



**HWA CHONG INSTITUTION**  
**C2 Preliminary Examinations**  
**Higher 2**

**CANDIDATE NAME**

**CT GROUP**

**21**

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**ECONOMICS**

Paper 1 Case Study Questions

**9757/01**

**23 August 2022**

**2 hours 15 minutes**

Additional Materials: Answer Booklet

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**READ THESE INSTRUCTIONS FIRST**

Read all instructions printed on the cover page of the 12-page answer booklet carefully.

Write all your particulars clearly on the cover page of the 12-page answer booklet.

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

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

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

Answer ALL questions.

Write all your answers in the 12-page booklet and subsequent 4-page booklets (if required).

Do all your rough work in pen using the answer booklet and cross it through without making it illegible.

Do not tear out any part of this booklet.

Begin case study question 1 and question 2 on a new page within the answer booklet.

All work must be handed in. If you have used any additional 4-page booklets, please insert them inside the 12-page answer booklet.

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

You may use a calculator.

You are advised to spend several minutes reading through the questions before you begin writing your answers.

You are reminded for the need for good English and clear presentation in your answers.

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

**[Turn over**

Answer all questions

**Question 1: Electric vehicle economics**

**Table 1: Global market share of Electric Vehicles (EVs), 1st Half 2020**

Firms	Market share (%)
Tesla	28
Renault-Nissan	10
Volkswagen	10
BYD	7
Hyundai-Kia	7
Others	38
Total	100

Source: CleanTechnica, 15 August 2020

**Extract 1: Singapore aims to deploy 60,000 charging stations for EVs by 2030**

Describing electric vehicles (EVs) as the “most promising” clean energy vehicle technology today, Deputy Prime Minister Heng Swee Keat announced that Singapore will set aside S\$30 million over the next five years for electric vehicle related initiatives. This includes measures to improve charging provision at private premises.

Singapore will accelerate the development of its charging infrastructure to better support the growth of electric vehicles in the next decade and aim to deploy 60,000 charging points at public carparks and private premises by 2030, more than double its initial target of 28,000.

Source: Today Singapore, 18 February 2020

**Extract 2: Tesla could go to India**

Tesla and its founder and Chief Executive Officer (CEO) Elon Musk are focused on building out factories around the world to complement its Fremont, California, electric vehicle plant where the company started. The EV maker spent over \$1 billion in the past quarter including on new factories in Texas and Germany, and Musk commented after its third-quarter 2020 earnings that he is “amazed” by the progress at the Shanghai plant. Tesla thinks it can reach 20 million vehicles by 2030.

“I’m not saying for sure we’ll hit 20 million vehicles,” Musk told analysts and investors on the conference call. “But it does seem like a good goal to have because that would mean that we’re replacing 1% of the global fleet of passenger cars per year.”

One question more Tesla watchers have been asking about that global EV revolution is, when will India become a part of it? India has a large population and Musk wants to bring Tesla everywhere so people can stop using internal combustion engine vehicles and reduce carbon monoxide emissions, alluding to Indian government’s renewable energy ambitions.

An analyst said Musk has had a few false starts in the past, but contends India is and will remain a high priority for Tesla in the coming years, pointing to EV demand and the population growth in India as indicative of a massive market.

Source: CNBC, 22 October 2020

**Extract 3: Produce Tesla’s EVs in India?**

India’s Minister for Road Transport & Highways said that electric vehicle (EV) manufacturer Tesla had been asked to not sell China-manufactured cars in India and instead produce the same in their country. He also urged the Tesla to export its cars by first manufacturing them in India.

“I have told Tesla not to sell electric cars in India which your company has manufactured in China. You should manufacture electric cars in India, and also export cars from India,” he said, adding Tesla had been assured of all necessary support from the Indian government.

Tesla has been asking for a reduction in import taxes in India. Musk, its CEO, had earlier said that Tesla’s plans to bring EVs to India were hampered by high import taxes charged in the country.

“We want to do so, but import taxes are the highest in the world by far of any large country!” Musk had written.

Source: Hindustan Times, 8 October 2021

**Extract 4: 50 to 60 percent growth in EVs in recent years**

The future looks bright for electric vehicle (EV) growth. Consumers are more willing than ever to consider buying EVs, and sales are rising fast. Most major markets have consistently registered 50 to 60 percent growth in recent years, although such growth came from low bases. Likewise, performance improvements continue with respect to range, performance, and reliability. Regulations in major car markets—namely China, the European Union, and the United States—compel car manufacturers to produce more EVs and encourage consumers to buy them. Consumers' EV preferences are shifting. The share of global consumers that would consider purchasing an EV is on the rise. In the United States, between 10 and 30 percent of consumers indicated their preference to consider an EV as their next purchase on national surveys. In Europe, the reported share of consumers considering EV purchase was higher, at 40 to 60 percent, and in China, it was over 70 percent, given the presence of strong government incentives to adopt these vehicles.

On the supply side, this increasing demand will be met with a broader set of choices. Today, new EV models are launching at a rate of approximately 120 a year, providing significantly more options regarding vehicle segment, performance, feature set, and value.

However, there is a problem: today, most car manufacturers do not make a profit from the sale of EVs. In fact, these vehicles often cost \$12,000 more to produce than comparable vehicles powered by internal-combustion engines (ICEs) in the small- to midsize-car segment and the small-utility-vehicle segment. Battery costs represent the largest single factor in this price differential. As industry battery prices decline, perhaps five to seven years from now, the economics of EVs should shift from loss to profit.

Source: McKinsey, 8 March 2019

[Turn over

### Questions

(a) Using Table 1:

(i) Explain the likely market structure of the EV industry. [2]

(ii) Explain why firms in such a market structure might not compete in terms of price. [3]

(b) Extract 1 describes the Singapore government's plan to deploy more charging stations for EVs. Explain why such charging stations are not a public good. [4]

(c) Extract 2 discussed the potential expansion of Tesla into India. With the aid of a diagram, explain one possible reason why its profits might be affected by this expansion. [3]

(d) Using Extracts 2 and 3, discuss whether India would likely overall benefit from Tesla producing EVs. [8]

(e) Extract 4 states that there have been more than 50% growth in many markets for EVs. With reference to the data where appropriate, discuss the view that supply factors are likely to be more important than demand factors, in explaining such a large change in the output of electric vehicles. [10]

[Total: 30]

**Question 2: Challenges faced by economies of United States (US), China and Singapore****Table 2: China's composition of aggregate demand (USD, billions)**

	2014	2015	2016	2017	2018
GDP At Current Market Prices	10475.7	11061.5	11233.2	12310.4	13889.5
Private Consumption Expenditure	5502.3	5972.2	6182.7	6754.4	7650.2
Government Consumption Expenditure	1656.9	1793.9	1838.2	2009.7	2297.6
Gross Fixed Capital Formation	4594.2	4656.3	4667.7	5153.3	5952.9
Exports Of Goods And Services	2462.8	2362.1	2199.9	2424.2	2655.6
Imports Of Goods And Services	2241.3	2003.2	1944.5	2208.5	2564.1

Source: World Bank

**Table 3: Singapore's composition of aggregate demand (USD, billions)**

	2014	2015	2016	2017	2018
GDP At Current Market Prices	314.9	308.0	318.8	343.4	376.0
Private Consumption Expenditure	148.7	145.8	149.1	155.8	167.4
Government Consumption Expenditure	30.3	31.4	32.8	34.9	37.6
Gross Fixed Capital Formation	88.6	83.8	83.0	86.8	85.1
Exports Of Goods And Services	604.4	549.4	525.2	587.4	665.7
Imports Of Goods And Services	530.6	465.3	441.7	496.6	557.5

Source: World Bank

**Extract 5: China's economy to face key challenges**

The Chinese economy continues to slow down as it faces multiple pressures in 2019, but it is also showing resilience with the support of a complex set of stabilizing policies. While 2020 will be a crucial year for China to secure a decisive victory in building a moderately prosperous society in all respects, the country will face greater challenges.

