not be huge for Exelon. And the increase in market share will not be much too. But it would also mean Exelon will not go into diseconomies so fast.

- On the other hand, if Pepco is actually doing well, the benefits of Exelon acquiring Pepco will likely outweigh the costs if Exelon is able to manage the company well.

Level	Descriptors	Mark Range
L1	Merely stating some factors without explanation.	**1 – 3**
L2	Clear explanation of the factors (both the benefits and costs of acquisition) to be considered, with reference made to Extract 2	**4 – 6**
E1	Statement/conclusion on whether the acquisition if beneficial to the company	**1**
E2	Reasoned conclusion on whether the acquisition if beneficial to the company	**2**

(e) With reference to the data where appropriate, discuss whether revenue decoupling such as that proposed in the US would be the most appropriate way of reducing carbon emission by the power plants. **[10**

- Revenue decoupling is appropriate:
  - It ensures stable revenue for the utility companies to cover the high COP, hence firms would be willing to engage in R&D to develop greener technology.
  - Firms wouldn't need to waste resources on trying to increase sales and thus able to channel the funds for R&D.
  - It doesn't discriminate against the older power plants which are emitting higher level of carbon.
  - Unlike emission caps, government doesn't need to estimate the external costs of carbon emission and then sets a target which may not coincide at the socially optimum output level. → the possibility of government failure in correctly estimate the external costs.
  - Also, this policy will not drain government's budget like the Public benefit funds. The funds for R&D will come from the utility firms themselves.
  - This policy is also easier to enforce. Additionally, no much publicity is needed for this policy.
  - This is a long term policy.

- However,
  - There won't be much increase in revenue thus no increment in profits. As such, if cost of production goes up, firms' profit will fall, resulting in not willing to engage in R&D for greener technologies.
  - Due to imperfect knowledge, firms can wrongly estimate the power usage and thus charging the consumers at the wrong rates which may not cover their COP.
  - R&D doesn't guarantee success. If the R&D is not successful, resources are wasted and firms may therefore stop their R&D.
- Revenue decoupling is an appropriate policy as the benefits outweigh the costs.
- However, the results may be seen only in the longer run, hence the US government should still have some ST policies to reduce the carbon emission

Level	Descriptors	Mark Range
L1	Merely stating the advantages and disadvantages of revenue decoupling. No mention of whether the policy is appropriate.	**1 – 3**
L2	Clear explanation of why revenue decoupling is more	**4 – 6**

	appropriate than other policies.	
E1	Statements on whether revenue decoupling is the most appropriate.	**1 – 2**
E2	Reasoned conclusion on whether revenue decoupling is the most appropriate.	**3 – 4**

Question 2

(a) Using economic analysis, explain how each of the following drives growth in Asia.

(i) low interest rates

(ii) fall in oil prices **[4]**

(i) Low interest rates → cost of borrowing ↓ → I ↑
Low interest rates → opportunity cost of spending ↓ → C↑
AD ↑ → NI ↑ by a multiple → actual growth

production → SRAS ↑ → NI ↑

2m for each part

(b) With reference to Extract 1, state how the 'persistent US dollar strength' affects the capital and financial account on the balance of payments of Asian countries. [1]

Capital and financial account worsens Or capital outflow in the capital and financial account – 1m

(c) 'The decline in oil and food prices provides a window of opportunity to further reform or phase out subsidies' (Extract 1).

Explain one benefit of the phasing out of fuel and food subsidies to governments of the Asian economies. [2]

Governments can channel funds to other areas like infrastructural development and education to stimulate/develop the economies → results in more efficient use of funds

Governments can reduce spending and hence improve fiscal balance → helps to reduce fiscal deficit if any or helps to build up fiscal surplus and allows governments to be in better position to stimulate economy in the case of any future recession/sluggish growth

Any clear explanation of how removal of subsidies benefits ---2m

(d) Using the information contained in Table 1, explain how current and future living standards of the three countries may be affected. [5]

Total final consumption expenditure figures more than 50% of GDP→ current consumption is high and hence material well-being of the people is high.

Vietnam's imports constitute >80% of its GDP and consumption figure is 70% of GDP →a high current living standard especially if most of these imports are consumer goods and services.

Future living standards of the countries are likely to be affected by their high current consumption. A high level of current consumption means fewer resources can be channelled to investment → reduced capacity in the future to produce goods and services to meet consumers' demand → future standard of living is compromised.

