



**CATHOLIC JUNIOR COLLEGE**  
**JC2 Preliminary Examinations**  
**Higher 2**

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**ECONOMICS**

**9757/01**

Paper 1

**20 Aug 2018**

Additional Materials: Writing Paper

**2 hour 15 min**

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**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 section on a new sheet of paper.**

Answer **ALL** questions.

At the end of the examination, fasten your work securely together.

Submit each section **separately**.

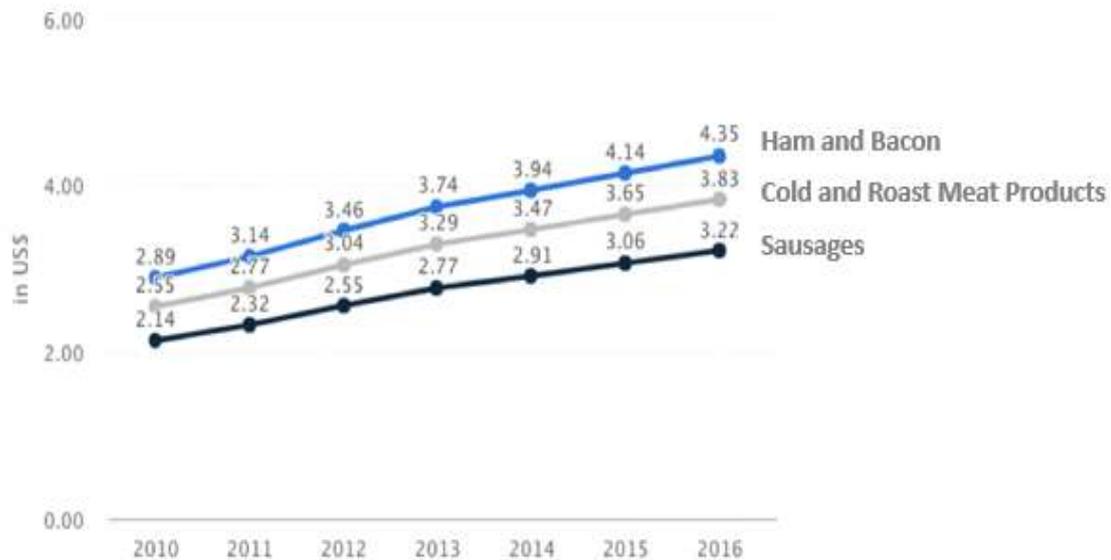
The number of marks is given in brackets [ ] at the end of each question or part question.

Answer **all** questions

### Question 1

#### The Market for Meat Products in India

Figure 1: Prices of various meat products in India from 2010 to 2016



Source: *Statista*, accessed 26<sup>th</sup> June 2018

#### Extract 1: Here's what is in store for the meat industry in India

India's per-capita consumption of meat products stands at 4.4 kg per person, which puts it at the second position on the list of countries with the least meat consumption per-person. However, this distinction can be attributed to its 2000-year-old tradition of vegetarianism. And like all old cultures, this one is changing as well.

The demand for meat products is expected to grow faster in India with sustained economic growth, strengthening urbanisation trends and increasing awareness of the nutritive value of meat and meat products. By 2020, the demand for milk is estimated to reach 143 million tonnes and that of meat and eggs eight million tonnes.

This increase in demand called for capitalisation on the part of producers. This primarily occurred in the form of increased development of technology which hastened the processing of livestock based products. The increase in production has however picked on rather dimly.

Livestock rearing serves as a much better alternative for millions to earn a livelihood. Hence, the government has introduced subsidies and exemption on excise duty for meat products to further the cause of employment.

Source: *World Economic Forum*, December 2017, accessed 1<sup>st</sup> July 2018

**Table 1: Income elasticities of demand for various type of meat products in India**

Beef	0.327
Mutton	2.265
Chicken	1.165

Source: *National Center for Agricultural Economics and Policy Research*, accessed 27<sup>th</sup> June 2018

**Extract 2: PETA asks government to tax meat, other animal derived foods**

In India, the consumption of beef, chicken, eggs, dairy and other animal derived foods is on a rapid rise. While vegetarian and vegan eating is also increasing between 2004 and 2014, the amount of meat, eggs or dairy foods consumed per person in India is the highest it has been in history and it is projected to grow further.

People for the Ethical Treatment of Animals (PETA), an Indian Animal Rights Organization, has asked the Indian government to levy a tax on meat and other animal derived foods for their damaging effects on environment and public health in a letter addressed to the Finance Minister.

The animal rights body asserted that this extraordinary upsurge in the consumption and production of these foods in India adversely impacts animals, of course, but also the health of its citizens, water availability, air and water pollution, greenhouse gas emissions and climate change and food supply to the poor in colossal ways.

In its letter, PETA also said that cattle transfer almost 12 million tonnes of methane -which traps 25 times as much heat as carbon dioxide does - into the atmosphere via flatulence every year. It added that "taxing meat could discourage citizens from consuming these damaging products and could bring in revenue that could help support costs related to the damage to public health and the environment because of meat, eggs and dairy foods."

Source: *The Economic Times*, January 2018, accessed 27<sup>th</sup> June 2018

**Extract 3: The future of jobs: Why India must embrace the new era of artificial intelligence, block chain and robots**

The fourth industrial revolution is being driven today by technologies that are transforming industrial production, for example, autonomous robots, simulation, additive manufacturing and artificial intelligence (AI). These technologies are impacting the entire production value chain from design to productivity, speed and quality of production.

Traditional manufacturing and service oriented industries are being disrupted in a manner we have never seen before. One example would be Impossible Foods Inc., a fourth industrial revolution technology company that makes a plant based food that smells, tastes, looks like real meat. It threatens the future of the \$90 billion meat industry. If only 20% of world population switches from eating real meat to alternative proteins it would free up 12% of total fresh water, free 400 million hectares of land and 960 megatons of CO<sub>2</sub> emission.

Studies have shown that the fourth industrial revolution has the potential to add \$957 billion to India's economy by 2035, lifting it by 15%. However, there is widespread concern over its potential impact on the employment, especially in the Indian meat industry. A vast range of jobs are at risk of extinction and rapid scaling could lead to accumulation of job losses. The other fear is that new technologies would lead to increase in inequalities and lack of social cohesion. There will thus be considerable need for re-skilling and training. India needs massive upgradation programmes in new technologies. It must redefine itself as an institute driving cutting edge technologies for the fourth industrial revolution.

Source: *The Times of India*, February 2018, accessed 1<sup>st</sup> July 2018

### Questions

- 1 (a) (i) Compare the relative price changes of different meat products in India from 2010 to 2016 shown in Figure 1. [2]
- (ii) With the help of a diagram, explain the factors that contributed to the above overall trend of meat product prices in India. [4]
- (b) Analyse the likely impact of the subsidies and exemption on excise duty on employment in the Indian meat industry. [4]
- (c) Given the information in Table 1, explain which type of meat product may be considered more of a luxury by Indian consumers. [2]
- (d) To what extent is the fourth industrial revolution likely to lead to an improvement in standard of living of Indian meat producers? [8]
- (e) Discuss the factors that could influence the government's decision to levy a tax on meat and other animal related products. [10]

[Total: 30]

## Question 2

### Challenges and opportunities in China

#### Extract 4: Three things that weakened China's economy in 2016

Bringing about growth was tough for Chinese policy makers throughout 2016. Even with loosened liquidity and government intervention, annual growth fell to a consistent 6.7% in the first three quarters of this year, the slowest rate seen in 25 years.

These numbers belie three important weaknesses in the large economy that threaten China's role as a major global growth driver:

- Fixed asset investment is no longer coming from the private sector.
- Overcapacity is acting as a burden on the government.
- The services sector is not competitive enough to make up for lost growth elsewhere.

First, fixed asset investment grew 9% year-on-year in the first half of this year, but slowed thereafter. The figure was down from 10% last year. Government-ordered investment by state-owned enterprises also helped boost numbers, but private investment, a reflection of market sentiment, lagged behind due to lack of confidence in growth prospects.

Second, overcapacity in heavy industrial sectors, like steel, aluminium, cement and coal, remains a problem. As international and domestic demand for construction materials and production inputs have dropped off, factories are left with excess supply. The steel industry in particular is locked in a conflict between flooding excess supply to international markets and angering Western nations, or hoarding large inventories and facing losses while averting the fury of the United States and Europe. China has chosen the former option, and the surplus has resulted in backlash among foreign importers of steel.

Third, reform in the services sector lags behind. The bulk of the services sectors, such as transportation, healthcare, information technology and transmission, scientific research, education, and entertainment, remain mostly restricted to state-controlled firms, which are often uncompetitive and mired in inefficiencies. Even though China's transformation to a service-based economy is in nascent stages, not enough energy has been devoted reforming the tertiary economy, resulting in ongoing lagging growth.

In the face of these weaknesses, China's economic first-aid tactics—liquidity provision and government stimulus—are not working. China has repeatedly aimed to use monetary policy to jumpstart the economy, with benchmark interest rates set at the lowest levels in over two decades. Officials have also cut the reserve ratio to provide more funds to the real economy.

Stimulus has not worked either. China's government has attempted to inject funds into the economy through various means, without directly labelling them as stimulus measures. State-owned enterprises have been urged to invest in fixed assets to bolster GDP growth. Tax rebates were given to Chinese steelmakers and oil refineries for exporting their goods to foreign markets. These measures have not stimulated real economic growth. In fact, they have supported inefficient aspects of the economy.

To generate long-term domestic growth and remain a driver of global growth, China needs to get serious about reforming its services sector, allowing for increased competition and reducing inefficiencies in government-heavy industries such as healthcare and telecommunications. Its leadership needs to focus less on stimulus and more on production and efficiency.

China also needs to accept more short-term pain for long-term gain and let go of weak firms, bringing about market incentives that reward productivity, efficiency and innovation. Right now, too many weak firms remain operational, and banks are going through the motions in issuing loans without stimulating real economic growth.

Source: *Forbes*, 13 December 2016, accessed on 2 Jun 2018

#### **Extract 5: China to reduce steel overcapacity by 2020**

China will achieve major progress in the steel sector's structural overhaul by 2020 and "fundamentally bail out" the industry, the Ministry of Industry and Information Technology said. China plans to reduce crude steel output by 100 million tonnes to 150 million tonnes by 2020 and ease the uneven supply-demand situation in the sector, according to the ministry's 2016-2020 plan on upgrading the steel sector. The whole sector will be modernised and its energy consumption and pollutant emissions will be maintained within the nation's standard by 2020.

The ministry stressed the central government's resolution to continue to shed unnecessary production capacity in the steel sector, and underscored that it will not allow the addition of new steel capacity, adding that any investment that would increase steel capacity should stop. Intelligent and green manufacturing in the steel sector will be encouraged, as well as mergers and acquisitions.

However, notwithstanding the changes, the European Union (EU) has decided to impose provisional anti-dumping duties on seamless pipes and tubes of iron and steel coming from China. This product is typically used in power plants, in construction, and in the oil and gas industry.

Investigations confirmed that the Chinese products had been sold in Europe at heavily dumped prices. To provide EU companies with necessary breathing space, the EU imposed duties ranging between 43.5% and 81.1%. This should prevent damage to the European companies involved in the production of the steel tubes and pipes.

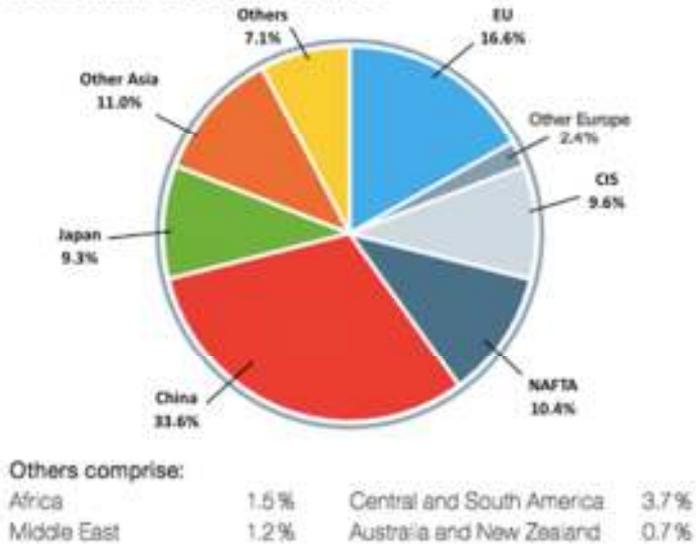
The EU currently has an unprecedented number of trade defence measures in place targeting unfair exports of steel products from other countries, with a total of 40 anti-dumping and anti-subsidy measures - 18 of which are on products originating from China.

Source: *Europost*, 18 November 2016, accessed 2 June 2018

Figure 2 Crude steel production by country, 2006 versus 2016

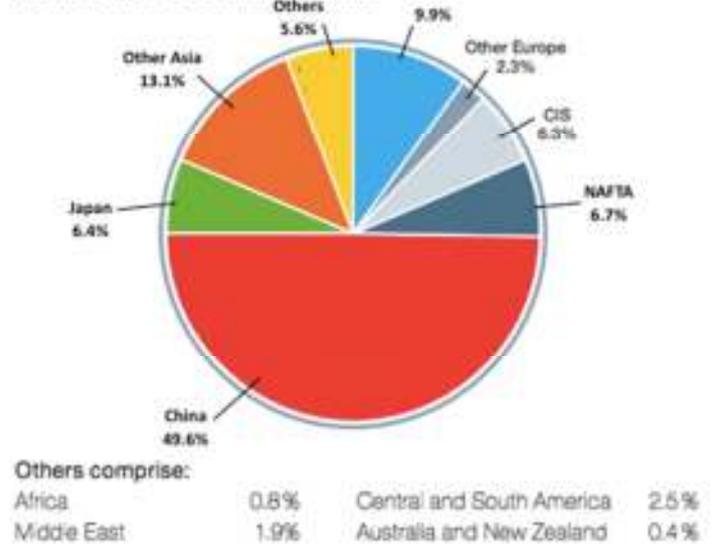
## Crude steel production in 2006

World total: 1 252 million tonnes



## Crude steel production in 2016

World total: 1 630 million tonnes

Source: [www.worldsteel.org](http://www.worldsteel.org), accessed 2 June 2018

## Questions

- 2 (a) Compare the change in share of crude steel production by China, Other Asia, and the EU as a proportion of world total between 2006 and 2016. [2]
- (b) With the use of a diagram, explain why overcapacity in China's heavy industrial sectors might be a problem for China. [4]
- (c) With the use of a diagram, explain the effects of anti-dumping duties on consumers and producers in the EU. [4]
- (d) (i) Explain the principle of comparative advantage. [2]
- (ii) Comment on the validity of EU's decision to impose anti-dumping duties on Chinese steel products. [8]
- (d) Discuss the extent to which Chinese policymakers should replace its economic first-aid measures with alternative measures to promote growth. [10]

[Total: 30]

[END OF PAPER]

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**H2 Economics 9757**  
**2018 JC2 Preliminary Exam**  
**Answer Package**