External challenges will be more demanding. The global economic downturn and US-China friction have entered new phases, bringing about unprecedented uncertainty to global economic policies. This will not only directly impact China through trade, but it will also negatively influence its economy by undermining market confidence. As external demand has weakened from 2018, the global manufacturing industry is set to slump. Also, domestic demand is expected to remain weak and has experienced a significant decline, which may accelerate the economic slowdown.

The economy is therefore more vulnerable, particularly when enterprises do not expand their investment in production and residents do not increase their consumption of durable goods, hence China must implement more targeted measures to boost domestic demand.

Source: Adapted from Global Times, 11 December 2019

[Turn over

**Extract 6: The United States – China decoupling**

After decades of increasing globalisation on every front, from trade – pushed further by the growing role of value chains – to technology, movement of people and investment, there now seems to be a turn towards slower globalization, if not deglobalisation, at least in some areas.

Deglobalisation is not a new concept but rather a megatrend which has been seen before, for example right before the First World War. Signs of deglobalisation, measured by decelerating trade and investment, and smaller global value chains, started to appear in 2008. But this trend seems to have accelerated because of the United States' push to contain China in the context of the strategic competition between the two. Such containment is apparent not only in bilateral trade and investment flows but also in technology. COVID-19 has been a second very important factor contributing to deglobalisation. The most obvious impact has been in movement of people.

The deglobalisation of trade is happening in terms of value and volume of gross trade and in terms of the importance of global value chains. In other words, there are signs of a reduction in the exchange of intermediate goods between countries as a way to exploit comparative advantage and specialisation gains. These trends should not surprise us given the increasingly protectionist policies of a number of governments, notably the United States, and the related weakening of multilateralism, as clearly exemplified by the decline of the WTO.

Overall, it is too early to confirm the depth and the sustainability of this new trend towards slower globalisation, if not deglobalisation, which may be happening in more domains that we are fully aware.

Source: [www.bruegel.org](http://www.bruegel.org), 21 December 2020

**Extract 7: For Singapore, globalization is still the future, despite 'dark shift' to protectionism**

Singapore has planted a fresh flag to promote global trade - in stark contrast to what it sees as a "dark shift" toward protectionism in other developed markets. Singapore, despite being small city-state, often punches well above its weight diplomatically and can help to set the tone for the region. It is Southeast Asia's only country with developed nation status. But the city-state has long relied on openness to global trade.

"Most worryingly, the world saw a dark shift in mood away from globalization in 2016. It no longer seems certain we are on an inevitable course towards greater globalization, stronger multilateral institutions and a more connected world," the Committee on the Future Economy<sup>1</sup> (CFE) report said. "Instead, we saw nationalist politics and protectionist economics growing in strength and influence in Europe and the United States. The anti-globalization trend will undermine international trade, hurting all economies, but particularly small open ones like Singapore, with two-thirds of our GDP generated by external demand."

Singapore's CFE, however, said the city-state's future remain focused on developing international ties, although the report placed great emphasis on regional ties as important for future economic growth. "We must resist the threat of rising protectionism. Singapore must continue to work with like-minded partners," the report said, including "less traditional" ones.

Source: [www.cnn.com](http://www.cnn.com), 09 February 2019

<sup>1</sup> The CFE is made up of 5 Cabinet ministers and 25 other members from the private sector, and was formed in December 2015 at the behest of Prime Minister Lee Hsien Loong. Among its top priorities was to transform Singapore to embrace innovation and become a digital economy by looking at five key areas: future growth industries and markets, corporate capabilities and innovation, jobs and skills, urban development and infrastructure, and connectivity.

**Questions**

- (a) (i) Compare China's balance of trade (BOT) with that of Singapore from 2014 to 2018.  
[2]
- (ii) With reference to Extract 5, explain one reason why the trend of China's BOT is likely to continue in 2019.  
[2]
- (b) (i) What is meant by 'production possibility curve'?  
[1]
- (ii) Using a production possibility curve diagram, explain how an increased in Gross Fixed Capital Formation can achieve economic growth.  
[3]
- (c) With reference to Tables 2 and 3, what additional information is required to compare material living standards between China and Singapore?  
[4]
- (d) Extract 5 mentioned two economic challenges faced by the Chinese economy.  
  
Evaluate two policy options the Chinese government may consider in overcoming any one of the above challenges.  
[8]
- (e) Using Extracts 6 and 7, discuss whether Singapore's approach to globalisation should be different from the US.  
[10]

[Total: 30]

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**Copyright Acknowledgements:**

Question 1	Table 1	© Tesla Had 28% Of World's Fully Electric Vehicle Sales In 1st Half Of 2020, cleantechnica.com, August 15, 2020
Question 1	Extract 1	© Budget 2020: Rebates for buyers of electric vehicles from Jan 2021 as Singapore goes low-carbon, Today Singapore, February 18, 2020
Question 1	Extract 2	© Why Tesla's 20-million electric vehicle goal could next take Elon Musk to India, www.cnbc.com, Oct 22 2020
Question 1	Extract 3	© Don't sell China-made EVs in India, Nitin Gadkari tells Elon Musk's Tesla, Hindustan Times, Oct 08, 2021
Question 1	Extract 4	© Making electric vehicles profitable, www.mckinsey.com, March 8, 2019
Question 2	Table 2	© The World Bank, www.data.worldbank.org

Question 2	Table 3	© The World Bank, <a href="http://www.data.worldbank.org">www.data.worldbank.org</a>
Question 2	Extract 5	© China's economy to face 6 key challenges, <a href="http://www.globaltimes.cn">www.globaltimes.cn</a> , 11 December 2019
Question 2	Extract 6	© Deglobalisation in the context of United States-China decoupling, <a href="http://www.bruegel.org">www.bruegel.org</a> , 21 December 2020
Question 2	Extract 7	© For Singapore, globalization is still the future, despite 'dark shift' to protectionism, <a href="http://www.cnbc.com">www.cnbc.com</a> , 09 Feb 2019

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**HWA CHONG INSTITUTION**  
**JC2 Preliminary Examinations**  
**Higher 2**

**CANDIDATE  
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21

**CENTRE  
 NUMBER**

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**INDEX  
 NUMBER**

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**ECONOMICS**  
 Paper 2 ESSAY

**9757/02**  
**12 September 2022**  
**2 hours 15 minutes**

Additional Materials: Answer Booklet(s)

**READ THESE INSTRUCTIONS FIRST**

Write your **name, CT group, Centre and Index numbers** clearly on every sheet of answer paper that you hand in.