Proportion of GDP devoted to capital goods (Gross capital formation as a % of GDP) is very low in India and Vietnam, and hence these two countries' future living standards are most likely to be compromised.
However, in Vietnam, if a large proportion of its imports are capital goods→ capacity to produce more goods and services in the future can increase → living standard may not be as badly affected as that in India.
[Also accept the point that if India's trade deficit persists it may point to a slower growth → future standard of living will be adversely affected]

Explanation confined to only current **or** future living standards --- max 3m

that with more consumer goods living standard is high --- max 2m
Reference to data to explain both current and future living standards --- 4-5m

(e) Assess whether a smaller country such as Vietnam benefits more from a greater regional cooperation and integration than larger economies like China and India, using both the case study and your own relevant knowledge. [8]

Greater regional cooperation and integration will benefit emerging Asian economies, whether big or small

- More efficient allocation of resources within the region → All countries can consume beyond their PPCs.
- Access to the regional market → more opportunities for domestic firms to reap economies of scale and Xs ↑
- Capital account liberalisation → FDIs ↑ → NI ↑

Smaller countries like Vietnam may benefit more

- Trade plays a significant role (Xs and Ms make up a larger proportion of the Vietnam's GDP)
  Greater cooperation and integration → volume of trade increases → benefits the small and open country significantly.
- Market for Vietnam's exports expands due to access to the regional market → export-driven growth. Bigger countries, like China and India, can rely on domestic consumption to drive growth instead of depending on exports.
  Firms in Vietnam can now operate on large scale and enjoy economies of scale as they now produce for a much bigger market.
- More inward FDIs → make up for the lack of funds for large scale investment projects in a small country like Vietnam (lower level of investment in the country compared to China) → both actual and potential growth.
  Inward FDIs also bring in a lot of other benefits like technical know-how and managerial skills.

However, extent of benefits depends on:

- Openness of the economy
- Type of goods that the country imports and exports

Conclusion:
All Emerging Asian economies will benefit with greater regional cooperation and integration and smaller economies that are more open to trade and capital flows are likely to benefit more.

Level	Descriptors	Mark Range
L1	Explanation of benefits of greater cooperation and integration without much reference to small countries like Vietnam	1 – 3m
L2	Balanced answer with clear explanation of why small countries may or may not benefit more	4 – 6m
E1	Statement/conclusion on whether small countries benefit more	1m
E2	Reasoned conclusion on whether small countries benefit more	2m

(f) Discuss the view that Emerging Asian economies need to shift to growth based on productivity increases driven by improvements in the quality of labour and other capital and by innovation in order to achieve sustained growth. [10]

To achieve sustained economic growth in Emerging Asian economies both AD and AS must increase.

AD in Emerging Asian economies is robust and will continue to grow due to

- Global recovery
- Demand in the regional market ↑

Need to increase AS. Otherwise, NI of these countries will increase up to the full employment level and inflationary pressure will then set in.
Emerging economies need to increase AS by increasing productivity

- Improving quality of labour and capital, and innovation → productivity and productive capacity ↑ → AS ↑ and entire AS curve shifts to the right → NI ↑ → economies enjoy both actual and potential growth.

But much depends on the structural reforms that must take place in these economies
Challenges for Emerging Asian Economies
-Development of institutional capacities to provide human capital, infrastructure and innovation
-Development of favourable investment and business environment
-Change in the participation of these economies in global value chains
-Development of service sector to provide the critical support to these economies' participation in the global value chain.

Conclusion:
As AD increases and will continue to increase, Emerging Asian economies need to shift to growth based on productivity increases driven by improvements in the quality of labour and other capital and by innovation. However, efforts must be channelled to ensure the structural reforms take place or else these countries would not be able to successfully raise productivity and achieve innovation needed to sustain growth.

Level	Descriptors	Mark Range
L1	Mere analysis of increase in AS without recognizing increase in AD and the challenges/problems that countries must address	1 – 3m
L2	Thorough analysis of the need to increase productivity in the light of increase in AD and the challenges the countries faced and arriving at a conclusion	4 – 6m
E1	Evaluative statements made regarding the need for growth based on productivity increases	1 – 2m
E2	Explained conclusion regarding the need for growth based on productivity increases	3 – 4m

H2 Economics Prelims Essays Suggested Answers

1 The recent strong economic growth and the advancement in technology have had major impact on the demand for and supply of air travel.