**Paper 1: Case Study Questions**

**✓ Answer Scheme**



**Question 1 Suggested Answers**

a (i).	<p><b>Compare the price changes of different meat products in India from 2010 to 2016 shown in Figure 1. [2]</b></p>
	<p><u>Suggested Answer</u></p> <p><b>Similarity</b> Prices for different types of meat were all increasing from 2010 to 2016. [1]</p> <p><b>Difference</b> Ham and Bacon's prices changed by the greatest extent (increased by \$1.46) as compared to Sausages (increased by \$1.08) and Cold and Roast Meat Products (increased by \$1.28). [1]</p> <p><i>Note: Comparison of price levels (i.e. Ham and Bacon Prices are higher than the rest) will not be accepted given that the question is asking for a comparison of relative price changes.</i></p>
a (ii).	<p><b>With the help of a diagram, explain the factors that contributed to the trend of meat product prices in India. [4]</b></p>
	<p><u>Suggested Answer</u></p> <p><b>Demand Factor (Knowledge + Evidence) [1]</b> Extract 1 "The demand for meat is expected to grow faster in India with sustained economic growth, strengthening urbanisation trends and increasing awareness of the nutritive value of meat and meat products."</p> <p>Change in Consumers' Tastes and Preference will lead to a rise in Demand for meat.</p> <p>Or</p> <p>Increase in consumer income will lead to an increase in demand for meat, assuming that meat is a normal good.</p> <p><b>Supply Factor (Knowledge + Evidence) [1]</b> Extract 1 "This increase in demand called for capitalisation on the part of producers. This primarily occurred in the form of increased development of technology which hastened the processing of livestock based products."</p> <p>Technological advancements lead to an increased productivity, which lowers costs of production. Thus, Supply increases</p> <p><b>Explanation of extent of shifts [1]</b> Extract 1 "an increase in production that has picked on rather dimly." Hence, it is likely that demand has increased more than supply, hence price of meat products in India has risen.</p> <p><b>Diagram [1]</b></p>

b.	<b>Analyse the likely impact of the subsidies and exemption on excise duty on employment in the Indian meat industry. [4]</b>
	<p><u>Suggested Answer</u></p> <p><b>Direction [1]</b> Subsidies and exemption of excise duty will reduce cost of production. This leads to an increase in Supply. Output will hence increase and there will be higher demand for labour. This will result in an increase in employment. [1]</p> <p><b>Magnitude [3]</b> Demand for meat likely to be inelastic due to lack of close substitutes. [1] Hence, a fall in price will lead to a less than proportionate increase in quantity demanded. [1] Since the output increase is not significant, increase in demand for labour is not significant. Hence, employment does not increase significantly. [1]</p>
c.	<b>Given the information in Table 1, explain which type of meat product may be considered more of a luxury by Indian consumers. [2]</b>
	<p><u>Suggested Answer</u></p> <p>Given the information in Table 1, <b>mutton</b> is considered more of a luxury by the Indian consumers [1].</p> <p>This is because it is the most income elastic amongst the three types of meat (it has the highest YED value). <b>This means that the rise in demand resulting from the rise in income will be biggest for mutton as compared to the rest.</b> [1]</p> <p><i>(Mark is awarded if students interpret what is meant by 'most income elastic')</i></p>
d.	<b>To what extent is the fourth industrial revolution likely to lead to an improvement in standard of living of Indian meat producers. [8]</b>



**Question 2 Suggested Answers**

- (a) **Compare the change in share of crude steel production by China, Other Asia, and the EU as a proportion of world total between 2006 and 2016.** [2]

The share of crude steel production by China and Other Asia of world total has increased, **while** that from the EU has decreased [1].

The change in share of crude steel production is the **largest** for China, and the **least** for Other Asia. [1]

*Note1: No credit if answer does not explicitly compare.*

- (b) **With the use of a diagram, explain why overcapacity in China's heavy industrial sectors might be a problem for China.** [4]

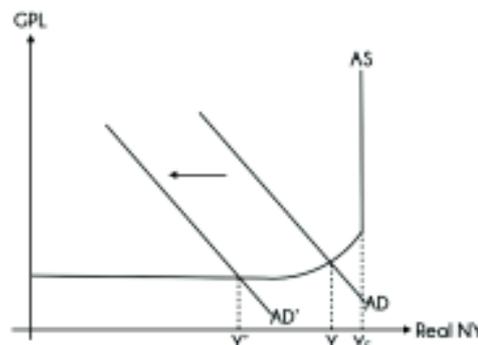
Reason 1: Retaliatory actions from trading partners

Overcapacity suggests that there is a surplus in such industries. Chinese producers may export the surplus to international markets at artificially low prices [i.e. dumping], prompting retaliation. [1]

This may prompt trading partners to retaliate by imposing anti-dumping duties on Chinese exports [1]

Fall in X-M → Fall in AD → Negative EG (multiplied fall in national income from Y to Y') + rise in unN rate (economy is producing at Y', further away from full employment at Y<sub>F</sub>) [1m – any link to macro aims]

Diagram [AD-AS diagram showing leftward shift in AD and negative impact on economic growth and unemployment rates]



**OR**

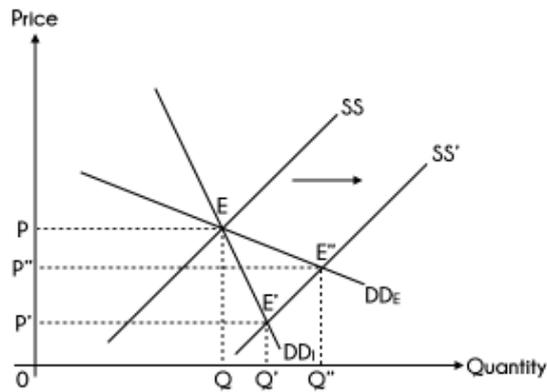
Reason 2: Fall in revenue suffered by producers in China

Heavy industrial sectors produce raw materials such as steel, aluminium, cement and coal which has few substitutes, resulting in a price inelastic demand. [1]

Overcapacity suggests that there is a surplus in such industries, causing prices to fall. [1]

With a fall in prices, quantity demanded of such raw materials rise less than proportionately, causing a fall in total revenue received by producers (from  $OP'EQ'$  to  $OP'EQ$ ). [1]

Diagram comparing the change in TR as a result of the overcapacity [1]



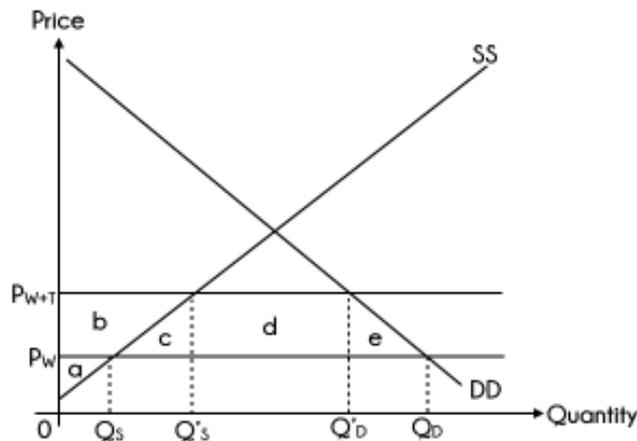
Note: Answers that explain the problem of overcapacity in the context of resource misallocation (i.e market failure) will receive max 3m.

- (c) **With the use of a diagram, explain the effects of anti-dumping duties on consumers and producers in the EU.** [4]

Well-referenced and accurately drawn tariff diagram [1]

Anti-dumping duties reduces world supply of steel into the EU and raises the price of steel in the EU from  $P_W$  to  $P_{W+T}$ . [1]

There is an increase in producer surplus from area A to area A+B [1] and a fall in consumer surplus by the area b+c+d+e. [1]



Examiners' Comments:

This question was also similarly very poorly attempted. Most answers demonstrated a very poor understanding of the diagrammatic analysis required to explain how tariffs work and its effects on domestic consumers and producers. Most answers drew an upward-sloping supply curve illustrating world supply of imports, without realising that world supply of imports into the EU market is assumed to be perfectly price elastic.

For some scripts that managed to draw the diagrams correctly, they merely indicated the deadweight loss areas (impact on society) and government revenue areas (impact on the government), instead of focusing on what the question was asking for.

- (d) (i) **Explain the principle of comparative advantage.** [2]

A country is deemed to have comparative advantage in the production of a good if it can produce the good at a lower opportunity cost than its trading partners can. [1]

A country should specialize in and export the good it has comparative advantage in, and import goods that it does not have comparative advantage in. [1]

(ii) **Comment on the validity of EU's decision to impose anti-dumping duties on Chinese steel products.**

[8]

Dumping refers to the sale of goods by foreign firms at a **price below the marginal cost of production** so as to drive out domestic producers and establish market dominance.

Thesis: EU's decision could be valid

Overcapacity in the Chinese steel industry has resulted in a surplus of steel. This surplus has been exported to the EU market at 'heavily dumped prices' (Extract 5). This creates unfair competition to EU producers and may drive them out of the market in the long run – allowing Chinese steel producers to establish market dominance and eventually increase prices due to the lack of competition.

EU may be trying to protect its sunset industries involved in the production of the steel tubes and pipes. Sunset industries are industries which have lost their comparative advantage. If exposed to free trade, firms in these industries may shut down abruptly, leading to a sharp increase in structural unemployment as workers may not be equipped with the relevant skill to work in another industry. There is a need to provide temporary protection for sunset industries so that workers are given time to learn new skills and to transit gracefully to other growing sectors.

*Or any other relevant argument for protectionism (applied to context of CSQ)*

Anti-thesis: EU's decision may not be valid

China may truly have a comparative advantage in the production of steel products. Referring to Figure 2, China's production of crude steel has increased from 33.6% of world total to 49.6% of world total – signalling that China may be exporting more of a good that it has comparative advantage in. Since an action is only considered 'dumping' if foreign producers are found to be selling at a price below marginal cost of production, and we do not have information regarding the prices at which Chinese steel is being sold at, nor do we have information about Chinese producers' marginal cost of production, EU cannot conclude that Chinese steel producers is dumping their products in the EU just because its prices are too low.

Furthermore, the low prices of Chinese steel will bring about advantages to other industries that uses steel as a factor input – such as 'in power plants, in construction, and in the oil and gas industry' (Extract 5). This lower cost of production may translate to lower prices for consumers. The imposition of anti-dumping duties remove such advantages.

Imposition of anti-dumping duties also result in an inefficient allocation of resources. From the tariff diagram drawn in (c), the welfare loss incurred from the imposition of a tariff are areas c and e. Area c represent the welfare loss suffered by society as a result of the increased production by domestic producers who are less efficient as compared to foreign producers with the comparative advantage in the production of steel and steel products; while area e represents the welfare loss as a result of pricing out consumers (or fall in consumption) who can no longer afford steel and steel products at the price of  $P_{W+T}$ . Hence, the society as a whole is worse off when tariffs are imposed.

*Or any other relevant argument against protectionism (applied to context of CSQ)*

## Synthesis

[Stand] EU's decision to impose anti-dumping duties on Chinese steel products may not be valid.

[Substantiation] This is because there is insufficient information provided in the case study to support that Chinese producers are indeed dumping steel in the EU market. Furthermore, even if EU is interested in protecting its sunset industries in the production of steel tubes and pipes, the anti-dumping duties should only be a short-term measure and not a long-term one, to prevent the breeding of complacency amongst EU producers. Ultimately, in the long run, it is in EU's best interest to subject its domestic producers to the competitive forces of international trade so as to force them to be efficient.

Alternative synthesis:

[Stand] EU's decision to impose anti-dumping duties on Chinese steel products may be valid.

[Substantiation] Extract 2 mentioned that 'investigations confirmed that the Chinese products had been sold in Europe at heavily dumped prices.' Since there is evidence of dumping, EU's decision could be valid.

L2	Answer is two-sided and contains detailed economic analysis that explains why EU's decision to impose anti-dumping duties may be valid/invalid. Answer uses extract evidence in support of points raised.	4-6
L1	Answer is irrelevant or largely one-sided or two-sided with vague/inaccurate economic analysis pertaining to imposition of anti-dumping duties. Answer may not have included the use of extract evidence.	1-3
E2	Well-substantiated judgment	2
E1	Unsubstantiated judgment	1

### Examiners' Comments:

Most answers were able to provide a two-sided analysis to discuss whether the imposition of tariffs was valid. However, the quality of explanations in terms of content development varied between scripts.

Few answers considered how the imposition of tariffs may go against the theory of comparative advantage and result in resource misallocation if China does indeed have comparative advantage in the production of steel and steel products.

(e) **Discuss the extent to which Chinese policymakers should replace its economic first-aid measures with alternative measures to promote growth.**

[10]

Chinese policymakers need to consider the costs and benefits, in terms of intended and unintended consequences on different parties (such as consumers and producers) in the economy, of replacing its economic first-aid measures with alternative measures to promote growth.

Identify criteria

Here, growth is defined as sustainable and inclusive growth – where there is an increase in output produced by a country that does not create problems for future generations and is broad-based across different sectors in the economy.

Thesis: Chinese policymakers should not replace its economic first-aid measures with alternative measures. This is because there are benefits to its economic first-aid measures in promoting growth, and costs to alternative measures Chinese policymakers may be thinking about implementing.

Define growth

The intended consequence of China's economic first-aid measures had been to achieve sustained economic growth and this has generally worked to China's advantage in the past three decades.

Direct comparison of costs and benefits

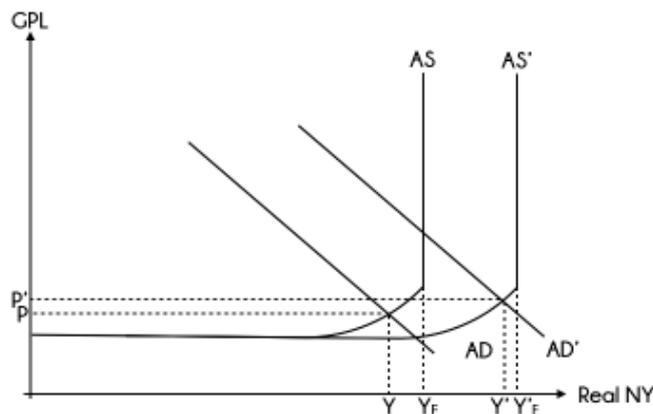
For example, loosened liquidity as mentioned in Extract 4 is a form of expansionary monetary policy focused on lowering interest rates and therefore the cost of borrowing, which would stimulate consumption and investment – the latter because the expected rate of return on potential investment projects is higher. Since consumption and investment expenditure are both components of AD, this would increase AD and lead to a multiplied increase in NY via the multiplier process.

Highlights show how answer considered the current context of China, on top of what is mentioned in the extracts

Government stimulus in the form of government expenditure on improving infrastructure within the economy will also lead to an increase in AD.

Furthermore, since the spending on infrastructure by the government and the investment spending on capital goods increases both the quantity and quality of resources within the economy, this would lead to an increase in LRAS and potential growth.

Together, economic first-aid measures have helped China to achieve non-inflationary economic growth that saw an increase in national income from Y to Y', a small increase in general price levels from P to P', and a fall in unemployment rate as the distance between Y and Y<sub>F</sub> is now smaller, indicating fewer idle resources.



Furthermore, alternative measures to promote growth, such as the supply-side measures mentioned in Extract 4 may come with its own costs. These supply-side measures include: 'reforming its services sector, allowing for increased competition and reducing inefficiencies in government-heavy industries such as healthcare and telecommunications' and 'bringing about market incentives that reward productivity, efficiency and innovation'.

There could be various costs involved in implementing the alternative measures to promote growth, such as: firstly, a rise in structural unemployment as resources in inefficient government-heavy industries need to be redeployed to other emerging industries and they may not have the necessary skills for the transition.

Secondly, a worsening of the government budget as subsidies, grants, etc need to be offered to encourage innovation and investments into productivity-enhancing technology. Furthermore, such investments do not guarantee success, and take a long time to take effect.

Finally, a rise in cost of production leading to an increase in cost-push inflation as some of these supply-side measures to make growth more sustainable may increase the cost of production, such as what is mentioned in Extract 5, where the modernisation of the steel sector to reduce pollutant emissions through the use of 'intelligent and green manufacturing' will lead to an increase in the cost of production of steel – potentially leading to cost-push inflation since steel is a key factor input in many production processes.

Anti-Thesis: Chinese policymakers should replace its economic first-aid measures with alternative measures. This is because there are costs to its economic first-aid measures in promoting growth, and benefits to alternative measures Chinese policymakers may be thinking about implementing.

At the same time, economic first-aid measures may not work as intended, or there could be certain negative unintended consequences resulting from the implementation of such measures.

Cuts in interest rates have proven to be ineffective in stimulating private investment to promote growth. Private investment in China appear to be interest-inelastic as a result of poor economic sentiments: Extract 4 - 'private investment, a reflection of market sentiment, lagged behind due to lack of confidence in growth prospects'

Government stimulus have supported inefficient aspects of the economy and have led to resource misallocation.