Write in dark blue or black pen on both sides of the answer paper.  
 You may use a soft HB pencil for any diagrams, graphs or rough working.  
 Do not use staples, paper clips, highlighters, glue or correction fluid and tape.

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

Write all your answers in the 12-page booklet and subsequent 4-page booklets (where required).

**Start each question on a new page in the answer booklet.**

**Indicate the questions you attempted on the cover page of the 12-page booklet.**

Do not tear out any part of this booklet.

All work must be handed in. If you have used any additional 4-page booklets, please insert them inside the 12-page answer booklet.

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

You are advised to spend several minutes reading through the questions before you begin writing your answers.

You are reminded of the need for good English and clear presentation in your answers.

This document consists of 3 printed pages and 1 blank page.

**[Turn over**

Answer **three** questions in total.

**Section A**

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

- 1 As countries reel from the negative impact of lockdowns on the global supply chain and economic growth, the COVID-19 crisis has expanded the scope of e-commerce, which has shifted in emphasis from luxury goods to everyday necessities such as daily groceries. Meanwhile, physical stores unable to keep up with e-commerce stand to lose out.
  - (a) Explain why we can expect the price of necessities to increase sharply as a result of the abovementioned events. [10]
  - (b) Discuss the relative importance of the factors mentioned in the preamble that impact the revenue of physical shops that sell luxury bags. [15]
  
- 2 In the US, skin lightening cream products need to be approved by the Food and Drug Administration before they can be sold. On the other hand, many African countries such as Kenya have chosen to ban the product altogether. Largely unknown to consumers, the beauty cream often contains toxic bleaching ingredients, and this in turn leads to wider impact on the society.
  - (a) Explain why the sale of skin whitening cream, if left to market forces, might not maximize societal welfare. [10]
  - (b) Discuss the reasons why the US and Kenyan governments use different approaches towards the sale of skin whitening cream. [15]
  
- 3 Ride hailing startup Gojek started increasing its trip fares in Singapore at the end of March 2022. Following Gojek's announcement, larger firms like Grab and ComfortDelgro announced similar moves. This came on the back of rising fuel prices in Singapore and increasing ridership due to the loosening of pandemic restrictions.
  - (a) Explain how barriers to entry impact a firm's ability to retain excess profits in the long run. [10]
  - (b) Discuss whether the rise in trip fares by the ride-hailing firms is due to collusion or other factors mentioned above. [15]

**Section B**

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

- 4 Current global economic developments have led to slow growth and high inflation in many economies.
- (a) Explain the adverse consequences of slow growth and high inflation in an economy. [10]
- (b) Discuss possible policies that governments could implement to manage the effects of current global economic developments. [15]
- 5 Developing economies like China have lifted many people out of poverty by pursuing economic growth through industrialization. However, governments all over the world have realised economic growth brings with it trade-offs in terms of income inequality and environmental sustainability.
- (a) Explain how economic growth might cause trade-offs in terms of income inequality and environmental sustainability respectively. [10]
- (b) Discuss whether subsidizing education and training is the best policy to achieve inclusive growth. [15]
- 6 10 ASEAN members and five regional partners (Australia, China, Japan, South Korea, and New Zealand) signed the Regional Comprehensive Economic Partnership (RCEP) on 15 Nov. It is the world's largest free trade agreement (FTA), comprising about 30% of global GDP and the world's population.

Adapted from CNA, 18 Nov 2020

- (a) Explain how the signing of FTAs will affect consumers and producers in participating economies. [10]
- (b) Discuss whether the signing of FTAs is the best measure to create jobs for an economy. [15]

**[Turn over**

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**Q1**

a) Using table 1,

i) Explain the likely market structure of the EV car industry (2)

Answer: Use market concentration ratio, CR5 62% (1), oligopoly (1)

Note: CR3 would be possible too, but not CR4. The 4<sup>th</sup> firm and the 5<sup>th</sup> firm has the same market share so it does not make sense to stop at CR4 instead of CR5.

ii) Explain why, firms in such a market structure might not compete in price (3)

Answer: Students are to explain the kinked demand analysis.

In such a market structure, there is mutual independence in pricing behaviour (1)

Firms assume that, should they increase the price, their rivals will not match the price increase, meaning total revenue would fall as quantity demanded would fall by more than proportionate (1)

Firms assume that, should they decrease the price, their rivals will match the price increase, meaning total revenue would also fall as quantity demanded would increase by less than proportionate (1)

b) Extract 1 describes the Singapore government's plan to deploy more charging stations for EVs. Explain why such charging stations are not a public good (4)

Charging stations are rivalrous in consumption (1): If one car is using the charging station, there is one less charging station for another EV (1)

Charging stations are excludable in consumption (1): the charging function can be limited to only those who are willing to pay for it. (1)

c) Extract 2 discussed the potential expansion of Tesla, an EV manufacturer, into India. With the aid of a diagram, explain one possible reason why her profits might be affected by this expansion.

(3)

Since profit is defined by  $TR - TC$ , students can explain either a cost reason or a revenue reason.

They can use internal EOS, give an example of an internal EOS that is relevant to Tesla.

They can use the bigger Indian market, extract 2 "EV demand and the population growth in India as indicative of a massive market", to increase AR curve.

Explanation of either cost or demand factor would be 1 mark

Individual firm diagram 2 marks, includes drawing the diagram (1) and explaining the change in profits (1).

If they use EOS reason, they should draw a new lower MC and AC, showing increase in profits.

If somehow students want to use dis-EOS instead, and show a higher MC and AC and hence profit falls. Since the question is "possible", we can also accept it too, but can discuss during standardization.

If they use demand reason, they should draw a higher AR curve, showing increase in profits.

d) Using extracts 2 and 3, discuss whether India would overall benefit from Tesla producing EVs in India. (8)

**Benefits**

### **Positive externalities**

We can bring in renewable energy ambitions in extract 2 which is on externalities "people can stop using internal combustion engine vehicles and reduce carbon monoxide emissions, alluding to Indian government's renewable energy ambitions": Students are to explain how renewable energy can have positive externalities/sustainable growth.

When the Indian consumer decides to use EV, instead of combustion vehicles, he only considers his MPB, the benefits of getting to their desired location and MPC, the cost of the vehicles, and the petrol prices.

He does not consider the MEB, which is how using EVs might lead to less air pollution, which benefits 3<sup>rd</sup> parties, such as non-drivers.

Graph showing under consumption/over priced

Hence, by having Tesla producing EVs in India, could lower the price of EVs sold in India, since it would be tariff free and have lower transport cost. This will allow the socially optimum number of EVs be used.

If students choose to explain negative externalities from "internal combustion engine vehicles and reduce carbon monoxide emissions" in extract 2, we could also accept.