Assess how the markets for low cost carriers and full cost carriers might be affected by the above. [25]

Low cost carrier	**Full cost carrier**
• Economic growth – increase in household income -- for inferior goods (low cost carrier may be perceived as inferior compared to their full cost counterparts) – DD for air travel decreases	• Economic growth – increase in household income – for normal goods – DD for air travel increases • For normal and necessity goods – higher degree of need for the good – consumers like businessmen would likely face an income inelastic DD curve – for a given increase in income, DD for air travel increases by less than proportionate • For normal and luxury goods – lower degree of need for the good – consumers like holiday-goers would likely face an income elastic DD curve – for a given increase in income, DD for air travel increases by more than proportionate
• Advancement in technology – higher productivity – lower AC – SS increases	

Inferior goods
• Decrease in DD
• Increase in SS
 	
Impact on the market
• Decrease in eqm p – explained using the price adjustment mechanism
• The impact on eqm Q depends on the extent of the shift of the 2 curves
  o If DD decrease > SS increase → eqm Q decreases
  o If DD decreases < SS increase → eqm Q increases
  o If DD decrease = SS increase → eqm Q remains unchanged
	Normal and necessity goods
	• Increase in DD (by less than proportionate)
	• Increase in SS
	
	Normal and luxury goods
	• Increase in DD (by more than proportionate)
	• Increase in SS
	
	Impact on the market
	• Increase in eqm Q
	• The impact on eqm P depends on the extent of the shift of the 2 curves
	  o If DD increase > SS increase → eqm P increases
	  o If DD increases < SS increase → eqm P decreases
	  o If DD increase = SS increase → eqm P remains unchanged

• Diagrams drawn to illustrate the impact on P and Q on the different types of goods	

Note:
- *Technology can also affect the DD (and not just the SS)*
- *XED can be used to explain the extent of the shift of the curve*

2 (a) Explain how barriers to entry determine a firm's pricing and output decisions. [10]

Define barriers to entry

Barriers to entry refer to any impediments that prevent new firms from entering an industry and limit the competition faced by existing firms.

Explain how high barriers to entry determine a firms pricing and output decisions

- Industry with high barriers to entry, may only have a few large firms dominating the market (oligopolies) or it may only have 1 firm in the market (monopoly)
- Firms in the industry will therefore have strong market power and can have control over the market price. Each firm will have the market power to set its own price or quantity to be sold but not both at the same time. If the firm decides to set the price in the market, then it would have to leave the resulting quantity demanded & sold to the market to determine. If the firm decides to raise its price, quantity demanded will fall. Alternatively, the firm can restrict output in order to raise the price. This implies that the demand curve (AR curve) that the firm faces is downward sloping.
- The higher the BTEs, the more price inelastic is the demand curve and the lower the BTEs, the more price elastic the demand curve.
- Each firm's MR curve is below the AR curve as price needs to be reduced if firm wants to sell an additional unit of the product.
- If the firm aims to maximises profits, the firm will produce at a level where the extra revenue earned from selling the last unit is just equal to the extra cost of producing that last unit, i.e. where MR = MC.
  Reason: When MR>MC, an additional unit produced adds more to the revenue than to the cost and hence profits can still increase by producing the extra unit. When MR<MC, an additional unit produced adds more to the cost than to the revenue, hence reducing the firm's profit and thus the firm will not produce the extra unit.
- At this output level, where MR=MC, P>MC, since AR(AR=P) is above MR.

Explain how the absence of barriers to entry determine the price and output decisions

- In a perfectly competitive market where there are no barriers to entry, new firms can easily enter the industry. There will be many firms in the industry.
- Each firm will only contribute an insignificant proportion of the total market supply and so has no power to influence the market price. The firm is a price taker, selling its product at the market-determined price which is determined by the total demand and supply in the market.
- The demand curve of each firm is perfectly price elastic. AR=MR
- The profit-maximising firm will produce the output level where MR=MC. Since MR=AR=P, the firm produces where P=MC

Conclusion

Barriers to entry determine the shape of a firm's AR/DD curve and this influences the firm's pricing and output decisions.

(b) Discuss the likely benefits to society if the barriers to entry were removed. **[15]**

Introduction

Removal of barriers to entry leads to increased competition in the market. Both consumers and producers can benefit from this.