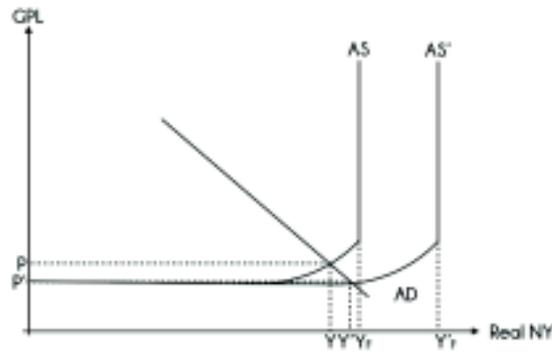
Liquidity provision and government stimulus are both demand-side measures and will lead to demand-pull inflation if not supplemented with supply-side policies. China may be operating close to the classical range of its aggregate supply curve, given its many decades of high growth rates.

Alternative measures to promote growth, on the other hand, may bring about long-term sustainable and inclusive growth. For example, the Chinese government can consider privatizing some of its state-controlled firms to increase efficiency. A large government sector such as that in China may be more bureaucratic and less efficient than the private sector. This is because governments do not aim to achieve profit maximisation, and therefore may not be concerned about lowering costs through efficient use of resources. Privatisation of the government sector releases resources that were used unproductively to more productive activities. This more efficient use of resources, translates to the increase in AS. This causes AS to shift outwards, from AS to AS', leading to both actual and potential growth.

Additionally, labour market reforms through labour retraining allows labour to become geographically and occupationally mobile. Through quality training, labour would be able and willing to move to another place or another type of job, boosting the supply of labour and the quality of labour, increasing the economy's productive capacity, and also causes AS to shift outwards from AS to AS'. This will become an increasingly critical aspect of China's growth strategy, in view of its rapidly-aging workforce, and many negotiations between labour unions and employers to push up wages; both of which will serve to make China a less attractive place to invest in in the future.

Furthermore, the increase in productivity when workers become more skilled can lead to an increase in wages, promoting inclusive growth.

Direct  
comparison  
of costs and  
benefits



Finally, the government can also target strategic sectors, for example, the clean energy sector, for state support to engage in R&D. This is to ensure the country's growth strategy is environmentally sustainable.

### Synthesis

In the long run, Chinese policymakers should replace its economic first-aid measures with alternative measures to promote growth [Stand]. This is because while the economic first-aid measures may have served China well in the past, it is clear that with slowing growth as a result of inefficient state-owned firms and the lack of innovation, the benefits to such measures have expired and will no longer work in the long run. While there are certain costs involved in reforming sectors and encouraging productivity and innovation, such costs are more short-term in nature and its benefits are more long-term and permanent [Substantiation]. For example, once workers have been retrained and re-allocated into emerging industries, funding for training (a cost) can be reduced gradually. Similarly, while Chinese policymakers may have to dip into its government budget to provide incentives for private firms to engage in innovation and R&D (another cost), such incentives can eventually be scaled back as firms themselves realise the benefits of such R&D efforts. Furthermore, there could be positive unintended consequences such as spill over effects into other industries as knowledge transfer take place.

L3	Answer is two-sided and contains detailed economic analysis to discuss if Chinese policymakers should replace its current measures with alternative ones. Answer uses extract evidence in support of points raised.	6-7
L2	Answer is relevant, but largely one-sided; or answer is two-sided with inaccurate economic analysis to discuss if Chinese policymakers should replace its current measures with alternative ones. Answer may not have included the use of extract evidence.	3-5
L1	Answer is largely irrelevant or contains very poor/little use of economic analysis to discuss if Chinese policymakers should replace its current measures with alternative ones.	1-2
E2	Well-substantiated judgment	2-3
E1	Unsubstantiated judgment	1



**Catholic Junior College**  
**JC2 Preliminary Examinations**  
**Higher 2**

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**ECONOMICS**

**9757/02**

Paper 2

**23 Aug 2018**

Additional Materials: Writing Paper

**2 hours 15 min**

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

At the end of the examination, **hand in ALL questions separately.**

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

Answer **three** questions in total.

**Section A**

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

- 1** A stronger than expected growth in Europe, China, India and non-OECD countries has contributed to the global demand for crude oil. However, the addition of Iranian supply where production looks to outpace consumption has brought bad news for producers of crude oil.

*Adapted from Reuters and CNBC*

Assess how the above developments would impact the market of crude oil and its related products. [25]

- 2** (a) Explain why price and output decisions differ across producers in different markets. [10]
- (b) Assess the economic case that rational decision making by consumers and producers always results in more equitable outcomes. [15]
- 3** Consumers often do not have good quality information when deciding which goods and services to consume. The information available may be incomplete, inaccurate, or producers may have more information about the product than consumers.
- (a) Explain why there is a greater need for government intervention in public goods rather than when information is imperfect. [10]
- (b) Discuss whether direct provision is the only way to deal with the above sources of market failure. [15]

**Section B**

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

- 4** Productivity growth is critical to our future progress. Without productivity gains, we will eventually lose our competitiveness. Wages will stagnate too. Labor productivity growth can be made more sustainable if firms invest in the right type of technologies, revamp their business processes to create value and also move to new markets.

*Mr Lim Swee Say, Minister for Manpower  
Speech at Singapore Productivity Awards Gala Dinner, 2017*

Explain how improving labour productivity affects a country's standard of living and discuss whether it should be the government's priority in Singapore. [25]

- 5** Discuss how far the concept of opportunity cost affects a government's policy decision. [25]

- 6** The withdrawal of the United States from the Trans Pacific Partnership is a setback, but the collective commitment of the remaining 11 partner countries towards greater liberalisation and regional integration may bring some positive outcomes through increased trade, labour and capital flows.

**(a)** Explain why countries may opt out of free trade agreements. [10]

**(b)** Discuss the likely effects of liberalisation and greater integration on the long-term growth of Singapore. [15]

**[END OF PAPER]**

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**H2 Economics 9757**

**2017 JC2 Preliminary Exam**

**Answer Package**

**Paper 2: Essay Questions**

**✓ Answer Scheme**

- 1 A stronger than expected growth in Europe, China, India and non-OECD countries has contributed to the global demand for crude oil. However, the addition of Iranian supply where production looks to outpace consumption has brought bad news for producers of crude oil.

*Adapted from Reuters and CNBC*

Assess how the above developments would impact the market of crude oil and its related products. [25]

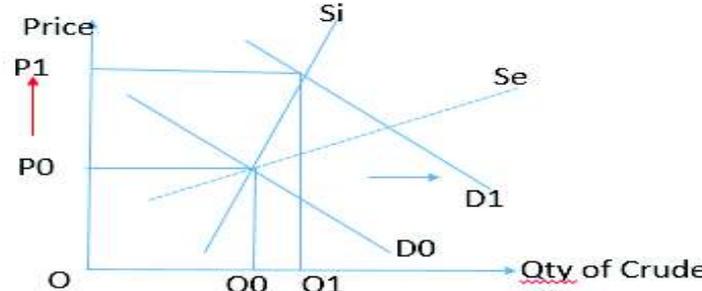
**Question Interpretation**

**Command Word:** Assess provide multiple perspectives on process

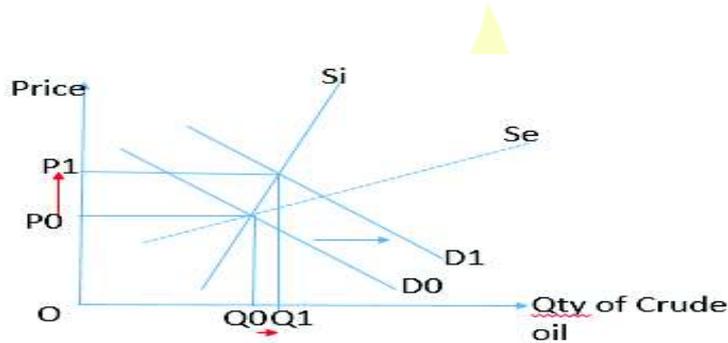
**Content:** impact the market- impact on equilibrium P and Q, Price Mechanism, elasticities of demand and supply

**Context:** above developments- “stronger than expected growth”, “addition of Iranian supply”; market for crude oil and related products [biofuel and petrol]

**Suggested Answer**

<p><b>Introduction</b></p>	<p>Demand is defined as the willingness and ability of consumers to buy a product at different price levels in a given time period, ceteris paribus. Supply is defined as the willingness and ability of producers to sell a good at different price level in a given time period, ceteris paribus.</p> <p>Stronger than expected growth in many economies suggests that there is a rise in economic activity in these economies that will require crude oil which has a <u>derived demand</u> to run many of these activities. Moreover, the addition of Iranian oil would possibly lead to an increase in supply of crude oil, given that there aren't any supply shocks from the other oil producing nations.</p> <p>The final impact on the market can be analysed based on how the price and output, as well as total expenditure/revenue will change in the oil market as well as in its related markets.</p>	<p><b>Define Key Terms</b></p> <p><b>Identify the demand and supply factors</b></p> <p><b>Set the tone for the essay</b></p>
<p><b>Body</b></p>	<p><b>Impact on Oil Market</b></p> <p>The strong growth in many economies will mean that production activities would rise, leading to a rise in demand for crude oil that may be used as a fuel to run many stages of production as well as used as an important raw material to generate energy and power for these economies. Thus, there will be a rise in derived demand for oil from D0 to D1 [reference to diagram]</p> <p>PES of oil is likely to be inelastic atleast in the short run. This means that a change in price will lead to a less than proportionate change in quantity demanded, ceteris paribus. PES is likely to be less than one due to the time taken to extract crude oil. Given a rise in demand, with <math>PES &lt; 1</math>, this will lead to a <u>sharp rise in price</u> of crude oil from P0 to P1 and a <u>relatively less than proportionate rise</u> in quantity traded from Q0 to Q1 [reference to diagram]</p> 	<p><b>Identification and elaboration of Demand factor- strong growth in many countries (rise in income)</b></p> <p><b>Rise in DD + PES - impact on extent of change in P and Q</b> (Meaning, elaboration and determinant of PES)</p>

Demand for crude oil is likely to be income inelastic due to its nature being a necessity. Thus, a rise in income will lead to a less than proportionate rise in demand and hence, a small rise in price and output (as compared to a case where  $YED > 1$ )



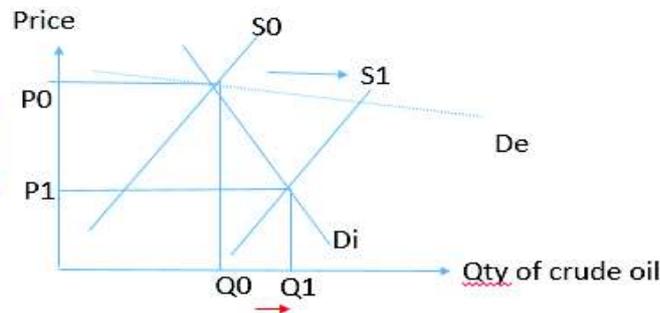
Overall, there will be significant rise in price but a relatively smaller rise in quantity traded, when the analysis just considers a change in demand and the PES of crude oil.

However, the market for crude oil has also seen a change in supply and that needs to be analysed too in order to have a more conclusive impact on the price and output.

The addition of Iranian supply would be increased the total supply of crude oil from  $S_0$  to  $S_1$  due to rise in number of producers in the market in the form of Iranian supply. [reference to diagram]

PED of oil is likely to be inelastic. This means a change in price would lead to a less than proportionate change in quantity demanded for crude oil, atleast in the short run, ceteris paribus. This is because in the short run it is difficult to find cheaper and better substitutes of crude oil as an essential component of many production processes.

A rise in supply with a  $PED < 1$  would lead to a sharp fall in price from  $P_0$  to  $P_1$  but a less than proportionate rise in quantity traded from  $Q_0$  to  $Q_1$  [reference to diagram].



Impact on the market needs to also consider how the consumers and producers are affected in terms of their total expenditure/total revenue (TE/TR).

$$TE/TR = P \times Q$$

Thus, with a sharp fall in price and a less than proportionate rise in quantity traded, TE/TR is likely to fall for crude oil.

It is likely that the rise in supply will be greater than the rise in demand, as is obvious from the preamble that says production seems to be outpacing consumption. This is also valid given the  $YED < 1$  for crude oil as well as some production activities also

**Rise in DD+ YED - impact on extent of change in P and Q**  
(meaning, elaboration and determinant of YED)

**Final impact on P and Q due to demand factors**

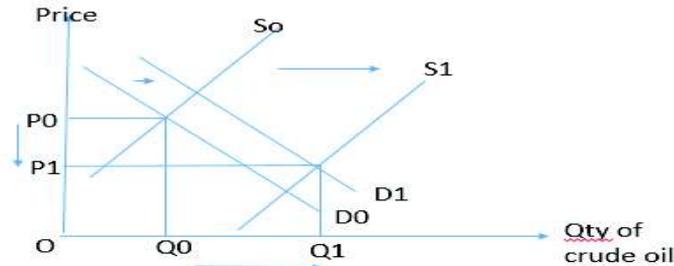
**Link to next paragraph**

**Identification and elaboration of supply factor**

**Rise in SS + PED - impact on extent of change in P and Q**  
(meaning, elaboration and determinant of PED)

**Simultaneous shifts in DD and SS - final impact on equilibrium P and Q**

possibly using shale oil. Thus the rise in demand from  $D_0$  to  $D_1$  is likely going to be less than the rise in supply from  $S_0$  to  $S_1$ . This will create a surplus at the existing price  $P_0$  which will put a downward pressure on price. As price starts to drop, quantity demanded will increase, quantity supplied will decrease, until new equilibrium is attained at a higher quantity  $Q_1$  and a lower price  $P_1$  (possibly the reason of bad news for the producers of crude oil).



**Note: candidates may also want to stretch the answer and explain the impact on  $P \times Q$  after explaining the simultaneous shift.**

**Impact on market for Substitutes**

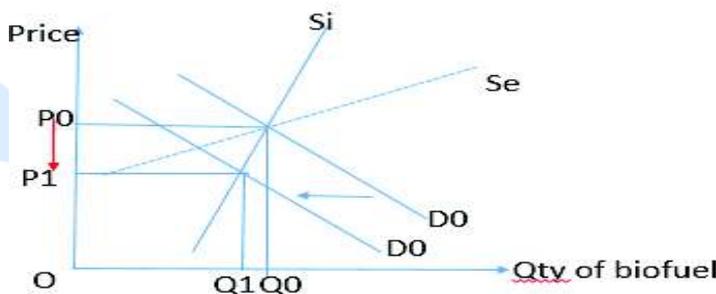
A fall in price of crude oil will lead to a fall in demand for its substitutes, biofuel. However, biofuel and crude oil are likely to be weak substitutes making  $XED < 1$  as in the short run it is not easy to switch all oil based production processes to be run on biofuel, and vice versa. Thus, a fall in price of oil will lead to a less than proportionate fall in biofuel.

In addition,  $YED < 1$  for biofuel as well due to it being a necessity. This will lead to a less than proportionate rise in demand with change in income.

It is likely that the substitution effect will be stronger as rise in growth may not make countries readily adopt biofuel for their production. Thus, the rise in demand, if any, will be almost insignificant. Overall, demand will fall from  $D_0$  to  $D_1$ .

$PES$  for biofuel is likely to be inelastic as it will take time to produce biofuel, which is produced using agricultural crops like sugarcane, corn etc., and the entire process is time consuming.

A fall in demand together with  $PES < 1$  will lead to a drastic fall in price from  $P_0$  to  $P_1$  and lesser fall in quantity traded from  $Q_0$  to  $Q_1$ .



**Demand factors – P of oil (combine with  $XED$ ) and rise in income (combine with  $YED$ ) +  $PES$  final change in P and Q for substitutes.**

**Justifying the extent of rise in demand**

**Note: there is no change in supply of biofuel (based on the extract).**

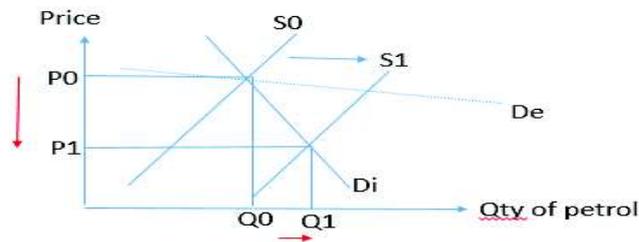
With a fall in price and output, the TE/TR will definitely fall in the biofuel market.