### **Macroeconomic benefits**

Job creation and improved balance of trade from Tesla setting up EV production plants in India (Extract 3 "You should manufacture electric cars in India, and also export cars from India,"). Students are to use AD-AS curve to show impact on macro goals

Tesla building EVs in India would mean FDI inflow, in the short run, AD of India would increase, multiplier effect, actual growth and fall in cyclical unemployment.

In the long run, potential growth due to increase in the quantity of capital.

AD-AS diagram

Furthermore, thru "exporting EV cars from India", it will cause an increase in export revenue and likely to improve BOT of India.

Costs

Loss of import tariff revenue from the current tariffs placed on Tesla EVs manufactured from China but sold in India. (Extract 3 Tesla's plans to bring EVs to India were hampered by high import taxes charged in the country)

"Tesla had been assured of all necessary support from the Indian government." Extract 3. Such support may come in the form of government subsidies, zero corporate tax, which may mean budget deficit, opportunity costs as there are less funds for other purposes.

### Conclusion

Students can take either stand, whether benefits outweigh the costs or vice versa, depends on how they justify.

The easier stand to justify should be that overall India would benefit.

India has a large population and the job creation aspect will be very significant. Furthermore, any loss in potential government revenue, whether thru government support to Tesla or the loss of import tariff, could be offset by the greater tax revenue generated through more employment and GDP growth from Tesla's production of EVs (similar to automatic stabilizers.)

### MARK SCHEME:

L 2	Breath: Covers at least 1 benefit and 1 cost for India	4 - 6
	Depth Answer use economic framework (externalities, AD-AS) Answer use case evidence from extracts	
L 1	Lacking any of the L2 criterions.	1 - 3
E	Marks will be awarded for any relevant justified stand that reaches a stand on whether India would benefit overall from Tesla producing EVs in her country.	1 - 2

d) Extract 4 stated that there have been more than 50% growth in many markets for EVs

**With reference to the data where appropriate, discuss the view that supply factors are likely to be more important than demand factors, in explaining such a large change in the output of electric vehicles (10)**

### **Introduction**

From the preamble, more and more EVs are now seen on the road in many countries, output here refers to the quantity.

### Possible demand factors increasing quantities of EVs

Extract 4: Changing T and P “Consumers’ EV preferences are shifting. The share of global consumers that would consider purchasing an EV is on the rise”. This could be because of more of them being environmentally conscious. Thus, the demand for EV would increase at every price level.

Extract 1: Governments in Singapore providing infrastructure to charge, complementary goods, increasing demand for EVs.

For this case, as governments provide infrastructure, it will increase the demand for EVs as they are complementary. Note students should not be using XED here since price of complements did not change explicitly.

(not explicitly in case) Petrol/Gasoline prices could be increasing as government is taxing them more to be car-lite as well as to reduce carbon usage (extract 1). Thus, the price of driving conventional cars would be higher, leading to increase in demand for EVs (This one can use XED)

### Possible supply factors increasing quantities of EV

Tech change that lowers the COP of car batteries. (Extract 4) “As industry battery prices decline...” As the COP decreases, more EV firms are now willing and able to supply EVs, leading to supply increasing.

No of firms selling EVs increasing “new EV models are launching at a rate of approximately 120 a year” (Extract 4). With more firms supplying EVs, the market supply curve would increase.

### PED and PES

Demand is likely to be price elastic due to the price of EV currently being a high proportion of buyer’s income, together with the fact that it is easily substitutable with a conventional internal combustion vehicle.

If students are smart, they could argue that supply might be price inelastic due to lack of spare capacity, spare parts due to current pandemic still resulting in lockdowns.

### **Take a stand**



If that is the case, with  $PED > 1$  and  $PES < 1$ , then since both demand and supply are increasing, **it is more likely that supply increasing, is going to be more important than demand increasing, in explaining the increase in the adoption of EVs**

Students could draw a combined diagram or separate diagrams, to show that with a steeper supply curve but a gentler demand curve, any supply increase is going to lead to a more significant increase in Q, compared to demand increase.

Note: If students decide to use both PED and PES being equal in value, and argue which curve shift more, that is also fine.

For example, they could argue that, for different countries, it could be different. For a smaller country like Singapore, where it is city state, the easy availability of charging stations, an important complementary good, would mean demand factors are likely to be more significant than supply.

For countries which are much bigger and perhaps more rural, unless the batteries are very long lasting, demand factors are unlikely to be that significant, hence the supply factors, such as technological advancement that allows batteries to last longer before the need to charge, more significant.

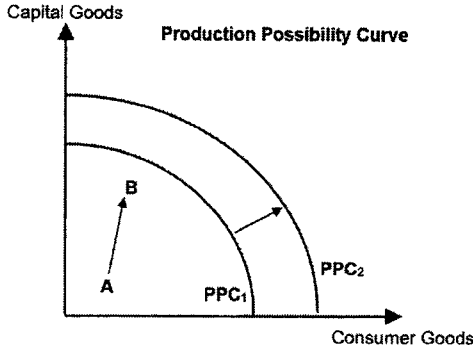
Possible overall evaluation: 50% increase but from low base (Extract 4 line 3), so it could be from 10 to 15, making the increase in Q less than significant in absolute terms.

**MARK SCHEME:**

L 2	<p>Breadth: Covers both demand and supply reason (at least 1 each) Covers PED or PES. (cap at 5 if none used, but they still have to address the extent)</p> <p>Depth Address case evidence in extract 4 (at least one) Use economics framework (demand and supply, with at least a combined diagram or 2 separate diagrams)</p>	5 - 7
L 1	Lacking any of the L2 criteria	1 - 4
E	<p>For statements/judgements that address the question, built upon earlier analyses and well-supported by economic reasoning.</p> <p>Support/justification for overall evaluative statement using case evidence</p>	3