Development

Benefits from removing barriers

- Increase in number of firms operating in the industry→ firms produce at or near P=MC → remove or reduce the extent of allocative inefficiency caused by market dominance
- Since P is equal to or closer to MC, consumer surplus is maximised or the extent to which producers rob consumers of their surplus is reduced
- New firms enter the industry→ each firm's demand fall → AR curve of each firm shifts to the left→ p and q falls → TR falls and supernormal profits are competed away → all firms earn supernormal profits→ there is a more equitable distribution of income in society as there is no sustained redistribution of income to the producers
- With an increase in competition, X-inefficiency is also avoided – as the firm is kept on its toes and would not face a lack of motivation from staff, lax cost controls and undertake unnecessary spending

Costs of removing barriers

- With an increase in the number of firms – incumbent's supernormal profits are eroded – limits their ability to conduct R&D to discover cost-efficient methods of production, or to innovate – dynamic efficiency is reduced
- In the case of a natural monopoly which faces a falling AC and MC over a large range of output, removing barriers may lead to them making losses as their TR cannot cover their TC – this is because the firm has to produce on a large scale in order to reap substantial EOS -- once the natural monopoly is prevented from doing so, it shuts down, and consumers are deprived of the good

Conclusion

- There may be costs to society when BTE is removed but it also makes sense if government comes in to intervene to ensure the benefits to society is maximised

3 (a) Explain why markets fail in the case of public goods and in the consumption of alcohol. [10]

Explain why market fails in the case of public goods

- State that public goods are goods that exhibit 2 characteristics:
    - Non excludable
    - Non rivalrous in consumption
- Explain the implication of each characteristics.

	Non-excludability	Non-rivalrous in consumption
Definition	A good is non-excludable when it is impossible or very costly to exclude non-payers from consuming it.	A good is non-rivalrous in consumption when the consumption of the good by one person does not reduce the amount of satisfaction of the next person consuming the same good.
Implication	Non-payers can also enjoy the good or service, leading to the **free ridership problem**. Consumers will not reveal their preferences and there will be **no effective demand**.	To provide the good for an additional consumer, no additional resources are needed. Thus, the marginal cost of producing an additional unit of good for the next person is zero. As society aims to be allocative efficient, price equals marginal cost, and since the marginal cost is zero, P=0. There is no incentive for producers to supply the good at all.
As a result	There will be no price signal and the good or service will not be provided by the free market. There is no resources are allocated to the provision of public goods.	

- Explain that in the case of public goods, there is complete market failure.

As there is no signal of effective demand and supply in the market, no resources will be allocated to the production of the good in the free market. Hence there is complete market failure.

Explain why market fails in the case of consumption of alcohol

- State that alcohol is considered as a demerit good because the government deems consumption of alcohol as undesirable.
- State also that there is a tendency for overconsumption of alcohol as consumers are not fully aware of the cost of consuming alcohol and that consuming alcohol generates large amount of negative externalities.
- Explain the possible negative externalities generated from the consumption of alcohol.
    - In consumption of alcohol, there are negative spill-over effects such as accidents caused by drunk driving, ruckus caused by highly intoxicated people.
- Explain how the presence of negative externalities lead to market failure.
    - The presence of negative externalities leads to the divergence between MSC and MPC as MEC on third parties not accounted for.
    - Explain that the private optimal consumption level > social optimal

level, therefore over allocation of resources to the consumption of alcohol. [Illustrate with diagram]
  - State the welfare loss, hence there is market failure.

Alternative explanation
Explain how due to presence of imperfect information, consumers are unaware of the full extent of the costs of consuming alcohol, thus undervalues the MPC, leading to over allocation of resources for the consumption.

(b) Evaluate the policies that the Singapore government can adopt to correct these causes of market failure. **[15]**

Introduction
- State that as market fails in the case of public goods and in the consumption of alcohol, there is a need for government intervention to correct the market failure.

Development
- Policy adopted to correct market failure in the case of public goods:
  - Direct provision by the government
    - When there exists complete market failure, as in the case of public goods, there is a need for direct provision.
    - Since goods/services like national defence and law enforcement are non-excludable and non-rivalrous in consumption, there exists a missing market and no producer will be willing to produce the good/service even though provision of the good/service benefits the society.
    - Thus in order to ensure efficient allocation of resources the government directly provides for the good.