**Impact on secondary market**

Fall in price of oil will lead to a fall in cost of production of petrol, as crude oil is a raw material used in the refining process and production of petrol. This will increase supply of petrol from  $S_0$  to  $S_1$ .

PED of petrol is likely to be inelastic due to lack of close substitutes

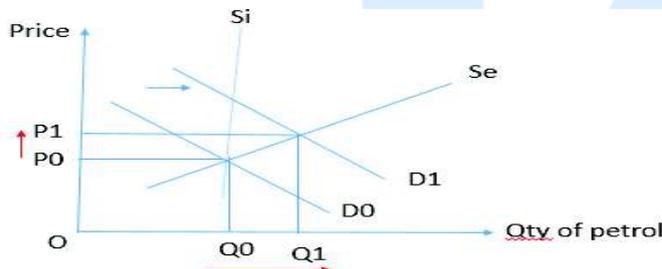
Thus, a fall in supply together with  $PED < 1$ , will lead to a drastic fall in price of petrol from  $P_0$  to  $P_1$  and a lesser fall in quantity traded from  $Q_0$  to  $Q_1$ .



With a sharp fall in price and less than proportionate rise in quantity demanded, TE/TR is likely to fall.

Rise in income may lead to rise in demand for petrol as petrol has a derived demand for many normal goods like cars. Rise in income will lead to a rise in demand for cars, and thus, a rise in demand for petrol from  $D_0$  to  $D_1$ .

PES of petrol can be considered to be elastic as it can be stored for a long period of time, making quantity supplied very responsive to price changes. Thus, a rise in demand together with  $PES > 1$  will lead to a smaller rise in price from  $P_0$  to  $P_1$  and a large rise in quantity traded from  $Q_0$  to  $Q_1$ .



Rise in supply is likely to be rise in demand, as crude oil affects cost of producing petrol significantly. This will create a surplus, leading to an overall fall in price from  $P_0$  to  $P_1$  and rise in quantity traded of petrol from  $Q_0$  to  $Q_1$ .

**Identification and elaboration of supply factor**

**Supply change + PED**

**Extent of impact on P and Q**

**Identification and elaboration of demand factor.**

**Demand change + PES- extent of impact on P and Q**

**Simultaneous shift and overall impact on P and Q**

<b>Synthesis</b>	<p>Thus, in the crude oil and its secondary market price will fall while quantity traded will rise. In the market for substitutes, price and quantity are both likely to fall.</p> <p>However, these analyses are made based on the assumption of ceteris paribus. If other factors affecting demand and supply in the various markets, for example govt.'s policy in the market, change the outcome may be completely different. Furthermore, analysis based on elasticity concepts may not be accurate as it may often be difficult to ascertain accurate values for these concepts at the time of analysis. Crude oil market is also an oligopoly and hence, their price and output outcomes may be largely based on the objectives of the producers of crude oil. Thus, the conclusions drawn on price and output are approximation of what might happen in the real world, which though simplistic, may provide relevant basis for decision making by various economic agents in the different markets.</p>	

**Level Marking Descriptor**

<b>L3</b>	Answer uses relevant concepts of demand and supply to explain the impact on price and output on three different markets. The analysis for each market is well developed and considers the direction and magnitude of change in price and output, with clear use of examples.	<b>15-20</b>
<b>L2</b>	Answer uses the concepts of demand and/or supply to explain the impact on price and output in the oil market and another related market. The analysis is not well developed throughout, although it attempts to address both direction and magnitude of change in price and output. Examples are not well used.	<b>9-14</b>
<b>L1</b>	Answer used concepts of demand and supply to explain the impact on price and output in oil market and/or its related market, but the analysis is largely undeveloped and contains inaccuracies in content.	<b>1-8</b>
<b>E3</b>	A well justified stand that considers unstated assumptions and provides a new perspective.	<b>4-5</b>
<b>E2</b>	Answer makes a stand that attempts to use economic justification.	<b>2-3</b>
<b>E1</b>	Answer makes an unjustified stand.	<b>1</b>

- 2 (a) Explain why price and output decisions differ across producers in different markets. [10]
- (b) Assess the economic case that rational decision making by consumers and producers always results in more equitable outcomes. [15]

**Part A Question Interpretation**

Command:	Explain why
Content:	price and output decisions
Context	across different markets
Approach	<p>Interpret “price “ and “output”</p> <p>Identify “producers in different markets”</p> <p>Candidates should show how price and output decisions could be influenced by various factors such as the ones stated below:</p> <ol style="list-style-type: none"> <li>1) <i>Market structure differences</i> <ul style="list-style-type: none"> <li>• <i>Can compare any 2 of 4 market structures</i></li> </ul> </li> <li>2) <i>Price rigidity in oligopolistic industries</i> <ul style="list-style-type: none"> <li>• <i>Collusive oligopolies</i></li> <li>• <i>Competitive oligopolies</i></li> </ul> </li> <li>3) <i>Alternative objectives:</i> <ul style="list-style-type: none"> <li>• <i>Sales/revenue maximization: Some producers may charge very low price, while producing very high quantity in order to maximise sales revenue/ market share.</i></li> <li>• <i>Market share maximization such as predatory pricing as one possible point.</i></li> </ul> </li> <li>4) <i>Pricing strategies:</i> <ul style="list-style-type: none"> <li>• <i>Price discrimination to conduct differentiated pricing for same product to different consumer groups</i></li> </ul> </li> <li>5) <i>Non price strategies</i> <ul style="list-style-type: none"> <li>• <i>Marketing/advertising to increase price and reduce output</i></li> </ul> </li> <li>6) <i>Government intervention in selected markets</i> <ul style="list-style-type: none"> <li>• <i>MC/AC pricing</i></li> <li>• <i>Regulations on prices/output</i></li> </ul> </li> </ol>

**Suggested Answer**

<p>Producers are profit maximizing firms, hence they decide their price and output based on the profit maximizing condition where MR equates MC and set a price based on the output produced.</p> <p>However, price and output differences may still occur across producers due to the type of market structure they are operating in and perhaps due to govt.’s intervention in markets for some products.</p>	Introduction
<p>Price and output decisions may differ across producers in different markets as a result of the market structure they operate in, despite holding profit maximizing objectives. Some market structures tend to have a high degree of competition while other market structures may experience low degree of competition. The below analysis will show price and output differences using examples of online blogshop and airline industry.</p> <p>A monopolistic competitive market is a type of market that experiences a high degree of direct competition, which is represented by online blogshops. This is an outcome of a producer is operating in a market with many competitors (many other online stores as rivals) selling highly similar products (clothes). Price will tend to be lower while the output, relative to industry output will be smaller.</p> <p>Due to many rivals selling highly similar products, each firm will only enjoy a small market share, contributing to a small demand for the firm relative to</p>	<p>Explain how price and output decision differ in markets with high competition</p> <p>Give example/ Elaboration of</p>



<p>However, government regulation in a particular firm or industry will therefore result in mandatory changes in price and output, causing deviations of price and output from the rest of the private firms. Government regulations are common in industries producing strategic goods such as water distribution or telecommunications. An example is that Singapore Powers, a water distribution company is nationalized and holds the objective of maximizing society welfare over profits incentive.</p> <p>A possible government regulation to maximize society welfare comes in the form of MC pricing [under the assumption of no externalities]. With the imposition of a MC pricing, firms will be forced to drop their profit maximizing pricing and output decision to a welfare maximizing pricing and output decision. The firm will have to reduce prices to <math>P_s</math> and increase output to <math>Q_s</math>..</p>	<p>Give example/ Elaboration/Link</p>
<p>Thus, P and Q will differ based on degree of competition in the market, and largely guided by the profit motive of the producer as well as other objectives of the producer and government intervention.</p>	<p>Conclusion</p>

### Level Marking descriptor

L3	Answer provides good elaboration on the reasons behind different price and output for different producers and these are based on different market structure as well as consideration of other reasons that will make price and output to be different across producers. There is good use of example throughout.	8-10
L2	Answer provides some elaboration on the reasons behind different price and output for different producers but these are not well explained in terms of different market structures. There is some attempt to use examples.	5-7
L1	Answer is superficial with conceptual errors. There is no clear elaboration on reasons behind differences in price and output across different producers.	1-4

### Part B Question Interpretation

Command:	Assess... rational decision making by consumer and producer ... always ... more equitable
Content:	Rational decision making by consumer and producer Equitable outcome [Note that equity is about fairness in outcome, which is not be confused as equality]
Context	Open context
Approach	<p>Need to define the objective of rational decision making by consumers and producers is to achieve self interest maximization</p> <p>Need to unpeg what is equitable outcome</p> <ul style="list-style-type: none"> <li>• Equity between producer and consumer</li> <li>• Equity within different types of consumer [ie: high income vs low income households]</li> <li>• Equity between different producers</li> </ul> <p>Need to identify situations where rational decision making results in equitable and inequitable outcomes as thesis and anti thesis developments.</p>

### Answer Scheme

Rational decision making by consumers and producers is to achieve self interest maximization. Equitable outcomes can be achieved between producers and consumers within consumers and within producers.	Introduction
<b>Thesis 1: Rational decision making will lead to equitable outcomes</b>	<b>Thesis 1:</b>
When consumers and producers use principle of rational decision making, in a perfectly competitive market to maximize their self interests. Consumers would	<b>Rational decision making will</b>

apply the marginalist principle and consume where  $MB=MC$  to maximize consumer welfare, while firms will produce up to  $MB=MC$  to achieve profit maximization.

Under a perfective competitive market setting, consumers will be able to enjoy the entire consumer surplus, which is the difference between market price and the price that consumers are willing to pay. This reflects maximum consumer welfare. The firms will be able to enjoy the entire producer surplus, which is the difference between market price and the price that producers are willing to accept. This indicates maximum producer welfare.

Under the free market, it is theoretically possible that the outcome could be equitable, with consumer and producer surplus both maximized.

**OR ANY OF THE TWO ALTERNATIVE THESIS BELOW**

lead to equitable outcomes.

Possible Alternative Thesis Developments

Rational decision making of perfectly competitive firms leads to equitable distribution of profits as all firms in the PC industry earns normal profit in the long run.

Assuming that there are short run super profits earned by some firms in a perfectly competitive industry, indicated by the shaded area in the figure below. There will be inequitable outcomes in the short run. New entrants will make the rational decision to enter the market. With market demand unchanged, a rise in number of firms results in rise in market supply and fall in market price from  $P_0$  to  $P_1$ . Since PC firms are price takers, the firm's demand will fall accordingly from  $AR=MR=P_0$  to  $AR=MR=P_1$ . With increasing entry of new firms, each firm's market share further reduces and output falls.

Increasing market entrants will therefore cause supernormal profits by incumbent firms to be eventually eroded. The long run equilibrium will be achieved when normal profits are achieved across all firms in the PC industry.

**Possible Alternative Thesis 1, exploring how rational decisions made by PC firms resulting in long run equilibrium can be considered equitable**

Evaluative statement. Despite rational decisions by firms in a perfectly competitive industry will eventually result in equitable outcomes in the long run. It is noted that short run equity may not be achieved as there may be different levels of profits earned, such as supernormal, normal and subnormal profits. However, inequity in profit distribution within firms is temporary.

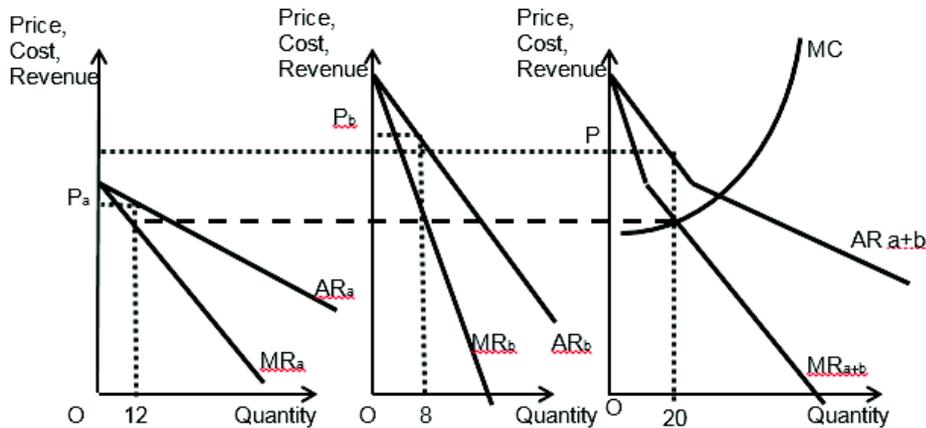
In markets where firms are able to satisfy the 4 conditions to price discriminate their products. Price discrimination is a differentiated pricing strategies with reasons unrelated to costs. An example will be third degree price discrimination.

**OR**

Third degree discrimination may serve to further increase profits further than simply applying a single profit maximizing price and output, Hence, the rational decision would be to embark on price discrimination in an attempt to increase their profits. However, despite the rational decision is to increase profits, such decisions incidentally may achieve equitable outcomes if the firm segregates the consumers into markets of differing PED based on proportion of income spent.

**Possible Alternative Thesis 1 showing how rational decisions of 3<sup>rd</sup>**

This is commonly seen in pharmaceutical companies where export prices are differentiated according to the state of economic development. Developing economies tend to have a larger proportion of population with low incomes while developed economies tend to have higher incomes.



In Market (a), the demand is relatively price elastic, as this market comprises of low income consumers (developing economies) who spends high proportion of income on the good. In Market (b), demand is relatively price inelastic, as this market comprises of high income consumers (developed economies) who spends low proportion of income on the good. The firm discriminates by charging a lower price,  $OP_a$  to consumers in developing economies and a higher price,  $OP_b$  to consumers in the developed economies.

Total revenue is higher than if the monopolist sells the entire output at a single price,  $P$ . Since the total cost of production is the same whether there is discrimination or not, profit is increased with the higher revenue earned from price discrimination.

Such rational decision of price discrimination leads to more equitable outcomes as more affluent consumers in the developed economies will now have to spent a larger proportion of their income on pharmaceutical products than less affluent consumers in the developing economies. This will reduce the income gap between two groups of consumers.

Rational decision making by producers in imperfect markets as opposed to perfective competitive industries tend to exploit consumers under profit maximizing conditions.

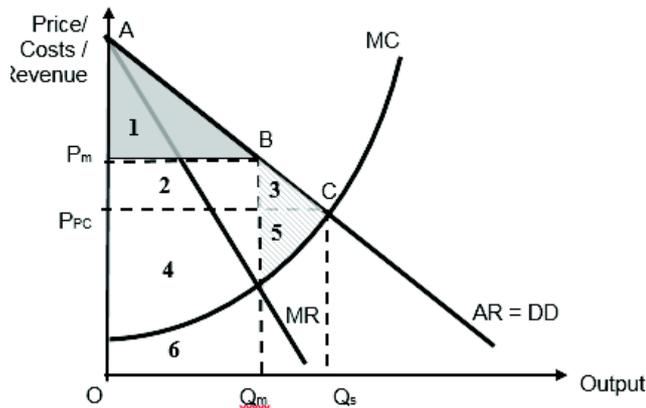
In reality, many firms operate in oligopolistic and monopolistic markets, where they have high market power and high price setting abilities. Hence rational decision making is to charge high prices and restrict output which results in highly inequitable outcomes, causing consumer surplus is redistributed to producers.

Consumer surplus is shown by areas 1+2+3 and producer surplus by areas 4+5. Total surplus is maximised at this output  $Q_s$ . The firm's rational decision to profit maximize via  $MC=MR$ , resulting in the equilibrium price and output of  $P_m$  and  $Q_m$  respectively.

At output  $Q_m$ , producer surplus is areas 2+4 (note that area 2 which used to be consumer surplus, now becomes part of producer surplus now). Consumer surplus falls drastically to area 1. Total surplus under monopoly is areas 1+2+4.

degree price discrimination results in equitable outcomes

Anti thesis 1: Rational decision making will not lead to equitable outcomes



This often results in inequitable distribution between consumers and producers, as part of the consumer surplus is redistributed to producers, causing consumers to be worse off than producers.