Q2

(a)	(i) Compare China's balance of trade (BOT) with that of Singapore from 2014 to 2018.	[2]																																																												
<p> <ul style="list-style-type: none"> <li>Similarity: Both China &amp; Singapore's BOT are in trade surplus.</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>Difference: China's BOT surplus generally decreased while Singapore's BOT surplus has increased. <b>OR</b></li> <li>Difference: China's BOT surplus <b>generally higher</b> or <b>consistently higher</b> than that of Singapore's BOT surplus <b>except</b> in 2018.</li> </ul> <p><b>For reference ONLY:</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="6" style="text-align: center;">China</th> <th colspan="6" style="text-align: center;">Singapore</th> </tr> <tr> <th></th> <th>2014</th> <th>2015</th> <th>2016</th> <th>2017</th> <th>2018</th> <th></th> <th>2014</th> <th>2015</th> <th>2016</th> <th>2017</th> <th>2018</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>2462.8</td> <td>2362.1</td> <td>2199.9</td> <td>2424.2</td> <td>2655.6</td> <td>X</td> <td>604.4</td> <td>549.4</td> <td>525.2</td> <td>587.4</td> <td>665.7</td> </tr> <tr> <td>M</td> <td>2241.3</td> <td>2003.2</td> <td>1944.5</td> <td>2208.5</td> <td>2564.1</td> <td>M</td> <td>530.6</td> <td>465.3</td> <td>441.7</td> <td>496.6</td> <td>557.5</td> </tr> <tr> <td><b>BOT (changes)</b></td> <td><b>221.5</b></td> <td><b>358.9</b></td> <td><b>255.4</b></td> <td><b>215.7</b></td> <td><b>91.5</b></td> <td></td> <td><b>73.8</b></td> <td><b>84.1</b></td> <td><b>83.5</b></td> <td><b>90.8</b></td> <td><b>108.2</b></td> </tr> </tbody> </table> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <p>China's Trade Balance</p> </div> <div style="text-align: center;"> <p>Singapore's Trade Balance</p> </div> </div> </p>			China						Singapore							2014	2015	2016	2017	2018		2014	2015	2016	2017	2018	X	2462.8	2362.1	2199.9	2424.2	2655.6	X	604.4	549.4	525.2	587.4	665.7	M	2241.3	2003.2	1944.5	2208.5	2564.1	M	530.6	465.3	441.7	496.6	557.5	<b>BOT (changes)</b>	<b>221.5</b>	<b>358.9</b>	<b>255.4</b>	<b>215.7</b>	<b>91.5</b>		<b>73.8</b>	<b>84.1</b>	<b>83.5</b>	<b>90.8</b>	<b>108.2</b>
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(ii)	With reference to Extract 5, explain one reason why the trend of China's BOT is likely to continue in 2019.	[2]																																																												
<p> <ul style="list-style-type: none"> <li>China's BOT surplus has declined due to decline in export revenue with evidence from Extract 5 Para 2 "...As external demand has weakened from 2018....". [1m]</li> <li>Reason: decline in export revenue due to fall in confidence OR fall in income (but must assume normal good).</li> </ul> <p><b>Alternative evidence:</b></p> <ul style="list-style-type: none"> <li>China's BOT surplus has declined due to decline in export revenue with the following evidence can be accepted as well, "...global economic downturn and US-China friction have entered new phases, bringing about</li> </ul> </p>																																																														

	<i>unprecedented uncertainty to global economic policies..” but must explain with appropriate reasoning.</i>	
(b)	(i) What is meant by ‘production possibility curve’?	[1]
	The <b>Production Possibility Curve</b> shows all the different <b>maximum attainable combinations</b> of goods and services that can be <b>produced</b> in an economy, when <b>all available resources</b> are <b>fully and efficiently used</b> .	
	(ii) Using a production possibility curve diagram, explain how an increased in Gross Fixed Capital Formation can achieve economic growth.	[3]
	<p>Increased in Gross Fixed Capital Formation = increased in Investment.</p>  <p><b>Actual Economic growth:</b> Actual growth refers to the expansion in the current output (Point A to Point B).</p> <p><b>Explanation:</b> When the economy is producing at a point inside the PPC, the economy is not fully utilising its resources. To achieve actual growth, there is a need for greater use of existing resources and by utilising its resources more efficiently, resulting in increased output of both capital and consumer goods. [1m]</p> <p><b>Potential Economic growth:</b> Potential growth refers to the expansion of the productive capacity (PPC<sub>1</sub> to PPC<sub>2</sub>).</p> <p><b>Explanation:</b> Potential economic growth is achieved when there is an expansion of the productive capacity of the economy, due to increase in quantity and quality of resources and advancement in technology through increased in gross fixed capital formation. [1m]</p>	
(c)	With reference to Tables 2 & 3, what additional information is required to compare material living standards between China and Singapore?	[4]

	<p><b>Standard of living</b> refers to the level of well-being or welfare enjoyed by an <b>average</b> person or resident of a country. <b>Material</b> (or tangible) well-being refers to the <b>quantity and quality of goods and services available to the residents for consumption</b>. [1m]</p> <p>In comparison of material standard of living especially over space, it may be misleading if official market exchange rates (USD) are used. This is because <b>market exchange rates generally tend to undervalue or overvalue</b> the purchasing power of the currencies due to differences in <b>cost of living</b>. Hence, <b>additional information on Purchasing Power Parity (PPP) rates</b> rather than market exchange rates will be more accurate to compare material standard of living between China and Singapore. [2m]</p> <p>Next, <b>information on population is required</b>, as population sizes differ between countries. Thus, a more accurate indicator of changes in the material standard of living is <b>PPP adjusted GDP per capita</b>. [1m]</p>	
(d)	<p>Extract 5 mentioned two economic challenges faced by the Chinese economy.</p> <p>Evaluate two policy options the Chinese government may consider in overcoming any <b>one</b> of the above challenges.</p>	[8]
	<p><b>Introduction</b> Two challenges faced by the Chinese economy (Extract 5):</p> <ol style="list-style-type: none"> <li>1. Continuing weakening of external demand</li> <li>2. Significant decline in domestic demand and remaining weak</li> </ol> <p>These challenges faced by China have varied negative impacts on economic growth, employment, price stability and BOP position in China.</p> <p><b>Body</b> <b>Challenge #1: Continuing weakening of external demand</b> <b>Evidence:</b> "...As external demand has weakened from 2018, the global manufacturing industry is set to slump...." (Extract 5 Para 2)</p> <p><b>OR</b> <b>Challenge #2: Significant decline in domestic demand and remaining weak</b> <b>Evidence:</b> "...domestic demand is expected to remain weak and has experienced a significant decline which may accelerate the economic slowdown....." (Extract 5 Para 2)</p> <p><b>Policy considerations:</b> Students may choose to discuss &amp; evaluate <b>any two appropriate policies</b> option to tackle either:</p> <p><b>Challenge #1: continuing weakening of external demand</b> Any accepted 2 policies include:</p> <ul style="list-style-type: none"> <li>• Expenditure switching (<i>depreciation</i>) <ul style="list-style-type: none"> <li>• <math>\downarrow ER \rightarrow \downarrow Px \ \&amp; \ \uparrow Pm \rightarrow \uparrow X \ \&amp; \ \downarrow M \rightarrow \uparrow(X-M) \rightarrow \uparrow AD</math></li> </ul> </li> <li>• Supply side policies</li> </ul>	

- Reduce production cost → ↑SRAS (shifts down) → ↑ real output
- Free Trade Agreements (FTA)
- Economic Integration

**OR**

**Challenge #2: significant decline in domestic demand and remaining weak**

Any accepted 2 policies include:

- Expansionary fiscal policy (*must acknowledge multiplier process*)
  - ↑G or/ & ↓T (which ↑ C + ↑ I) → ↑ AD
- Expansionary monetary policy
  - ↓i/r → ↑C+↑I → ↑AD
- **Only Short Run** Supply side policies
- Can accept **devaluation/undervaluation** for China

**Conclusion**

In view of the challenges China is experiencing, China may need to prioritise the issues at hand in order of importance, in order to effectively reduce its negative impacts on the macroeconomy. In so doing, China will better be able to achieve its aims of high and sustained economic growth, low unemployment and a favourable BOP position. Furthermore, given that some policy options require some time before its effects can be seen in the macroeconomy, it would be wise of the Chinese government to consider a combination of short term and long term policy options in order to see the best outcome in mitigating these challenges.