    - However, it is difficult for government to have complete knowledge of the right amount of the good to be provided. (information failure)
    - In addition, such policy puts a strain on government's budget which can be used to develop other sectors, which are important to aid economic growth in the country

- Policies adopted to correct market failure in the consumption of alcohol:
  - Legislation to discourage consumption of alcohol
    - Legislative Acts such as ban of the sales of alcoholic drinks after 10.30pm.
    - This policy reduces supply of alcohol after 10.30pm, thus the quantity available for consumption falls. Hence curbing the over consumption problem.
    - Such Acts may also increase the cost of getting access to alcohol. Thus increasing the MPC of consuming alcohol. As MPC rises, the quantity consumed by consumers to maximised their net private benefit will fall, Hence solving the over consumption problem.
    - This policy is simple to implement, relatively easy to administer. And any sellers who break the law will be heavily punished.

    - However, there will be high enforcement cost, such as the high cost involved in getting law enforcers to conduct regulatory checks.

- o Taxation
    - Imposing taxes equivalent to the marginal external cost at the socially optimal level of output increases MPC to MSC, reduces consumption of alcohol (illustrate and explain using diagram the shift of MPC curve to MSC curve)

    - However, due to complexity and inaccurate information, it is hard to measure and quantify the amount of negative externalities given off due to consumption of alcohol, hence it's difficult to impose the correct value of tax to fully internalize the different types of negative externalities exhibited.
    - In addition, if the consumers are alcohol addicts, their demand for alcohol will be highly price inelastic. Thus, it will require a very high amount of tax to reduce alcohol consumption.
- o Campaigns to increase the awareness of costs of consuming alcohol
    - Educating people on the costs of consuming alcohol to increase their awareness and thus closing the gap of imperfect information.
    - As consumers have more knowledge of the costs of alcohol consumption, their MPC will increase and as such the quantity they consumed will fall. Problem of over-consumption is thus solved.

    - However, it is difficult to change the mindset of people, some people may think that precaution measures are not necessary.
    - Nonetheless, such policy is needed for long term impact.

Conclusion

- Effectiveness of intervention in these markets depend on the severity of market failure and the appropriateness of intervention.
- If extent of market failure is small, less intervention is required, for e.g if MEC is small, perhaps some efforts to raise awareness is sufficient, as opposed to large taxes which might unnecessarily distort the workings of the free market.
- Even in the case of public goods, effectiveness of direct provision cannot exist alone as strict regulation and monitoring are also required in order for resources to be efficiently allocated. i.e. army and police force are given sufficient funds for operation and not for resources to be unnecessarily wasted.
- Presence of good governance would prevent government failure and ensure a greater success of the implementation of the policies.

4 Explain the conflicts that exist between the major macroeconomic objectives and discuss the extent to which exchange rate policy alone can be effective in achieving these macroeconomic objectives in Singapore. [25]

Introduction

- Explain the 4 macroeconomic objectives
- The 4 macroeconomic objectives can be achieved by demand management policies and/or supply-side policies. Use of demand management and supply-side can sometimes lead to conflicts in achieving the macroeconomic objectives.

Development

1. Use of expansionary demand management policies such as EFP can lead to conflict between macroeconomic goals <use graph to illustrate>.

Conflict 1: When the government tries to achieve actual growth (and full employment), it will lead to demand-pull inflation

AD rises along upward sloping portion of AS curve (actual growth) → economy has little excess resources → competition for resources by producers bid up factor prices → translates into higher COP is then passed on to consumers through higher consumers prices + exports become less price competitive.

→ Employment goals achieved at the expense of higher inflation and possibly worsening BOT.

2. Use of supply-side policy can lead to conflict between macroeconomic goals.

Conflict 2: When the government tries to achieve potential growth, it will lead to structural unemployment

Successful supply-side measures increase quantity and improve quality of factors of production → potential output increases → productivity ↑, COP ↓, GPL ↓ and export competitiveness (price and product) ↑, possibly improving BOT.

→ ↑productivity through automation and labour-saving innovations increases structural unemployment.

Note: Other conflicts are also acceptable

3. Exchange rate policy can be effective in achieving macroeconomic objectives in Singapore.

Singapore is a small and open economy. Small size and lack of resources → need to import resources and final goods and services from overseas → Increasing import prices is one main source of inflation.

Appreciation of SGD: Pm of final goods and services↓ in SGD → GPL↓ directly
Pm of intermediate goods and raw materials ↓ in SGD → COP↓ → GPL ↓ → helps to curb **imported inflation** in Singapore
Moreover, Singapore's exports have high import content → Improved price competitiveness of SG's exports, BOT improves →net exports ↑, AD↑, Y↑ by multiples (**actual growth**). With improvement in BOT, it will also **improve the current account**.