In the long term, firms' rational decision will be to increase market power and maximise profit through creating more barriers to entry. An example would be mergers and acquisitions to reduce competition, such as the Grabcar bought over Uber's market share, resulting Grabcar having monopolistic powers in the ride hailing industry. Such actions raise market dominance and consumer exploitation, worsening the inequitable distribution of profits between dominant firms and consumers.

Evaluative statement: Degree of inequity depends on the degree of market dominance. The higher the dominance, the higher  $P > MC$  will be.

**OR ANY OF THE TWO ALTERNATIVE ANTI THESIS BELOW**

**Alternative Anti thesis 1**

In perfectly competitive markets, the output produced may not be fairly and equitably distributed, especially if there is existing income inequity. The poor without the dollar votes will not be able to access the goods causing severe under allocation of resources to the low income household. The rich with the dollar votes will be able to gain access to goods. This can be commonly seen in developing economies where a high proportion of the population live under poverty lines, resulting in inequitable access to merit goods such as healthcare and education.

**OR**

In developed economies with high income differences, firms will be influenced by the potential profits in producing luxury goods. This results in allocation of resources towards luxury goods production and less of basic necessities. Inequitable access of goods and services due to firms' rational decision making arises.

**Rational decision made by firms based on dollar votes in developing economies.**

**Rational decision made by firms based on dollar votes in developing economies.**

Through our analysis earlier, rational decision aims to maximize self-interests in consumer and producers. Hence, any equitable outcomes are unintended outcomes and uncommon. It is only under the presence government intervention where more equitable outcomes can be achieved.

This can be done through application of progressive taxes, market regulations such as anti-competitive laws, subjected to the effectiveness of the imposed policies. The Singapore Competitive Act is enforced to protect consumers from anti-competitive practices by private firms. Through this act, the government is preventing abuse of dominant firm position, and encouraging more competition. encouragement of more competition.

An example is that if a merger is regarded as anti-competitive, resulting in exploitation of consumers. It will be disallowed. Through such methods, the

**Anti thesis 2: Other factors will lead to equitable outcomes.**

Explain how government help to achieve more equitable outcomes

government helps to improve equitable outcomes between producers and consumers, preventing excessive consumer surplus to be absorbed by producers.	
More often than not, the pursuit of rational decisions is to maximize net benefits to self rather than society, which is common in a free market enterprise. Equitable outcomes that arise out of rational decisions are merely incidental and unintended. Hence, we can conclude that in a totally free market, it will largely not result in equitable outcomes.	Overall Synthesis
The role of the government will be more important than reliance on rational decisions by consumers and producers to achieve equity as an intended outcome. It is only with the governmental interventions, where outcomes of rational decisions in producers and consumers can be regulated to improve equity.	Justification
Despite rational decisions by consumers and producers may have limitations, benefits such as efficient resource allocation can be achieved. Hence, a free market enterprise with some government regulation will be a better way forward to achieve both equity and efficiency.	Something special

#### Marking descriptor

L3	Answer presents well balanced arguments on whether rational decisions lead to equitable outcomes. These arguments are based on the perspectives of rational decision making by consumers, producers and governments as well as other factors that may lead to more equitable distribution of resources. Answer makes use of contextual knowledge to support the arguments. *No context can also hit L3-8m	8-10
L2	Answer presents different arguments on whether rational decisions lead to equitable outcomes, although they may not be fully developed. Arguments do not explicitly consider all economic agents. There are some attempts to use contextual knowledge to support the arguments.	5-7
L1	Answer attempts to present some arguments on whether rational decisions lead to equitable outcomes, but they are largely one sided. The link between rational decision and equitable distribution of resources is not clearly made. Answer does not consider any economic agent. Examples have not been used. Answer contains conceptual errors.	1-4
E3	A reasonable evaluative appraisal of the policies with justification	4 – 5
E2	Attempted evaluative appraisal/justification on policy evaluation based on Singapore context	2 – 3
E1	For unexplained evaluative statement(s)	1

- 3 Consumers often do not have good quality information when deciding which goods and services to consume. The information available may be incomplete, inaccurate, or producers may have more information about the product than consumers.
- (a) Explain why there is a greater need for government intervention in public goods rather than when information is imperfect. [10]
- (b) Discuss whether direct provision is the only way to deal with the above sources of market failure. [15]

**Question Interpretation**

Command:	Explain why ... greater need for intervention in public goods... than information imperfect information
Content:	Government intervention in market failure Public goods as a source of market failure Imperfect information as a source of market failure
Context	open context
Approach	Candidate to prove that 'greater need for intervention' in public goods implies that public goods is a more significant problem than imperfect information, such that public goods result in total market failure while imperfect information results in partial market failure.  Candidate should also realise that imperfect information also includes asymmetric information.

**Answer Scheme**

Both public goods and imperfect information are sources of market failure, hence necessitates government intervention. However, public goods require a greater need for intervention over imperfect information is due to the extent of market failure. Public goods always result in complete market failure while imperfect information only results in partial failure (resources are misallocated but market still exists)	Introduction
National defence is an example of public good, and it causes total market failure as a result of non-excludability and non-rivalry in consumption.  <u>Non-excludability</u> means that once the good is produced, it is impossible or prohibitively expensive for non-payers to be excluded from consuming the good. A tourist who does not pay for national defence will also be able to enjoy the protection of national defence, as it is provided for. As there is no feasible way of excluding non-payers from enjoying the benefits of the good, free ridership arises. Consumers would not be willing to pay for the good and hence there is no effective demand. Thus, in a free market, private firms will not produce the public good.  <u>Non-rivalry</u> in consumption means that the consumption of the good by one more person will not leave less for others to consume. National defence is non-rivalrous as the SAF protects the country as a whole. Even if there is an additional citizen, the quality of the skills and professionalism of the SAF will not drop, there will also not be weaker defence for the rest of the country just because there is one additional citizen. Marginal cost of providing the same good (quality and quantity) for one more consumer is zero. This means price must be zero if the economy is to allocate resources efficiently (since allocative efficiency is achieved when $P=MC$ ). No private producer will be willing to provide the public good for free for the sake of allocative efficiency.	Explain how public good results in total market failure  Give example/ Elaboration  Give example/ Elaboration
The outcome will be non-provision of this good by the private sector in the free market. Complete market failure as no resources are allocated to producing this good, causing society welfare is not maximized.	Link

<p>Imperfect information is one of the causes of partial market failure. One of the markets where imperfect information exists will be the childcare immunization market. Childcare immunization can be seen as a merit good which is desirable by the society, yet under-consumed. The under consumption is partly due to the imperfect information of the consumers.</p> <p>Imperfect information of consumers will cause a deviation between <math>MPB_{perceived}</math> and <math>MPB_{actual}</math>, (<math>MPB_{perceived} &lt; MPB_{actual}</math>). As consumers underestimate their private benefit, they will under consume. In the context of childcare immunization services, a common trend among parents is the underestimation of private benefits of having immunization for their young children. They may be myopic about the importance of childhood immunization to the long term health of young children.</p> <p>Hence there is under consumption of childcare immunization by QfQs. Deadweight loss is created. Society welfare is not maximized due to the under allocation of resources.</p> <p>Partial market failure arises.</p>	<p>Explain how divergence between perceived/actual benefits or costs results in market failure</p> <p>Give example/Elaboration</p> <p>Link</p>
<p>In some situations, producers may have more information than patients. This is commonly seen in the market for specialist healthcare services. Doctors have more info than patients causing a situation of supply-induced demand.</p> <p>Since the doctor's rational objective is to maximize profits, he/she will prescribe more medication or medical tests for the patient than what is truly necessary to increase total revenue, hence profits. Patients who know less than doctor tend to be trusting of doctors' recommendations. Demand for medications/medical tests will be higher than is needed for patient.</p> <p><i>Over-consumption of medical services, as a result loss of consumer welfare is experienced.</i> The additional benefit gained from consuming an additional unit of medical services is less than the additional cost incurred</p> <p>Unethical decisions made by doctors will cause an <i>overconsumption of medical services creating an over-allocation of resources</i> to medical services. Deadweight loss arises from over allocation of resources. Society welfare is not maximized. Partial market failure arises.</p> <p><i>Alternative method: We can say that the doctors' recommendations result in <math>MPB_{perceived} &gt; MPB_{actual}</math>. Overconsumption of QfQs and deadweight loss arises. Partial market failure arises</i></p>	<p>Explain how asymmetric information results in partial market failure</p> <p>Give example/Elaboration/Link</p> <p>Link</p>
<p>As seen from above analysis, imperfect information tends to result in distortions to the market. Misallocation of resources occurs, which could be either over or under allocation of resources. However, in the case of a public good, it is seen that total market failure occurs, creating a missing market.</p> <p>Loss in society welfare will be higher in a missing market than in a market with partial failure. Hence, with consideration of the extent of market failure and that public goods are also highly strategic goods, this necessitates a greater need for intervention in public goods than imperfect information.</p>	<p>Conclusion</p> <p>Comparison of public goods vs imperfect information based on degree of failure.</p>
<p><i>Other possible points:</i></p> <p><i>There are many contemporary examples of imperfect information. Check Colac Workbin T3W2 Group B Revision Slides for these examples.</i></p>	<p><i>Some possible alternatives that can also be used for development of Part A.</i></p>

### Level Marking descriptor

L3	Well explained 3 sources market failure must be seen – public goods and imperfect information and asymmetric information, with a clear comparison made on the degree of market failure.	8-10
L2	Attempted to explain 2 sources of market failure – public goods and imperfect information/asymmetric information, with adequate economic analysis. There is an attempt to compare but may not be clear/explicit.  L2-5m max for scripts with no attempt to compare the degree of market failure regardless the number of market failure explained. L2-7m for well explained scripts with 2 sources of market, with comparison made.	5-7
L1	Lack of economic analysis; largely descriptive; large gaps; no egs.	1-4

### Part B Question Interpretation

Command:	Discuss whether... direct provision ... only way ... deal with ... above sources..market failure.
Content:	Direct provision
Context	Above sources of market failure (identified in part a)
Approach	An extension of part a  <b>Criteria 1: Efficiency</b> <b>Criteria 2: Address root cause</b> <b>Criteria 3: least unintended consequences</b> <b>Criteria 4: Constraints</b>  <b>Criteria 1 and 2 is compulsory for this essay.</b>  <b>Approach 1</b> T1: Direct provision is the only way to deal with public goods AT1: AT 1: Direct provision cannot deal with imperfect information AT 2: Other policies can deal with imperfect information  <b>Approach 2</b> T1: Direct provision is the only way to deal with public goods and imperfect info AT 1: Direct provision cannot deal with imperfect information and public goods AT 2: Other policies can deal with imperfect information

### Answer Scheme

Direct provision is a type of government intervention where the government is the main provider of a good or service to consumers, in most cases for free. I will consider direct provision as the only way to solve the above stated market failure if it is the most appropriate way to do so.	Introduction
Direct provision is the only way to deal with public goods and imperfect information based on efficiency grounds (ie: it is able to achieve socially optimum resource allocation)  Since public goods are strategic goods which will be completely not produced by the private sector, then free direct provision will be the only and best way to deal with public goods. Defence therefore has to be solely provided by the government.  Despite not being able to improve the information gap in markets such as childcare immunization, free direct provision can increase the consumption levels to Qs, reducing the welfare loss. Based on efficiency grounds, direct provision is the only way to solve imperfect information.	Thesis 1  Elaboration on how free provision address public good and a type of imperfect information

<p>Direct provision may not be the only way in addressing public goods and imperfect information due to its limitations in achieving efficient resource allocation.</p> <p>In the case of public goods, reliance on the government as the sole provider of public goods may not result in socially optimal output levels due to government failure. The government may not also have imperfect information, and may overproduce public goods, resulting in Qs not being achieved.</p> <p><i>Evaluative statement/Address Qn: Despite this limitation, direct provision of public goods is the only way in the absence of private sector. Such government failure can be easily circumvented if there is good information infrastructure and processes, making direct provision.</i></p> <p>Reliance on government as sole provider also brings about unintended consequences, such as other economic inefficiencies in the form of dynamic inefficiency and productive inefficiency. The lack of competition threat reduces the desire and incentive to innovate and drive progressive changes on technology used or product/service offered, creating a situation of dynamic inefficiency. Society welfare overall still reduces.</p> <p>Similarly, the lack of competition threat may result in complacency in costs, resulting in lax cost control. Lax cost controls may result in productive inefficiency whereby the government firm incurring higher average costs than the lowest possible average cost for a given output level.</p> <p><i>Evaluative statement/Address Question: Despite limitations that may arise in direct provision of public goods, it is the only method to solve public goods. Hence there is no alternative policy. However, the government can consider collaborations with private sectors in producing public goods (public private partnership), whereby the expertise of private firms may help government in reducing dynamic and productive inefficiency.</i></p> <p>Direct provision is not the only way to address imperfect information. Even though there is a possibility of achieving Qs with free direct provision, it does not address the root cause and brings about wastage of scarce government resources.</p> <p>The market for specialist medical services and childcare immunization will be used as cases to explain the two major limitations mentioned.</p> <p>The root cause in specialist medical services is the information gap between the patient (consumer) and doctor (producer). Direct provision does not increase the patient's limited knowledge. The information gap continues to exist. Direct provision also does not improve the information gap that that parents have, causing perceived understanding towards immunization to be unchanged.</p> <p>Also, direct provision creates unintended consequences of greater wastage and resource misallocation through overconsumption.</p> <p>In market for childcare immunization, free provision has the effect of decreasing marginal private costs to zero. Consumers consume at point where MPB perceived = MPC (which equals 0). Quantity consumed is now Q', Moral hazard arises causing overconsumption. A larger DWL is created as shown by the area A which is greater than the DWL generated under free market as shown by the area B due to under-consumption.</p> <p>In asymmetric markets such as specialist services, free provision may fuel a greater incentive by unethical producers (doctors) to prescribe even more medication or medical tests for the patient than what is truly necessary to</p>	<p>Anti thesis 1</p> <p>Direct provision has its limitations in addressing public goods + Evaluative Statement</p> <p><b>Criteria 1</b> Efficiency (government failure)</p> <p><b>Criteria 3</b> Unintended consequences</p> <ul style="list-style-type: none"> <li>• Dynamic inefficiency</li> <li>• Productive inefficiency</li> </ul> <p>Direct provision has its limitations in addressing imperfect information</p> <p><b>Criteria 2</b> Effectiveness (address root cause)</p> <p><b>Criteria 3</b> Unintended consequences</p> <ul style="list-style-type: none"> <li>• wastage of govt resources</li> </ul>
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<p>increase total revenue, hence profits. This simply serves to aggravate the overconsumption problem, increasing allocative inefficiency.</p>	
<p>Direct provision is the only way for public goods, but is not the only way to address imperfect information. There are other more effective methods.</p> <p>Despite limitations that may arise in direct provision of public goods, it is the only method to solve public goods. Hence there is no alternative policy. However, for imperfect information, there are other available and possibly better policies that can better address the root cause and minimize wastage of scarce government resources.</p> <p>In the market for child immunization services, regulation and public education will be more important. Regulations on parents such as compulsory vaccinations against particular diseases – National Childhood Immunization Programme is monitored by Expert Committee on Immunization. Singapore is largely free from vaccine preventable diseases. Public education such as MOH creation of one stop health portal (myhealth) also serves to help parents track children’s immunization schedule and basic information on vaccination on MOH website. Despite being similar to direct provision such it brings about efficiency (Qs is reached) and not being able to reduce imperfect information existing in parents. This method is superior than direct provision primarily because it avoids excessive government resource wastage. However, we can argue that in the Singapore context, parents’ imperfect information could be in the form of forgetting the optimal timeline for immunization, hence the MOH health portal may still address the root cause of imperfect information in Singapore after all.</p> <p>In the market for specialist medical services, regulations are more important to prevent moral hazards from arising. Regulations on doctors such as doctors face penalties from Singapore Medical Council and MOH if found overcharging and over treating. Also, regulations on health insurance coverage to prevent moral hazard: 5% co-payment on Integrated Shield Plans as opposed to full coverage to reduce incentive of exploitation by doctors and encourage patients to reconsider/find out the necessity of recommended treatments. Unlike direct provision, regulations can be said to be the most efficient (achieve Qs) and effective (addressing the root cause by reduce the information gap), at the same time poses least constraints on government budget (by avoiding resource wastage)</p> <p><b>Note: There are other possible strategies that may be used to achieve socially optimal output levels in markets with imperfect information</b></p> <ul style="list-style-type: none"> <li>➢ <u>Incomplete/inaccurate information</u> <ul style="list-style-type: none"> <li>○ Public education, e.g. campaigns, fairs</li> <li>○ Regulations, e.g. compulsory labelling, age restrictions</li> <li>○ Taxes and subsidies</li> </ul> </li> <li>➢ <u>Asymmetric information</u> <ul style="list-style-type: none"> <li>○ Regulations, e.g. provision of guarantees and warranties, mandatory screening/signaling (e.g. vehicle inspection in used car market)</li> </ul> </li> </ul>	<p>Anti-Thesis 2:</p>
<p>Direct provision is the only way for public goods due to the absence of the private sector in production of the good. The only way forward is to ensure that direct provision is sustainable. Hence, the government should critically explore different forms of direct provision, in particular the public private partnership models to increase the efficiency and effectiveness of government provision.</p> <p>In imperfect information, it is evident from the prior analysis that free provision is not the only way, nor the best way. In light of the aging population, government budget will gradually become a major constraint to finance free provision methods. Hence the only way forward is to access strategies that can ultimately reduce strains on government budget and addressing the root cause, in which regulations and education will be key.</p>	<p>Overall Synthesis</p> <p>Justification</p> <p>Overall Synthesis</p> <p>Justification</p>