**Note:**

- Explaining the challenge is not required. Minimum, state the challenge and analyse 2 policies (+ limitations) to address the challenge: **max L2**.
- For scripts with no limitations but very good analysis of policies: **max L2 - 4m**.
- For overcoming **weak domestic demand**, if candidates use LR SSP (written as SSP in general; eg, subsidy for R&D to lower cost or skills upgrading to improve productivity) **OR** overcoming **weak external demand**, if candidates use LR SSP (to improve export price competitiveness/ quality of exports), it's not acceptable as the lowering of costs only in the LR, although theoretically correct, however it does not address the context which requires SR action (assuming the other policy is correct): **L2 – max 4m**.

**MARK SCHEME**

L2: (4-6)	<ul style="list-style-type: none"> <li>• Explain the 1 major challenge from the Extract 5: continuing weakening of external demand <b>OR</b> significant decline in domestic demand and remaining weak</li> <li>• Explain at least 2 policies may alleviate the chosen challenge faced by China with limitations</li> <li>• Applies case evidence to support answers</li> </ul>
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	<ul style="list-style-type: none"> <li>• Applies economic concepts or theories</li> <li>• Demonstrates sufficient depth and rigour in the analysis</li> </ul>	
L1: (1-3)	<ul style="list-style-type: none"> <li>• Lacking in any of the L2 criteria</li> </ul>	
E (+2)	<ul style="list-style-type: none"> <li>• Provide a substantiated stand on whether the policies were able to alleviate the challenge faced by China</li> </ul>	
(e)	Using Extracts 6 & 7, discuss whether Singapore's approach to globalisation should be different from the US.	[10]
	<p><b>Introduction:</b></p> <ul style="list-style-type: none"> <li>• "Approach to globalisation" – embrace or limit the flows <ul style="list-style-type: none"> <li>• From Extract 6, "US &amp; China have chosen to limit the extent of globalisation and "deglobelised" by engaging in protectionist measures and reduce the flows in trade, capital, technology and labour".</li> <li>• From Extract 7, "the city-state has long relied on openness to global trade".</li> <li>• This is due to how globalisation has impacted the economy can be analysed with reference to macrogoals, etc.</li> </ul> </li> </ul> <p><b>Body:</b></p> <p><b>Thesis: Approach to globalisation should not be different</b></p> <p><b>Costs of globalisation apply to all countries – large, less open and SOEs</b></p> <ul style="list-style-type: none"> <li>• <b>Worsening of macrogoals - Slow economic growth, structural unemployment &amp; BOT deficit</b> <ul style="list-style-type: none"> <li>• Free trade tends to result in competition in import-substituting industries that are no longer able to compete with more efficient competitors in other countries. Competition from cheaper price imports might hence cause some domestic firms (producing substitutes) to shut down might results in an increase in structural employment due to mismatch of skillset between current requisite skills set and the skills that new jobs require.</li> <li>• Similarly, small and open economies are also susceptible to structural unemployment especially more advanced SOEs with limited land and labour loss of CA in labour intensive industries.</li> <li>• US may choose to pursue de-globalisation in order to improve their BOT position. [Extract 6: <i>Signs of deglobalisation, measured by decelerating trade and investment.</i>]</li> <li>• Contagion effects from external shocks experienced by small economies cyclical unemployment and fall in economic</li> </ul> </li> </ul>	

growth esp so for small economies that is dependent on trade (higher degree of openness) will be more susceptible to these shocks.

**Anti-thesis: Approach to globalisation should be different for Singapore**  
**Benefits of globalisation to SOEs (outweigh the costs) / Costs of de-globalisation**

- Large & less open economies (US) can better rely on huge domestic markets for actual economic growth. Or gains from transfer of capital and technology on potential economic growth
- On the other hand, embracing globalisation and ensuring barrier free trade, capital and labour flows, small open economies can gain from higher export revenue (larger X markets) positive impact on BOT, economic growth and employment esp given smaller domestic market size. [illustrate with AD-AS diagram]
- Especially pertinent for small and open economies like Singapore which are limited by their small domestic market sizes, without globalisation, their economies are less able to achieve high economic growth, low unemployment and healthy BOT relative to large economies.
- **OR**, if Singapore is to deglobalise will fail to gain from globalisation
- **OR**, to explain how Singapore cannot afford retaliatory measures from deglobalisation.

**Conclusion and Overall Evaluation:**

- Generally, US have taken to deglobalisation but Singapore should not follow the position of US as the cost of increasing barriers will tend to outweigh the benefits due to the nature of the economy small domestic market and reliance on imports due to lack of resources.
- Possible stand: the approach towards globalisation for all economies should be the same embrace globalisation and the costs can be mitigated.

How far global economies (whether large or small) approach to globalisation/deglobalisation should differ may depend on:

- Nature and state the economy (elaborate)
- Policies implemented by governments to deal with the costs of globalisation, while maximising on its benefits (elaborate)

**Note:**

*This question has multiple approach – in general, the approach to globalisation should fundamentally be the same for all countries based on the benefits of globalisation and whereas for costs of globalisation could be different for some countries and hence deglobalisation. In the context of the question, general approach would be that the costs of deglobalisation outweighs benefits for Singapore as compared to US.*

**Conclusion:** we cannot adopt US approach of outright protectionism, however to deal with the costs of globalisation - structural unemployment, vulnerability to external shocks, we can adopt decoupling/trading partner diversification/regionalization, etc.

**MARK SCHEME**

L2: (5-7)	<ul style="list-style-type: none"> <li>● Explain reasons based on thesis: approach to globalisation should not be different &amp; anti-thesis: approach to globalisation should be different for Singapore</li> <li>● Analyses with depth and rigour</li> <li>● Supports answers with case evidence</li> <li>● Applies economic concept and theories</li> </ul>
L1: (1-4)	<ul style="list-style-type: none"> <li>● Lacking in any one of the L2 criteria</li> </ul>
E: (+3)	<ul style="list-style-type: none"> <li>● Provide clear judgment and justification on whether Singapore should follow US's approach to globalisation/deglobalisation.</li> </ul>



HCI Prelims 9757/2

Q1

**Suggested Answer**

As countries reel from the negative impact of lockdowns on the global supply chain and economic growth, the COVID-19 crisis has expanded the scope of e-commerce, which has shifted in emphasis from luxury goods to everyday necessities such as daily groceries. Meanwhile, physical stores unable to keep up with e-commerce stand to lose out.

- a. **Explain why we can expect the price of necessities to increase sharply as a result of the abovementioned events.**

Introduction:

- Define necessities (e.g. daily groceries) as goods that have both a price inelastic and income inelastic demand (note: this is if students use this to justify later why price will increase rather than fall. Alternatively, they can just suggest that they are normal goods, but justify why price will overall increase using another way).

Body:

**Supply falls**

- Explain that the disruption of the global supply chain due to Covid means that the production of a good can become more costly and the process can be delayed, leading to **a rise in cost of production and a fall in supply of the good.**
  - For instance, a local fishball manufacturer may not be able to import fish from Malaysia as its raw material due to Covid lockdown, and would have to buy more expensive fish from Indonesia due to higher transportation cost.
- The demand for fish balls is likely to be price inelastic as it is inexpensive and a necessity for many hawkers and restaurants.
- An increase in price due to the fall in supply would lead to a less than proportionate fall in quantity demanded. This implies that the price of fishballs would rise sharply.