SG's ERP stance of stable, appreciating currency reduces exchange rate risks and is conducive for international trade and investment → attracts FDI (**improves capital and financial account**) → benefits: capital accumulation, skills and technology transfer →LRAS shifts right (potential output increases), makes **sustained growth** possible.

4. Exchange rate policy <u>alone</u> may not be effective in achieving macroeconomic objectives in Singapore

- Appreciation of SGD lowers import prices only through the currency effect. The effects of an external shock such as a sharp increase in oil prices <u>may not be fully mitigated</u> by currency appreciation and can translate into higher COP, threatening export

- Stable, long-term appreciation alone is not sufficient to attract FDIs. Other factors such as political stability, good industrial relations, availability of supporting infrastructure, are also very important.
- Inflationary pressures from domestic sources such as higher wages from a tight labour market, wealth effect from appreciating asset prices causing increase in domestic consumption cannot be addressed through appreciating the SGD.
- Structural unemployment cannot be solved by ERP as the root cause of the problem is the mismatch of skills due to the changing structure of the economy. As such, it is more appropriate to use supply-side policies to tackle the problem.
- Demand for SG's export and direct investment into SG depend on world income levels as well as the level of optimism in the world economy. These factors are external and cannot be influenced by domestic policies.
- In addition to capital accumulation, which may be encouraged through ERP, SG also needs to develop her workforce through **other supply-side measures** such as education, training and re-training, to achieve sustained growth. ERP alone is insufficient.

Conclusion
In the case of Singapore, because of the characteristics of Singapore economy, ERP has proven to be effective in achieving our macroeconomic aims and it is our main policy to stable prices. With price stability, our macroeconomic objectives can be achieved. However, ERP alone is definitely not effective enough because it is important to look at the root cause of the problems before using the appropriate policies to achieve the macroeconomic aims.

5 Economists are concerned that the Chinese economy is too dependent on exports and investments for growth.

(a) Using the circular flow of income, explain how an increase in exports and investments can affect China's national income. [10]

Requirements:
- Circular flow of income – identify that exports and investments are J
- Process to bring national income back into equilibrium
- Multiplier process

In a circular flow of income, the national income equilibrium is determined when total planned injections equal to total planned withdrawals. Injections include investment, government spending and exports revenue while withdrawals consist of savings, taxes and imports expenditure. When injections do not equal to withdrawals, a state of disequilibrium will exist. This will kick in a process to bring the economy back into equilibrium.

An increase in exports and investments will increase the total injections. As J > W, there will be unplanned running down on stocks. Firms then step up production and increase the demand for factors of production. As firms hire more resources, they also pay out more factor income. As national income and purchasing power starts to increase, it will induce more consumption. **Since one person's spending becomes another person's income, national income will increase by multiples assuming that value of MPC is between 0 and 1.** Furthermore, households will not only spend more on domestic goods, they will tend to save more, pay more taxes or buy more imports, thus increasing the amount of withdrawals. Withdrawals will continue to rise until it is equal to injections. The equilibrium is thus achieved at a higher national income.

(b) Discuss whether a country's high rate of economic growth achieved by depending heavily on exports and investments is desirable. [15]

Requirements:
- Balanced discussion with a good scope of analysis:
- Advantages of economic growth
- Disadvantages of
    - Too heavily dependent on external factors for growth
    - **High** growth rates
- Evaluation/judgement

It is desirable for a country to achieve high rate of economic growth by depending on exports and investments

- Able to tap on international market that enables the demand for domestically-produced goods to expand → volume of trade increases → firms can now operate on large scale and enjoy economies of scale → lower cost of production
- FDI allows for transfer of technological knowledge and skills from foreign firms to domestic firms, thereby improving productivity
- Increase in X and I increases AD and LRAS, thus achieving actual and potential growth, and increasing employment level
- Higher national income → higher purchasing power → higher material SOL
- This is especially desirable for an economy with relatively small domestic market. Eg. Singapore relies on trade and investment for growth→ X revenue is a significant component of AD → enables it to depend on increase in X revenue (rather than C) to achieve high growth rate. There is also a need for FDIs to invest in this small domestic

However, there are situations where it may be undesirable for a country to achieve high rate of economic growth through exports and investments