Other than public goods, direct provision should only be considered if there are inequity issues resulting in lack of access in certain groups of households.	Something special
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**Level Marking Descriptor**

L3	Well-developed argument with a balanced discussion of the benefits and costs of direct provision in addressing the market failure indicated in Part A, and two alternative policies. Good economic analysis; good use of examples that relates to chosen context in Part A. L3-8m to be awarded for well analysed scripts + 1 well developed alternative policy	8-10
L2	Balanced argument of the benefits and costs of direct provision is seen but quality may be inconsistent, with a weak alternative reason. Some attempts to relate to chosen context in Part A. Very well developed explanation and discussion of benefits and costs of direct provision, without alternative policies – max 6m One sided development – benefits/costs only – max 5m	5-7
L1	Lack of economic analysis and largely descriptive.	1-4
E3	A well justified stand that considers unstated assumptions and provides a new perspective.	4-5
E2	Answer makes a stand that attempts to use economic justification.	2-3
E1	Answer makes an unjustified stand.	1

- 4 Productivity growth is critical to our future progress. Without productivity gains, we will eventually lose our competitiveness. Wages will stagnate too. Labor productivity growth can be made more sustainable if firms invest in the right type of technologies, revamp their business processes to create value and also move to new markets.

*Mr Lim Swee Say, Minister for Manpower  
Speech at Singapore Productivity Awards Gala Dinner, 2017*

Explain how improving labour productivity affects a country's standard of living and discuss whether it should be the government's priority in Singapore. [25]

**Question Interpretation**

Command	<ul style="list-style-type: none"> <li>• “Explain how”: Describe in detail; give clear reasons using relevant economic facts</li> <li>• “Discuss”: TAS – different perspectives</li> </ul>
Content	<ul style="list-style-type: none"> <li>• Improving Labour productivity</li> <li>• SOL               <ul style="list-style-type: none"> <li>○ Material aspect</li> <li>○ Non-material aspect</li> </ul> </li> <li>• Government Priority – Ranking of priorities of the government</li> </ul>
Context	Singapore: Small & Open economy
Approach	<p>“Explain how improving labour productivity affects a country's SOL”</p> <ul style="list-style-type: none"> <li>• Improving labour productivity affects m SOL</li> <li>• Improving labour productivity affects nm SOL</li> </ul> <p>“Discuss whether it should be the government's priority”</p> <ul style="list-style-type: none"> <li>• T: Labour productivity can be the govt's priority</li> <li>• AT1: Limitations of placing “improving labour productivity” as a priority</li> <li>• AT2: Other aspects can be more/equally as important as improving labour productivity               <ul style="list-style-type: none"> <li>○ Focusing on external sector (export sector)</li> <li>○ Achieving income equity</li> </ul> </li> </ul>

**Answer Outline:**

**Introduction**

Standard of Living (SOL) reflects the well-being of an average person in a country. It includes the material and non-material aspects. The material well-being refers to the quantity of goods and services available to the average person in a country. The non-material well-being examines the quality of life of an average person in a country. This includes the number of working hours per period, leisure time, quality of physical environment, life expectancy...etc. Labour productivity is defined as output per man hour, where improving productivity will therefore increase the output per man hour, thus resulting in a more productive workforce.

Singapore has a small and open economy, where we are extremely reliant on the external sector for sustainable economic growth. With quickly evolving technologies and innovation, coupled with greater competition especially from the emerging economies, it is therefore pertinent for Singapore to always remain competitive so that our external sector can flourish. Given our small and open economy, people are hence our precious resource. Unfortunately, as birth rates fall, the ageing population is starting to take a toll on the government budget and the productivity of the workforce as well. Hence, many resources and policy focuses of Singapore are on building up our people and improving labour productivity, where productivity growth is critical to our future progress, so as to build a skilled workforce, remain competitive and increase our attractiveness as a FDI destination.

In this essay, we will look at how a more productive workforce, where output per man hour increases, will affect Singapore's SOL and whether or not that improving labour productivity is a priority for the Singapore government.

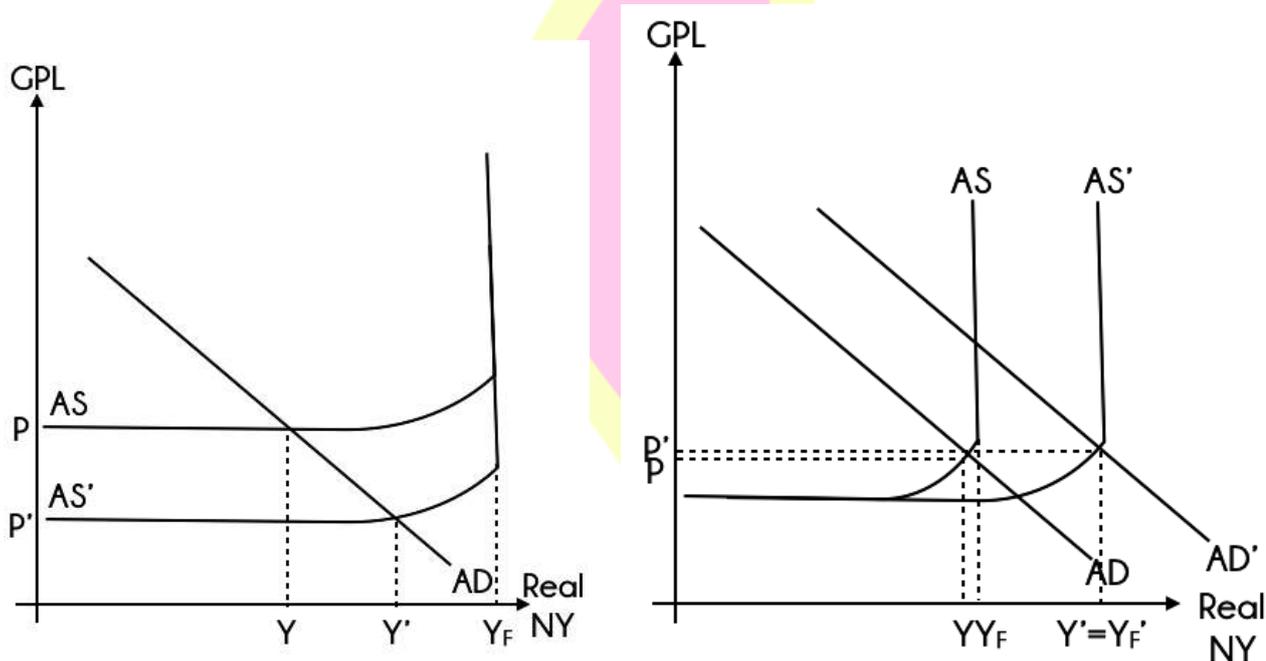
**Body: How Improving labour productivity affects SOL**

Improving labour productivity will increase output per man hour. This way, unit labour costs is lower, which reduces Cost of Production (COP). SRAS will increase and shift downwards, resulting in an increase in Real National Income (RNY) with a fall in General Price Levels (GPL). As such, households' disposable income

rises and purchasing power increases, where quantity of goods and services consumed increases, thereby increasing current material SOL.

In addition, with a more productive workforce, Singapore will become more attractive as an FDI destination. As such, FDI in the form of investments into capital goods will increase. In the short run, AD increases, leading to actual economic growth where more goods and services are available to the average person in a country, thus increasing current material SOL. In the long run, LRAS will increase since the quality of resources in Singapore will also be higher, where Singapore's productive capacity will rise. This will improve future material SOL.

Moreover, with a more productive workforce, there is greater efficiency. As labour becomes more productive, there is less work stress and less time spent on producing the same output levels, thus freeing up more time for leisure. This improves the quality of life where non-material well-being improves.



Given our lack of natural resources, where people is Singapore's only precious resource, this essay will proceed to look at whether improving labour productivity should be the Singapore government's priority.

**Thesis: Improving labour productivity should be the government's priority**

**Improving labour productivity should be the government's priority as it can enhance actual economic growth, reduce inflationary pressure and improve BOT.**

Given that labour is our key resource, labour productivity is the Singapore government's priority as it is our primary way to increase competitiveness in the short run. Improving labour productivity will reduce unit labour cost (since same amount of output is able to be produced within a shorter period of time). This will lead to a fall in cost of production, where SRAS will increase, shifting upwards from AS to AS', as seen in Figure 1. This will lead to a fall in GPL from P to P', where Singapore's export competitiveness will improve. With a fall in price of exports (Px), demand for our exports will rise, leading to a rise in export revenue. Ceteris paribus, (X-M) rises (movement along the AD curve), where real national income (RNY) rises from Y to Y', thus achieving actual economic growth, reducing inflationary pressures and improving Singapore's current account through her balance of trade (BOT).

Figure 1

Figure 2

### **Improving labour productivity should be the government's priority as it can enhance both material and non-material SOL in the long run**

In the light that Singapore has an ageing population, labour productivity is essential for Singapore to maintain competitiveness into the future. Having an ageing population may result in the rate of older workers retiring out of the workforce being greater than the rate of young workers entering the labour force in future. Thus, this may cause our productivity capacity to fall in the future. Hence, with improvements in labour productivity, the quality of Singapore's workforce will increase. In the long run, as seen in Figure 2, the productive capacity of Singapore's economy will increase from  $YF$  to  $YF'$ , where LRAS shifts right from  $AS$  to  $AS'$ , offsetting the falling LRAS arising from our ageing population. This enables Singapore to sustain economic growth and enjoy sustained SOL improvements (both material and non-material) in the long run.

### **Improving labour productivity should be the government's priority as it can enhance both actual and potential economic growth, and increase competitiveness by being more attractive as a FDI destination**

An improvement of labour productivity will increase the expected rate of return on investments. This will increase Singapore's attractiveness as a destination for Foreign Direct Investments (FDI), where she becomes more competitive as an investment hub compared to other countries. Level of FDI will increase, thus increasing AD due to an increase in investment in capital goods. AD shifts rightwards from  $AD$  to  $AD'$  as seen in Figure 2, increasing RNY from  $Y$  to  $Y'$ , thus achieving actual economic growth. In the long run, an increase in labour productivity and FDI increases both the quantity and quality of resources in Singapore, enabling Singapore to also achieve potential economic growth.

With Singaporeans being unable to accept population-driven growth by increasingly depending on the influx of foreign workers, productivity-driven growth seems to be the primary option forward for Singapore to achieve sustained non-inflationary economic growth in the long run. Moreover, Singapore is currently on the intermediate range of the AS curve approaching the classical range. Hence improving labour productivity is even more imperative to prevent Singapore's economy from overheating. This can also help to prevent demand-pull inflation. In the face of globalisation, where Singapore is extremely susceptible and vulnerable to more intense external competition and her ageing population, it is only right that the government be forward-looking and continue to improve labour productivity, so that we will continue to be an attractive destination for FDI in the Asia-Pacific region and maintain our competitiveness.

### **Improving labour productivity should be the government's priority as it can enable SG to develop CA in new sectors and improve non-price competitiveness of exports, enhance actual economic growth and improve BOT**

Given that Singapore is a small and open economy, trade is an essential engine of growth. Labour productivity should be the Singapore government's priority as it can also increase our export non-price competitiveness. With the rise of emerging economies like China and India, these economies are indeed eroding Singapore's traditional areas of comparative advantage (e.g. in the production of capital-intensive goods and services). Hence, there is a need for Singapore to develop new areas of comparative advantage (CA) in the production of knowledge-intensive goods and services and value creation (e.g. in the Science, Technology, Engineering and Mathematics (STEM) sectors). An improvement in labour productivity will be able to help Singapore develop CA in these new areas. By developing a CA in these areas, this will enable Singapore to produce higher quality exports, which will increase exports' non-price competitiveness. Due to higher quality exports, this decreases availability of substitutes as Singapore exports become more highly sought after (PED inelastic). Thus demand for Singapore's exports will rise, ceteris paribus, leading to a rise in net export revenue, thus increasing AD and thus RNY. This will enable Singapore to achieve actual economic growth despite the rise in regional competition, and improve Singapore's current account through her BOT.

### **Anti-Thesis 1: Limitations of placing improving labour productivity as a government priority**

#### **Improving labour productivity should NOT be the government's priority because of the limitations improving labour productivity entails**

Unfortunately, improving labour productivity can be a rather long and tedious process which will take many years to come into fruition. Time lags will be involved in the implementation of the supply-side policies e.g. labour reforms where the effects will only take place in the long run, thus having no short term effects. Moreover, such policies to improve labour productivity may not guarantee results as there will still be uncertainty and resistance in the older people whose mind-sets are difficult to change even if retraining programmes are in place.

#### **Improving labour productivity should NOT be the government's priority because of the higher opportunity costs faced**

The Singapore government may also face potential trade-offs with the achievement of other macroeconomic aims, where high opportunity costs are likely to be incurred because the Singapore government may then have

less government revenue to spend on other sectors like healthcare or national defence. This may result in higher domestic costs of production (SRAS decreases) which may hinder actual economic growth, increase unemployment (possibly both cyclical and structural) and increase prices (cost-push inflation) in the short run.

**Improving labour productivity should NOT be the government's priority because it may lead to non-inclusive economic growth**

Due to the inherent limitations of improving labour productivity, the Singapore government may also thus not choose to make it its priority. If improving labour productivity is only limited to certain sectors (e.g. export or STEM sectors) in the economy, this may lead to non-inclusive economic growth as only the wages of the workers in these certain sectors will increase, given that they have higher skills and thus have a higher ability to negotiate for higher wages. As compared to the sunset industries or industries who do not get improvements in labour productivity – the wages may remain stagnant. This will widen the income gap, worsening inclusive economic growth.

**Improving labour productivity should NOT be the government's priority because it may create the problem of excess capacity**

Improving labour productivity may create the problem of excess capacity, especially when the economy is facing demand-side issues. For example, during global economic crises when incomes of trading partners are falling, Singapore may face a fall in export demand, ceteris paribus, leading to a fall in net export revenue (X-M), and therefore a significant fall in AD, especially when (X-M) is such a significant component of AD for Singapore as a small and open economy.

**Anti-Thesis 2: Improving labour productivity should NOT be the government's priority because there are other equally or more significant issues to focus on**

**Improving labour productivity should NOT be the government's priority because ensuring a stable exchange rate is of a greater priority**

Given Singapore's nature of a small and open economy, Singapore is also heavily dependent on the external sector, particularly trade to drive economic growth. As such, the Singapore government should perhaps prioritise improving the export sector instead to ensure that our exports continue remaining both price and non-price competitive and that our currency value remains stable so that the problem of a huge or prolonged BOP (BOT) deficit will be prevented. If not prioritised, Singapore will face unintended consequences on her external sectors given her vulnerability.