**Demand falls**

- Due to negative economic growth, demand for necessities will fall less than proportionately as necessities have  $1 > YED > 0$ .
- This will lead to a small fall in price.
- **Draw a combined diagram to fall in SS and a small fall in DD, with a price inelastic demand curve.**

Conclusion:

- Explain that the rise in price due to fall in SS, amplified by the low PED will greatly outweigh the small fall in price due to a fall in DD because of low YED, leading to an overall **large** increase in price.
  - Alternatively, students can justify the overall large increase in price by suggesting SS fell by a large extent due to the global scale of supply chain disruption during Covid.

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> <li>● Breadth &amp; Application               <ul style="list-style-type: none"> <li>● Explains a fall in SS and <math>PED &lt; 1</math> for necessities that leads to increase in price</li> <li>● Explains a fall in DD (either suggest <math>YED &gt; 0</math> or <math>1 &gt; YED &gt; 0</math>) leading to a fall in price</li> <li>● Explain how impact of fall in SS will overall outweigh fall in DD either using <math>1 &gt; YED &gt; 0</math> <u>or</u> large extent of fall in SS</li> </ul> </li> <li>● Depth               <ul style="list-style-type: none"> <li>● Applies relevant <b>economic concepts or theories</b></li> <li>● Explains with <b>rigour and detail</b></li> <li>● Explains and illustrates with relevant <b>diagrams and examples</b> – Price Mechanism diagram showing disequilibrium</li> </ul> </li> </ul>	8-10
L2	<ul style="list-style-type: none"> <li>● Lacking in any one of the L3 criteria</li> </ul>	5-7
L1	<ul style="list-style-type: none"> <li>● Largely irrelevant response</li> <li>● Descriptive response with non-existent or minimal or application of economic concepts or theories</li> <li>● Serious and pervasive conceptual errors</li> </ul>	1-4

**b. Discuss the relative importance of the factors mentioned in the preamble that impact the revenue of physical shops that sell luxury bags.**

Introduction:

- Define revenue as  $P \times Q$ , and luxury bags are goods that have  $YED > 1$
- List the factors mentioned in the preamble:
  - Negative economic growth
  - Rise of e-commerce
  - Disruption in global supply chain
- Explain that we will examine the relative importance of these factors in impacting the revenue of physical shops that sell luxury bags.

Body:

- **Factor 1: Negative economic growth**
  - Fall in income  $\rightarrow$  demand for luxury bags ( $YED > 1$ ) falls more than proportionately  $\rightarrow$  total revenue falls **significantly**
    - Limitation: Exact extent of fall in TR however depends on how high the YED value is
- **Factor 2: Rise of e-commerce**
  - An increase in the number of producers selling online  $\rightarrow$  SS of online luxury bags increases  $\rightarrow$  P falls  $\rightarrow$  demand for price of related goods i.e. bags sold in physical shops (substitute) will decrease  $\rightarrow$  TR will fall
  - Limitation: However, physical shops who can keep up with e-commerce will experience lesser impact i.e. CED value will be lower and extent of fall in revenue will be lesser.
- **Factor 3: Disruption in global supply chain**
  - Higher costs for raw materials or labour costs for luxury bags  $\rightarrow$  increase in COP  $\rightarrow$  SS falls
  - Impact on revenue depends on the PED of goods sold by physical stores. Since luxury bags should take up a high proportion of income  $\rightarrow$   $PED > 1$   $\rightarrow$  TR falls. [ $PED < 1$  is not acceptable]
    - Limitation: Extent of fall in TR will be larger if fall in SS is larger.

Conclusion:

- The impact of the **rise of e-commerce on physical shops is least determinate** as it depends on whether the shops can keep up with e-commerce, and the CED between physical shops and what can be bought online via e-commerce. If the physical shops sell bags that are produced locally, CED will depend on consumer preference for the bags produced in that particular country.
- **Negative growth and disruption in global supply chain** will have more certain impact. However, if the impact of disruption of global supply chain can be alleviated if inputs can be procured locally in large, resource-rich countries such

as China, the impact of negative growth, given the YED of luxury bags is likely to be most significant.

- Eventually the relative importance of the factors will depend on the country context. For a small country like SG, the impact of global supply chain disruption on our physical firm will be greater than that of larger countries like US or China.

Note: can use firm approach but still only focusing on TR of physical shop selling luxury bag

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> <li>• Breadth &amp; Application               <ul style="list-style-type: none"> <li>• Covers all three factors listed in the preamble</li> <li>• Examines limitations for all three factors</li> </ul> </li> <li>• Depth               <ul style="list-style-type: none"> <li>• Applies relevant <b>economic concepts or theories</b></li> <li>• Explains with <b>rigour and detail</b></li> <li>• Explains and illustrates with relevant <b>examples</b> – diagrams are not required but explanation should be clear</li> </ul> </li> </ul>	8-10
L2	<ul style="list-style-type: none"> <li>• Lacking in any one of the L3 criterions</li> </ul>	5-7
L1	<ul style="list-style-type: none"> <li>• Largely irrelevant response</li> <li>• Descriptive response with non-existent or minimal or application of economic concepts or theories</li> <li>• Serious and pervasive conceptual errors</li> </ul>	1-4
Evaluation		
E3	<ul style="list-style-type: none"> <li>• Takes a clear overall stand that is <b>comprehensively</b> justified by providing <b>convincing</b> evaluative comments on the measures in <b>moderating the rise in electricity prices</b></li> </ul>	4-5
E2	<ul style="list-style-type: none"> <li>• Takes a <b>clear overall stand</b> which is only <b>partially justified</b> as               <ul style="list-style-type: none"> <li>• Only <b>some</b> of the <b>points</b> mentioned in the body were evaluated</li> <li>• The overall stand was <b>largely justified</b> by the inclusion of <b>additional concluding points to sway</b> the overall argument</li> <li>• The arguments used to evaluate individuals points were <b>unconvincing</b> or somewhat <b>flawed</b></li> </ul> </li> </ul> <p>Evaluates at least one of the points covered in the body but the <b>overall stand is unclear</b></p>	1.