- Vulnerable to external shocks - If country Z's trading partners faced a recession → their NY falls→ demand less imports from other countries → translates to less X revenue and I spending in country Z → AD falls → RNY falls by multiples & higher unemployment level → undesirable as country Z's growth is dependent on the state of other countries
- If most goods and services produced in the country are exported, left very little for domestic consumption → undesirable as material SOL is compromised
- With more investments entering the economy, there may be a changing structure of the economy as it changes from labour intensive to capital intensive industries. Structural unemployment may result if the workers' skill level did not keep pace with the advancement of technology/ if there is a displacement of low-skilled workers through automation and improvement in quality of technology → labour not used fully → undesirable because there will loss of potential output and income
- Not sustainable to maintain such high growth rates → Rapid depletion of non-renewable resources → may compromise growth in the future
- Deterioration of the environment (higher pollution and waste level) → lower SOL

<u>Evaluation</u>

An investment or export-driven economy such as China has to depend on the state of the global economy and foreign demand for its products. If consumption cannot increase to play a much larger role in aggregate demand, then this rapid growth will slow down or even stop at some time in the future. With prospects for export growth weakening, such economy needs to rebalance its growth away from potentially volatile net exports toward a more sustainable path driven by domestic demand.

6 (a) Explain how the concept of opportunity cost can be used in explaining why countries trade with each other. [10]

Introduction

- Countries trade with each other because there are benefits to trading. The gains from trade can be partially explained by the principle of comparative advantage, which allows a country to specialise in producing goods at a lower opportunity cost, given its labour, natural resources and technology.
- World output will increase due to specialisation and countries can now trade in their exports with their trade partners to obtain imports which they would have to incur a higher opportunity cost if they were to produce the goods themselves. Thus, when countries are able to exploit the differences in opportunity cost of production, they can consume beyond their production possibility curve and enjoy a higher standard of living.

Development

1. Production gains can be achieved through specialising production in goods which the country can produce at lower opportunity cost.
   - A country has comparative advantage (CA) over another country in the production of a good if it can produce it at a lower opportunity cost, i.e. if it has to forego less of other goods in order to produce it.
   - Differences in opportunity costs arise, e.g. as countries have different endowments of factors of production and different level of technology, the ability to produce goods differ between countries What this means is that the opportunity cost of producing goods that requires different factors of production varies from country to country. Example of Singapore's CA in production of goods requiring high-skill labour and advanced technology.
   - Differences in opportunity cost would lead to specialisation, i.e. due to differences in factor endowments and therefore differences in opportunity cost, a country should specialise in producing and exporting the goods in which it has a comparative advantage in because the opportunity cost of producing them is lower.
   - <Use a simple example to illustrate>
   - Suppose a two country, two good model, and the two countries (China and Singapore) spend equal amount of resources into producing both cloth and hard disk within the country :

Country	Cloth (m)		Hard Disks (units)
China	500	and	250
Singapore	400	and	800
Total output	900	and	1050

In this case, to produce 1 unit of cloth, China gives up producing 0.5 unit of hard disk. For Singapore, to produce 1 unit of cloth, the country has to give up producing 2 units of hard disk. China therefore incurs lower opportunity cost in producing cloth, and Singapore would incur a lower opportunity cost in producing hard disks.
Suppose the two countries completely specialise their resources in producing the good whereby they have a comparative advantage:

Country	Cloth (m)		Hard Disks (units)
China	1000	and	0
Singapore	0	and	1600
Total output	1000	and	1600

In this case, the output of cloth would increase by 100 units and output of hard disk increase by 550 units.

2. Countries can benefit from the exchange of goods at a mutually beneficial trade price that was set in between the opportunity cost of production of the two goods in the two countries.
   - Subsequently, Singapore and China can engage in trade to exchange their outputs. To do that, countries would have to agree on a mutually beneficial exchange ratio (i.e. terms of trade). The terms of trade is defined as the rate at which two goods will be exchanged in trade, i.e. the amount of a good or service that must be given up (opportunity cost) to buy a unit of another good or service.
   - A mutually beneficial exchange ratio is one where each country will now be able to import the goods in which it does not have a CA in, at a lower opportunity cost (as compared to if it tries to produce the good itself).