In addition, due to Singapore's lack of natural resources, she is heavily reliant on imported inputs, and therefore highly susceptible to imported inflation. This is a problem which improving labour productivity will not be able to control (and solve the root cause of the problem). Thus, it is government priority to stabilise the exchange rates where we have a slow and gradual appreciation of the Sing dollar to dampen imported inflation, where the excessive rise of price of imports, in term of domestic currency, is prevented.

Singapore's stance towards free trade results in increased interconnectedness between Singapore and other trading partners. As aforementioned, global recessions will affect Singapore's net export revenue (NX). Labour productivity will take too long a time to improve net exports in the short run through capacity expansions and falling general price levels. Thus, by controlling exchange rates, moving towards a zero appreciation stance will decrease price of exports in terms of foreign currency, thereby increasing export price competitiveness, and thus preventing prolonged BOT (BOP) deficit in the long run.

**Improving labour productivity should NOT be the government's priority because ensuring that economic growth is inclusive is of a greater priority**

With globalisation, income inequality is becoming a pertinent issue for Singapore. As such, the Singapore government also needs to take income distribution into consideration and prioritise ensuring that the income gap does not widen so as to promote more inclusive economic growth in the long run, that is sustained over a period of time, is broad-based across economic sectors and creates productive employment opportunities for the majority of the country's population. The Singapore government does this by implementing progressive taxes to ensure that income redistribution takes place so that economic growth is more inclusive in the long run.

**Improving labour productivity should NOT be the government's priority because ensuring that economic growth is sustainable is of a greater priority**

Labour productivity should also not be the main priority, especially since the government should also need to ensure that sustainable growth is achieved, where other significant economic problems, such as depleted resources and environmental problems will not be created, particularly for future generations. The government can provide grants to firms to encourage more R&D on cleaner and green technology. Carbon taxes can also

be implemented to reduce carbon emissions and lessen air pollution. All these will reduce the amount of environmental problems, thus leading to more sustainable economic growth in the long run.

### Synthesis

Despite existing issues that merit equal or some attention, the Singapore government should still make improving labour productivity her priority. This is because most economies are still in the midst of recovery from recent economic crises and therefore, there is less urgency for the Singapore government to stimulate further demand-side growth. Additionally, improving labour productivity may help to make economic growth more inclusive, depending on the way the government implements policies. For example, the Workfare Training Scheme (WTS) targets low-income earners by helping them to up-skill so that they are able to earn higher wages through greater productivity, and thus narrowing the income gap. Given Singapore's added challenge of a rapidly ageing population and declining birth rates, there is even more impetus for the Singapore government to make raising labour productivity its priority, so as to counter the effects of this in the long run.

### Level Marking Descriptor

L3	<p>Answer uses relevant concepts of SOL to explain how improving labour productivity affects SOL.</p> <p>Answer also presents well balanced arguments on whether improving labour productivity should be the government's priority. These arguments are based on the various aims that the Singapore government wants to achieve. Analysis is well-developed throughout and argument is coherent.</p> <p>Answer makes use of contextual knowledge to support the arguments. Good use of Singapore examples.</p>	15—20
L2	<p>Answer uses some concepts of SOL to explain how improving labour productivity affects SOL, but explanation may lack complete elaboration.</p> <p>Answer presents different arguments on whether improving labour productivity should be the government's priority, although the analysis may not be fully developed.</p> <p>There are some weak attempts to use contextual knowledge to support the arguments. Examples not well used.</p>	9—14
L1	<p>Answer attempts to explain how improving labour productivity affects SOL, but distinction between material and non-material aspects are not clear and elaboration is weak.</p> <p>Answer attempts to present some arguments on whether improving labour productivity should be the government's priority, but they are largely one sided. Analysis is largely undeveloped and contains inaccuracies in content.</p> <p>No contextual knowledge to support arguments. Answers are purely theoretical. Examples have not been used.</p>	1—8
E3	A well justified stand that considers unstated assumptions and provides a new perspective.	4—5
E2	Answer makes a stand that attempts to use economic justification.	2—3
E1	Answer makes an unjustified stand.	1

5 Discuss how far the concept of opportunity cost affects government policy decision making. [25]

**Question Interpretation**

**Command Word:** Discuss how far: multiple perspectives and comparison with other factors

**Content:** opportunity cost; government's policy decision- micro and macro decisions

**Context:** no specific context

**Approach**

- Explain how opportunity cost is used by the govt. for their decision making
- Explain how opportunity cost is not used by the govt. due to the limitations of using the concept
- Explain how other factors are more important in affecting govt.'s policy decisions.
- Throughout the answer consideration of opportunity cost from different stakeholders' point of view must be analysed as the govt. may use these perspectives before making the decision.

**Answer Scheme**

<p><b>Introduction</b></p>	<p>Opportunity cost is defined as the next best alternative forgone when a decision/choice is made.</p> <p>Government's decision making involves the aim of maximising societal welfare both at the micro and macro level. Thus, a govt. undertakes microeconomic policies to achieve efficiency and equity while macroeconomic policies to improve the standard of living in an economy.</p> <p>Government's decision making involves if they should intervene at all and if they do, how should they intervene to achieve their objectives for the economy. In making such decisions, opportunity cost may often play an important role. However, how far they affect the govt. can only be assessed after comparing it to other factors that may also guide govt.'s decision making</p>	<p><b>Define key terms</b></p> <p><b>State that govt. makes both micro and macro level decisions</b></p> <p><b>Set the tone of the essay</b></p>
<p><b>Body</b></p>	<p><u>Thesis: Concept of opportunity cost affects govt.'s policy decisions</u></p> <p>In achieving <u>Micro aims</u> of efficiency</p> <p><b>Whether there is a need to intervene-</b> In the market of healthcare, consumers will only consider their own private costs, MPC which may include their opportunity cost, and private benefits MPB. However, due to the presence of MEB, <math>MSB &gt; MPB</math> and there arises a problem of under-consumption. This has an opportunity cost on the third parties and societies due to the forgone benefits of not consuming healthcare at the social optimal level. For example, this could be the forgone benefit of a healthy and productive workforce which supports potential economic growth in the country. This presence of opportunity cost will guide the govt. to intervene in the market, proving the importance of opportunity cost in decision making.</p> <p><b>How to intervene?</b>- Govt. can consider either giving subsidies or direct provision. If the govt. embarks on direct provision, like in the case of UK, MPC will be zero and opportunity cost of the consumers will be zero while that of the govt. will be very high, in terms of huge resources that could have been used to develop other sectors of the economy. In addition, providing it for free of cost may lead to greater DWL due to overconsumption/exploitation of the provision, thereby adding to govt.'s opportunity cost (as society's welfare is at stake and consumers may not be self-reliant/responsible). Such high opportunity cost may lead the govt. to discard use of direct provision and choose subsidy for healthcare instead, as in the case of Singapore. Subsidy=MEB at <math>Q_s</math> will lower MPC and increase consumption to societal optimal level. Although</p>	<p><b>Note that the under-consumption is not elaborated in detail.</b></p> <p><b>Example of Opportunity cost involved</b></p> <p><b>Link how govt. decides</b></p> <p><b>Examples of opportunity cost for Direct Provision</b></p> <p><b>Link to govt.'s decision</b></p>

	<p>providing subsidy will also incur an opportunity cost on gov't.'s part (for not being able to utilise the resources elsewhere), it will also create opportunity cost for the consumers who now have to pay part of their medical bills. Incurring this opportunity cost will make them more responsible about their healthcare and may in fact solve the issue of under-consumption of preventive healthcare. This shows that gov't. considers opportunity cost of both consumers and itself before deciding on the type of policy.</p> <p>In achieving <u>macro aim- Economic growth</u>  <i>Whether there is a need to intervene?</i>- In period of falling economic growth, the gov't. may want to use macro policies to spur growth. If they do not intervene, the opportunity cost may be that of rising unemployment and falling material SOL in the country. If the gov't. considers this opportunity cost to be large enough, they will choose to intervene. This was definitely a guiding factor in many major economies during the falling income levels due to 2008 sub-prime crisis.</p> <p><i>How to intervene?</i> – Gov't. has limited budget that they need to allocate to competing needs. Thus, if during demand deficiency the gov't. wants to adopt expansionary fiscal policy by increasing gov't. spending through cash payouts as was done in the US with their American Recovery and Reinvestment Act through fiscal stimulus in 2009, it will have to forgo spending on the capital infrastructure of the country that affects its potential economic growth. If this opportunity cost is considered to be high (especially as future growth will be at stake), gov't. may want to consider adopting fiscal policy with a supply side slant instead. While expansionary fiscal policy with rise in gov't. expenditure will increase AD and increase real national income, the spending on capital infrastructure will also increase productive capacity of the country and lead to rise in AS and potential economic growth. Alternatively, they may want to adopt monetary policy instead, for example quantitative easing adopted by western economies during the global slowdown, whereby money supply in the economy was raised in order to encourage higher consumption and investment, and lead to higher AD and national income. As it will not require gov't. expenditure, gov't. will not have to give up next best alternative use of its resources.</p> <p><u>Other possible points</u></p> <ol style="list-style-type: none"> <li>1. Choice between interest rate policy Vs exchange rate policy, the associated opportunity cost and how that affects gov't.'s decision</li> <li>2. Choice between protectionism Vs free trade, the associated opportunity cost and how that affects gov't.'s decision</li> <li>3. Choice with regard to which goods to specialise in [theory of comparative advantage], associated opportunity costs and how that affects gov't.'s decision</li> <li>4. Choice of expansionary fiscal policy, associated opportunity cost of giving up on low inflation aim and how that affects gov't.'s decision</li> </ol>	<p><b>Examples of opportunity cost for subsidy</b></p> <p><b>Link to gov't.'s decision</b></p> <p><b>Examples of opportunity cost</b></p> <p><b>Link to gov't.'s decision</b></p> <p><b>Examples of opportunity cost</b></p> <p><b>Link to gov't.'s decision</b></p> <p><b>Link to gov't.'s decision</b></p>
	<p><u>Anti-Thesis 1: Opportunity cost does not affect gov't.'s decision making</u></p> <p>It is hard to estimate opportunity cost accurately and thus, may not play an important role in decision making as there is no certainty of an effective and efficient outcome even when decisions are made based on opportunity costs. [<b>consideration: information available to gov't.</b>]</p>	

	Explicit costs/actual monetary cost of the policy and whether there are sufficient funds available will play a more important role in assisting the govt. in their decision making.	
	<p><u>Anti-Thesis 2: Other factors affect govt.'s decision making</u></p> <p><b>(Macro)</b> Priorities of the govt./state of the economy – if an economy is going through severe demand deficiency, govt. may generally choose to use expansionary fiscal policies it as <u>it will have a direct and fast impact on AD</u> and therefore, spur growth faster.</p> <p><b>(Micro)</b> If the market has zero provision of the good (public good-national defence) such that there is total market failure without govt. intervention, direct provision will be the most effective policy to choose. This is because there will be no effective demand and no private producer will want to produce the good. In the case of healthcare, if the under-consumption was attributed to underlying inequity in the economy, govt. may adopt direct provision to ensure social justice and a fair access for all.</p> <p>Similarly, for subsidy, a bigger consideration could be whether MEB can be accurately estimated to be able to implement an effective subsidy. If not, it may lead to over/under subsidies and the inefficiency may not be solved.</p>	<p><b>[consideration: economic priorities and benefits of the policy]</b></p> <p><b>[consideration: economic priorities and benefits of the policy]</b></p> <p><b>[consideration: availability of information]</b></p>
<b>Synthesis</b>	<p>Opportunity cost will definitely affect govt.'s decisions at both micro and macro levels. This is to ensure that scarce resources are allocated in the most optimal way to maximise societal benefits that includes consumers, producers and the govt. itself.</p> <p>However, often the govt. needs to consider other factors that may affect their decision in order to address the root causes of the problems effectively and achieve objectives that can be sustained over a long period of time, <u>despite the high opportunity costs involved with the policies.</u></p> <p>Even when decisions are made based on opportunity cost considerations in the current time period, any changes/external threats that the economy might face will require the govt. to review their decisions and act according to the most pressing need of the country.</p> <p>Sometimes even if a policy has low opportunity cost, the govt. may not want to adopt it if it does not significantly improvement the standard of living in the country.</p> <p>While welfare and standard of living considerations remain as overarching aims underlying any decision making, decisions are ultimately depended on a thorough cost-benefit analysis and often also influenced by the political needs of the govt.</p>	<p><b>Stand + Justify</b></p> <p><b>Something Special</b></p> <p><b>Something Special</b></p>

### Level Marking Descriptor

<b>L3</b>	Answer makes good use of the concept of opportunity cost to analyse various decisions at the micro and macro level. The arguments developed are well balanced and make good use of contextual knowledge. There is comparison made between opportunity cost and at least one other factor that influences gov't.'s decision.	<b>15-20</b>
<b>L2</b>	Answer makes good use of the concept of opportunity cost to analyse various decisions at the micro and/or macro level. Arguments developed are not well balanced and may not use contextual knowledge consistently. There is no comparison made to other factors that influence gov't.'s decision.	<b>9-14</b>
<b>L1</b>	Answer attempts to use the concept of opportunity cost but it is applied generically in gov't.'s decision making without clear link to micro or macro decisions. Answer lacks of examples and there are inaccuracies in content development.	<b>1-8</b>
<b>E3</b>	A well justified stand that considers unstated assumptions and provides a new perspective.	<b>4-5</b>
<b>E2</b>	Answer makes a stand that attempts to use economic justification.	<b>2-3</b>
<b>E1</b>	Answer makes an unjustified stand.	<b>1</b>

- 6 The withdrawal of the US from Trans Pacific Partnership is a setback but the collective commitment of the remaining 11 partner countries towards greater liberalisation and regional integration may bring some positive outcomes through increased trade, labour and capital flows.
- (a) Explain why countries may opt out of free trade agreements. [10]
- (b) Discuss the likely effects of liberalisation and greater integration on the long-term growth of Singapore. [15]

### Question Interpretation (a)

Command	“Explain why”: Describe in detail; give clear reasons using relevant economic facts
Content	<ul style="list-style-type: none"> <li>• Opt out of FTA = no free trade = engaging in protectionism (trade flows, capital flows, labour flows) <ul style="list-style-type: none"> <li>○ Protect infant/sunset industries</li> <li>○ Prevent foreign dumping</li> <li>○ Reduce reliance on other countries on goods of strategic importance</li> <li>○ Prevent BOP deficit</li> <li>○ Prevent brain drain</li> <li>○ And any other points relevant</li> </ul> </li> </ul>
Context	No specific context; any context will do (preferably not hypothetical)
Approach	<ul style="list-style-type: none"> <li>• Improving labour productivity affects m SOL</li> <li>• Improving labour productivity affects nm SOL</li> </ul>

### Essay Outline

#### **Intro:**

- Definition of FTA
- Set a context: Withdrawal of US from TPP = Engage in protectionism
- Overview: Protect country's trade flows, labour flows, capital flows

#### **Body (Any 3 points will do)**

1. To develop and/or protect infant (sunrise) industries
2. To protect declining (sunset) industries
3. To prevent foreign control of domestic market through dumping
4. To correct adverse balance of payments temporarily
5. To encourage production of goods of strategic importance
6. Prevent exploitation of cheap labour
7. Protect against goods that gives rise to negative externalities

#### **Conclusion - summary**

### Answer Scheme

#### **Introduction**

A Free Trade Agreement (FTA) is a legally binding agreement between 2 or more nations to lift bilateral trade through measures such as lowering tariffs and other trade barriers to bring about closer economic integration.

Countries may opt out of FTAs and/or engage in protectionism to mitigate the disadvantages that stem from enjoying international trade.