   In this case, the TOT for 1 unit of cloth must be set between 0.5 and 2 units of hard disk. Suppose the TOT is fixed at 1 unit of cloth for 1 unit of hard disk and Chins exports 450 cloth in exchange for 450 units of hard disk:

Country	Cloth (m)		Hard Disks (units)
China	550	and	450
Singapore	450	and	1050
Total output	1000	and	1600

   Singapore will enjoy an additional 50 units of cloth and 200 units of hard disk compared to the pre-specialisation and trade, and China enjoys an additional 50 units of cloth and 250 units of hard disk.

   - As a result, both countries get to consume beyond what they can produce for themselves if they do not trade, allowing the two countries to enjoy a higher standard of living.

Conclusion
In conclusion, countries trade because they can benefit from the exchange, and this was made possible due to differences in opportunity costs of producing the two goods within the two countries.

(b) To what extent does this concept explain the pattern of trade between Singapore and the rest of the world? [15]

Introduction
- Examining Singapore's pattern of trade requires one to consider Singapore's trade partners as well as the volume and composition of goods and services that Singapore imports and exports.
- Singapore's top export destinations in order of trade value are Hong Kong, China, Malaysia, Indonesia and Other Asia. The top import origins are China, Malaysia, the United States, Other Asia and South Korea.
- The concept of opportunity cost can be useful in understanding the composition of goods and services that Singapore imports and exports.

Development
1. **Singapore's pattern of trade can be explained through the concept of opportunity cost.**
   - The openness of Singapore implies that it has a high degree of exchange in capital,

through the capital goods used by foreign firms. Singapore also has a highly skilled labour force (both foreign talents and an educated domestic workforce).

- The congregation of technology, as well as highly productive physical and human capital meant that Singapore tends to incur a lower opportunity cost and hence exports high-technology and skills-intensive goods and services. In terms of visible trade, Singapore is a net exporter of chemical products, machinery, and transport equipment. In terms of invisible trade, Singapore exports high-skilled-labour intensive services such as in the areas of Bio-Medical Research & Development, as well as financial services.
- In particular, Singapore has a large oil refining industry. Singapore imports crude oil to refine into oil-based products like diesel and petroleum. While much of the products are exported, some are for domestic use, which is why Singapore is a net importer. While Singapore does not have any oil resources, it still has a comparative advantage in capital-intensive, high-tech, and high-skilled oil refining. Therefore, it would seem that the concept of opportunity cost does explain Singapore's export pattern.
- At the same time, Singapore incurs higher opportunity cost in producing land- and low-skilled-labour-intensive products. Hence, the lack of specialisation in these areas explains why Singapore is a net importer of non-oil products like food, beverages and tobacco and animal and vegetable oils.

2. **Singapore's pattern of trade can also be explained by other factors besides the concept of opportunity cost.**

Demand-side reasons

- Intra-industry trade (trade in the same industry) may also take place despite similar opportunity costs in production due to differences in taste and preferences. There are differences in taste and preferences due to different lifestyles, technological innovations and improved product design. This means that there will be trade between Singapore with other countries in goods and services in the same industry. E.g. Singapore export banking services (e.g. DBS, OCBC, UOB) to other countries but we also import banking services from other countries (e.g. HSBC, Citibank).

Historical/Geographical Reasons

- As Singapore is a transhipments hub as well as a famous hub for entrepot trade, much of its imports are re-exported out of Singapore. Often Singapore is only a temporary destination for goods meant for re-export. Such transhipment trade is not related to comparative advantage and hence the concept of opportunity cost, but are more due to Singapore's locational or geographical, positional advantage along major shipping routes.

Conclusion

<candidates should take a stand and provide reasons>

- The concept of opportunity cost does explain many aspects of Singapore's trade pattern. While the openness of the economy as well as the government's supply-side policies have been fairly successful in shaping Singapore's comparative advantage (lower opportunity cost) in producing technology, physical and human capital, and knowledge-intensive products and services, Singapore government's strategy of always anticipating and preparing its productive capability for the emerging products and services have also been fairly important in influencing the pace of change in its comparative advantage (changes in opportunity cost) and hence in the changes in Singapore's trade pattern.
- Furthermore, as the pace of countries' exchange through the Trans Pacific Partnership quickens, trade barriers are increasingly reduced or eliminated. As such, Singapore will increasingly import from countries which can produce the good or service at lower opportunity costs and export to countries that incurs higher opportunity costs in production. This should further open up the Singapore economy to many other export and import markets which should further affect Singapore's trade patterns through changes in opportunity costs.