#### **Body 1 [Infant Industry argument]**

Countries may opt out of FTAs to protect and/or develop their infant industry. An infant industry is one which has potential comparative advantage but is too young to realise this potential in the face of more established foreign competitors, and is therefore operating on higher average cost. For example, Vietnam – a member country in the TPP is an infant industry in the automobile/motorcycle industry. With free trade, foreign firms and their more established products – who have reaped internal economies of scale and therefore have both price and non-price advantages, will be competing against the Vietnamese domestic firms in the infant automobile/motorcycle industry. Given the infancy stage of the domestic firms (thus operating at a lower efficiency and higher cost), they may not be able to compete with the foreign firms' more established products. Furthermore, the Vietnamese consumers will also buy from their automobiles/motorcycles from the more established foreign brands e.g. BMW or Honda, which may result in the Vietnamese domestic firms

experiencing losses and shutting down eventually before even reaping the potential comparative advantages, which may lead to the monopolisation of the foreign firms in the Vietnamese market and predatory prices which will hurt both the consumers and producers. As such, by opting out of FTAs, this will reduce the amount of foreign competition the Vietnamese infant industries will face, where they are protected in their early stages of growth so that they will have time to grow and develop their potential comparative advantage and in time, expand their scale of production to enjoy economies of scale, lower their cost of production and then compete with the more established foreign firms on more equal terms.

**Body 2 [Sunset Industry argument]**

Countries may also opt out of FTAs to protect their sunset industries. Comparative advantages are constantly changing. A country like USA could have lost its comparative advantage in manufacturing because relative costs of production across countries like China and India has fallen because of abundance of cheap labour and land. If resources are perfectly mobile, they will be move out of the sunset industry to those in which the country now has a comparative advantage in. However, the reality is that factors of production are not perfectly mobile. Workers take time to learn the skills required by the new industries. Machines designed for and installed in the manufacturing industry have no use in other industries e.g. services. If USA were to sign more FTAs with other countries, these sunset industries e.g. in the rubber tyre industry will face intense competition from foreign firms and goods and will shut down very quickly – where it may lead to sudden and possibly significant rise in structural unemployment. Hence opting out of FTAs will help reduce this intense competition from foreign firms, and thus preventing a rise in structural unemployment. Alternatively, reducing foreign competition by opting out of FTAs would allow the sunset industry more time to decline gradually, and giving the resources more time to move to other flourishing industries (e.g. give the workers more time to undergo retraining and reskilling so that they can find new jobs in other industries).

**Body 3 [Dumping argument]**

Countries may also opt out of FTAs to prevent foreign control of domestic market through dumping. With FTAs, there may be a higher occurrence of foreign producers engaging in dumping. This is possible if these foreign countries practice predatory pricing or that their government is subsidising them. Dumping allows these foreign producers to further reap economies of scale and increase their share of the domestic market. This may eventually drive the domestic firms out of the industry, resulting in the foreign company gaining control of the market (monopolisation) and subsequently charging high prices (predatory pricing), which will lead to exploitation of consumers and a reduction in societal welfare. Thus, by opting out of the FTAs, this will lower the chances of foreign firms dumping and monopolising the domestic markets, and also may help domestically produced goods to be more competitive.

**Summary**

As some countries may face more disadvantages (cost) as a result of globalisation and FTAs, rather than advantages (benefits), thus this explains why some countries opt out of the FTAs to restrict trade so as to protect their domestic markets and workers from foreign competition.

**Level Descriptor**

L3	Answer is clearly elaborated with in-depth analysis on why some countries opt out of FTAs.  Good use of relevant examples is present to support the analysis.	8-10
L2	Answer lacks depth in elaboration in terms of explaining why some countries opt out of FTAs.  There are some weak attempts to use relevant examples.	5-7
L1	Answer makes some superficial links to why some countries opt out of FTA.  No examples have been used and there are inaccuracies in content elaboration.	1-4

## Question Interpretation (b)

Command	Discuss: TAS; different perspectives
Content	<ul style="list-style-type: none"><li>• Liberalisation = removal of trade barriers → move towards Free trade</li><li>• Greater integration → higher reliance / interdependence / interconnectedness of trade + labour + capital flows between countries</li><li>• Long term growth<ul style="list-style-type: none"><li>○ Sustained (actual &amp; potential)</li><li>○ Sustainable</li><li>○ Inclusive</li></ul></li></ul>
Context	Singapore: Small & Open economy
Approach	<ul style="list-style-type: none"><li>• T: Benefits of liberalisation &amp; greater integration on SG's long term growth</li><li>• AT: Costs / Limitations of liberalisation &amp; greater integration on SG's long term growth<ul style="list-style-type: none"><li>○ May only benefit SG's growth in SR</li><li>○ Sustainability and inclusive of growth cannot be achieved in the LR</li></ul></li></ul>

## Essay Outline

### **Intro:**

- Define "Liberalisation & greater integration"
- Context: Commitment of countries in the TPP; SG
- Overview: Likely to be both benefits and costs on the long term growth of Singapore

### **Body**

- **Thesis:** Liberalisation and greater integration will have benefits on long term growth of SG
- **Anti-Thesis:** However, liberalisation and greater integration may also bring about some costs which will affect SG's long term growth negatively

### **Synthesis**

- Stand
- Justification
- Insights

## Answer Outline

### **Introduction**

Economic integration refers to the process where neighbouring countries integrate as one economic unit to take advantage of the extended market to bring about better allocation of resources. As part of the Trans Pacific Partnership (TPP) with liberalisation, trade barriers will be reduced, which will promote greater access to the 11 partner countries' export markets in which domestic goods are sold.

Since the world market is always larger than the domestic market, with liberalisation and greater integration, Singaporean firms will then have access to the world market, thus allowing for greater sales which drives economic growth. This is important for Singapore considering her small and open economy, where natural resources are limited and population size is small, and thus, she is extremely dependent on trade for long term growth.

In this essay, we will look at the positive and negative effects of liberalisation and greater integration on the long-term growth of Singapore, in terms of actual, potential, sustainable and inclusive economic growth.

### **Thesis: Benefits on long term growth of SG**

#### **[Trade Flows]**

Being part of the 11 member countries of the TPP will ensure greater integration and liberalisation which will reduce the existing trade barriers, thus promoting free trade. Now that the domestic firms in Singapore have access to larger markets, they are then able to increase their scale of production and experience economies of scale which will lower costs of production (COP), improving price competitiveness of their exports. With lower COP, SRAS increases, shifting downwards from AS to AS' as seen in figure 1, where RNY increases from Y to Y', thus achieving actual economic growth.

In addition, they will also face greater competition from foreign firms. Thus, the domestic firms will then have greater incentive to innovate and engage in R&D to improve both price and non-price competitiveness of their exports. This will enable a greater flow of goods and services which will increase Singapore's export volume, ceteris paribus, net export revenue (NX) will increase and hence AD will rise from AD to AD' as seen in Figure 2, where Real National Income (RNY) increases from Y to Y', thus also achieving actual economic growth.

However, demand-pull inflation may result in the long run if the productive capacity of Singapore's economy does not increase in tandem with the rise in AD. Moreover, in reality, the ceteris paribus assumption may not hold because with greater access to the global markets, import expenditure may also rise. Ultimately, whether (X-M) component of AD rises or not depends on the relative elasticities of exports and imports, and also dependent on external conditions i.e. trade partners' economic outlooks as well. It is possible that import expenditure may exceed export revenue, given that Singapore has limited resources and PED of imports is highly price inelastic, which may result in a worsening of BOT & thus BOP and a fall in AD which will lead to negative actual economic growth.

[Labour Flows]

With respect to labour flows, there will also be a greater influx of highly skilled immigrants from Australia, Canada and Japan, which will improve the quantity and quality of Singapore's labour force. With a more highly skilled workforce, labour productivity will rise, leading to a rise in LRAS, where AS shifts rightwards from AS to AS' as seen in Figure 2. Moreover, with liberalisation and greater integration, there will also be a greater influx of low skilled immigrants from countries e.g. Mexico and Peru, where the quantity of Singapore's labour force will rise further. The influx of both low skilled and high skilled immigrants will increase the productive capacity of the economy from Y<sub>F</sub> to Y<sub>F</sub>' and thus achieve potential economic growth in the long run. This is especially helpful due to Singapore's small labour force and the ageing population issue in recent times. In addition, with more labour, domestic consumption will rise, which causes a rise in AD, thus achieving actual economic growth.

With liberalisation, Singaporeans can also go overseas for jobs without restrictions from other countries. As Singapore embarks to ride the waves of the 4<sup>th</sup> Industrial Revolution (IR) and focuses on automation, cloud computing and value creation...etc., learning from highly technologically advanced countries like Japan would help to further develop the skills of the Singapore workforce. When their contracts end as they return back to Singapore, this will therefore further improve the quality of Singapore's workforce as these workers come back to share their expertise and help to improve the skills of their colleagues as well. As such, LRAS will also rise, leading to a rise in potential economic growth.

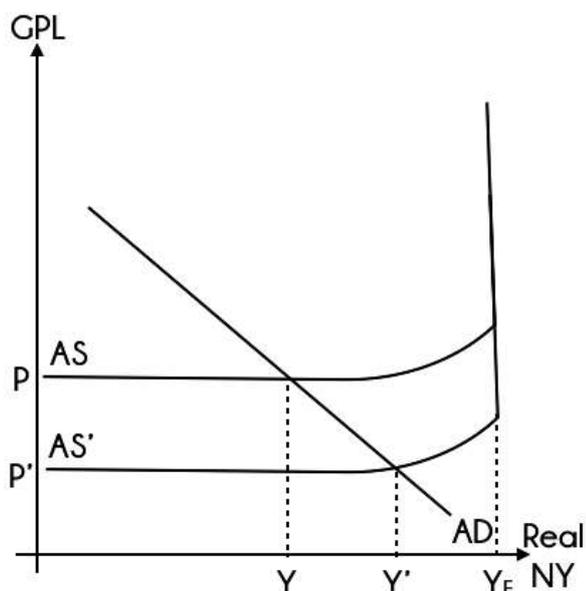


Figure 1

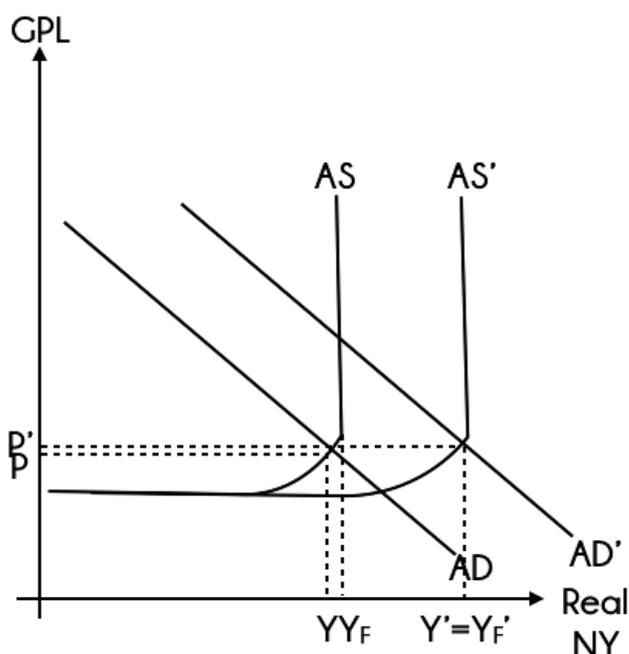


Figure 2

[Capital Flows]

A highly skilled and more dynamic workforce with increase labour productivity will also increase Singapore's attractiveness as a FDI destination, where there will be greater capital flows in the form of Foreign Direct

Investments (FDI), where AD will rise, achieving actual economic growth. Furthermore, with an increase in investments in capital goods, technology and Research and Development (R&D), this would cause LRAS and the productive capacity of Singapore's economy to rise, where potential economic growth is also achieved. Thus in the long run, Singapore will be able to achieve non-inflationary sustained economic growth, where material Standard of Living (SOL) will also improve and be sustained in the long run.

However, this sustained economic growth may worsen the equitable distribution of income in Singapore, where income gaps may widen especially between the flourishing export sectors versus the other more sluggish or stagnant sectors. This will result in inclusive economic growth being unattainable in the long run. In addition, if globalisation leads to greater air pollution (carbon emissions...etc.), greater depletion of resources and environmental degradation, sustainable economic growth may also not be achieved in the long run. Even if there is sustained economic growth in the long run, but it comes with an increase in stress levels, this may also cause non-material SOL to worsen in the long run and affect Singapore's long term growth.

### **Anti-Thesis: Costs on long term growth of SG**

#### **[Trade Flows]**

On the other hand, liberalisation and greater integration may bring about some problems. With greater economic integration with the other countries in the TPP, Singapore will then be more vulnerable to external shocks. Given Singapore's small and open economy, together with liberalisation and greater integration of economies, this may entail Singapore facing greater external instability when other countries are facing weak/negative economic growth e.g. a global recession like the 2009 subprime crisis, where there will be a fall in demand for Singapore's exports, thus causing a fall NX and AD and hence negative actual economic growth in the long run, where there may also be excess capacity.

#### **[Labour Flows]**

The quality of labour force may decrease if Singapore experiences brain drain (due to higher cost of living in SG / higher stress levels / brighter futures in other countries...etc.) where the highly skilled Singaporeans may emigrate to other countries e.g. Australia, New Zealand or Canada. This may hinder potential economic growth because the quality of Singapore's labour workforce will fall, where the productive capacity of Singapore economy may not increase, and thus preventing Singapore from experiencing sustained economic growth in the long run or even face demand-pull inflation in the short run if rise in productive capacity of Singapore is slower than the rise in AD.

#### **[Capital Flows]**

In addition, with liberalisation and greater integration, Singapore will then be very susceptible to hot money inflows and outflows due to free capital mobility. This may affect the stability of the currency value which may bring about imported cost-push inflation, higher cost of production that will affect the price competitiveness of Singapore's exports.

### **Synthesis**

#### **[Stand]**

There are definitely costs and benefits to being a part of the TPP, which promotes greater liberalisation and integration. As rational decision makers, I believe that the net effect of liberalisation and increased integration is positive.

#### **[Justification]**

This is because there have been measures put in place to help Singapore deal with the potential negative impacts mentioned. For example, there have been many retraining and up-skilling programmes put in place that allow workers to easily make the transition from their old jobs to sectors which are growing (and therefore attracting FDI). This ensures that growth remains inclusive. Furthermore, there has been tightening of emission standards for new vehicles and industries, as well as the introduction of a carbon tax from 2020 onwards. This ensures that growth will be sustainable in the long run.

#### **[Insights]**

As much as Singapore is reliant on other countries for economic growth, the Singapore government should also be prudent and forward looking in her policy decision making in order to fully maximise the potentials that the Singapore economy can benefit from the increased liberalisation and integration in order to ensure long term sustainable and inclusive economic growth.

For example, while Singapore cannot entirely reduce our vulnerability to external shocks as a small and open economy, we can insulate ourselves against such shocks by encouraging local small-medium enterprises (SMEs) to develop and grow, thereby providing employment opportunities even when our key trading partners are experiencing downturns.

Ultimately, with greater liberalisation and integration also comes the influx of management expertise and technological advancements from other countries that Singapore can learn from in dealing with “first-world” problems of sustainability issues and widening income gaps. Singapore can implement tried and tested policies from the other developed countries/advanced economies to reduce negative externalities and environment issues to achieve sustainable economic growth in the long run and also put in place certain policies to try to bridge the income gaps between the rich and poor to achieve inclusive long-term growth

**Mark Scheme**

<b>L3</b>	Well-developed argument with a balanced discussion of the benefits and costs of liberalisation and greater integration on Singapore’s long term growth. Good economic analysis with reference to diagrams Good use of examples and good attempts to relate to TPP context in preamble.	<b>8—10</b>
<b>L2</b>	Balanced argument of the benefits and costs of liberalisation and greater integration on Singapore’s long term growth is seen but quality may be inconsistent. Economic analysis may not be so well-elaborated with some gaps. Some reference to diagrams. Some attempts to relate to TPP context in preamble. One sided development: Benefits/costs only – max 5m	<b>5—7</b>
<b>L1</b>	Lack of economic analysis and largely descriptive. No use of examples; Answer purely theoretical.	<b>1—4</b>

<b>E3</b>	A well justified stand that considers unstated assumptions and provides a new perspective.	<b>4—5</b>
<b>E2</b>	Answer makes a stand that attempts to use economic justification.	<b>2—3</b>
<b>E1</b>	Answer makes an unjustified stand.	<b>1</b>