	Provides <b>insightful opinion(s)</b> which are however <b>not directly relevant</b> to the requirements of the question	
E1	<ul style="list-style-type: none"> <li>Provides <b>unsubstantiated opinion(s)</b></li> </ul>	+1

Q2

**In the US, skin lightening cream products need to be approved by the Food and Drug Administration before they can be sold. On the other hand, many African countries such as Kenya have chosen to ban the product altogether. Largely unknown to consumers, the beauty cream often contains toxic bleaching ingredients, and this in turn leads to wider impact on the society.**

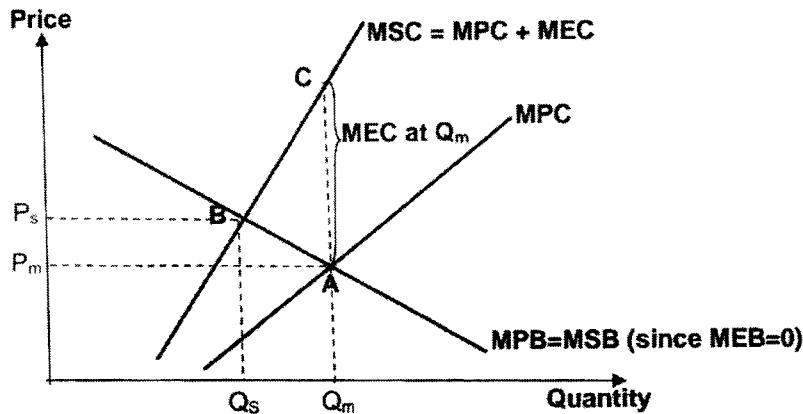
**(a) Explain why the sale of skin whitening cream, if left to market forces, might not maximize societal welfare. [10]**

The sale of skin whitening cream might not maximize societal welfare **due to market failure arising from negative externalities and imperfect information.**

**Body**

Negative externalities

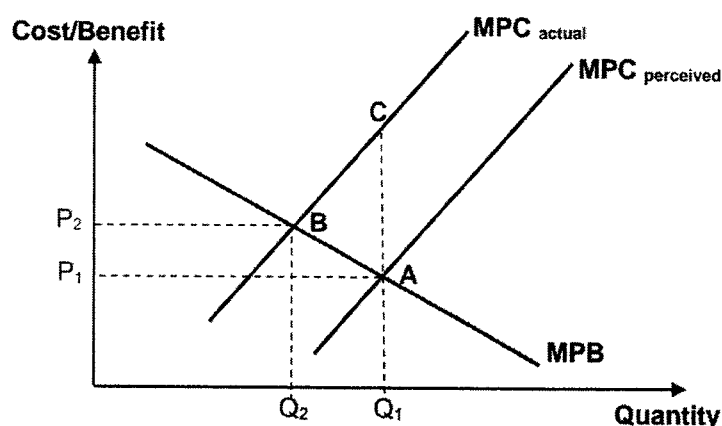
Figure 1: External cost of consuming skin whitening cream



- If left to market forces, consumers and producers would make decisions based on their marginal private benefit and marginal private cost, which respectively measure the benefit to consumers from consuming additional units of skin whitening cream and the cost to producers of producing additional units of the cream such as the cost of raw materials.
- To maximize utility for consumers and maximize profits for producers, the output level will be where  $MPB=MPC$ , in Figure 1, is given by  $Q_m$ .
- However, the beauty cream contains “toxic bleaching ingredients” which can lead to negative consumption externalities, because health costs to the consumers can in turn lead to a “wider impact on the society” in the form of lower productivity for their employers and the economy at large (third parties).
- These third party costs are not taken into consideration when consumers and producers make their decisions, leading to a **divergence between MSC and MPC** as  $MSC=MPC + MEC$ .
- The socially efficient quantity of plastic to maximise social welfare is at  $Q_s$  where  $MSB=MSC$ . This level of output is lower than  $Q_m$ , the amount if left to the free market. Hence there is an **overconsumption** of the beauty cream.
- Area  $Q_m Q_s BC$  is the total social cost incurred while Area  $Q_m Q_s BA$  is the total social benefit gained from the over-consumption of  $Q_m - Q_s$ . Since total social costs incurred exceeds the total social benefits gained, **area ABC represents the deadweight welfare loss due to over-consumption of  $Q_m - Q_s$ .**

### Imperfect Information

Figure 2: Imperfect information on the consumption of skin whitening cream



With reference to Figure 2:

- Marginal Private Cost (MPC) and Marginal Private Benefit (MPB) measures the cost and benefit respectively to a consumer from consuming additional units of the beauty cream.
- A divergence between actual and perceived MPC is created due to the consumer having imperfect information due to a lack of awareness about the harmful effects of the toxic ingredients. Hence she may underestimate her true marginal private costs because the health cost may not experienced immediately but only over time. Hence the consumer's perceived MPC lies below the actual MPC.
- With imperfect information, the consumer will weigh her perceived costs and benefits and consume quantity  $Q_1$  of cigarettes where  $MPC_{perceived} = MPB$ .
- However, at quantity  $Q_1$ , the consumer suffers a welfare loss as her **actual MPC is greater than her MPB** from using the cream. In fact, if she had **perfect information** about the true MPC of using the cream, the optimal quantity of beauty cream for her is  $Q_2$  where  **$MPC_{actual} = MPB$** .
- Hence the consumer suffers from a **welfare loss of area ABC** since her **true MPC is greater than his MPB** for the **overconsumed quantity of  $Q_1 - Q_2$** .

#### Conclusion:

In conclusion, if left to market forces, the sale of beauty cream will not maximise societal welfare due to market failure arising from negative externalities and imperfect information.

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> <li>• Breadth               <ul style="list-style-type: none"> <li>• Covers both negative externality and imperfect information</li> </ul> </li> <li>• Depth</li> </ul>	8-10

	<ul style="list-style-type: none"> <li>• Applies relevant economic concepts or theories</li> <li>• Explains with rigour and detail</li> <li>• Explains and illustrates with relevant <i>diagram</i> and examples</li> </ul>	
L2	<ul style="list-style-type: none"> <li>• Lacking in any one of the L3 criteria</li> <li>• Only 1 market failure well explained OR both market failures briefly explained &amp; lacking in tools of analysis.</li> </ul>	5-7
L1	<ul style="list-style-type: none"> <li>• Largely irrelevant response</li> <li>• Descriptive response with non-existent or minimal or application of economic concepts or theories</li> <li>• Serious and pervasive conceptual errors</li> </ul>	1-4

**(b) Discuss the reasons why the US and Kenyan governments use different approaches towards the sale of skin whitening cream. [15]**

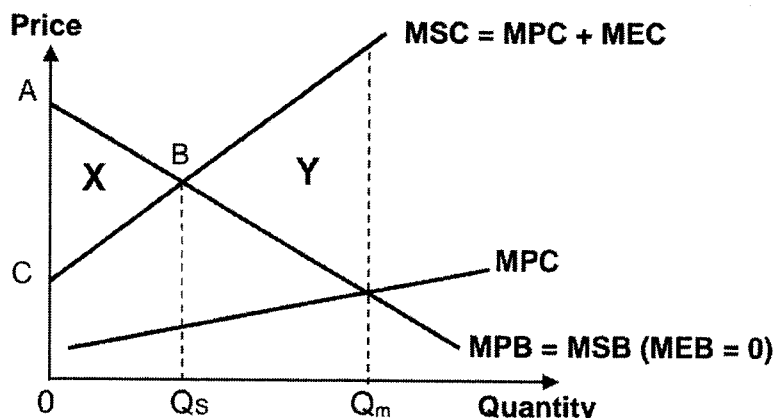
While the US government chose to regulate the sale of skin whitening cream, the Kenyan government chose to ban the sale of the cream. This is largely due to their different perceptions of the extent of external costs and imperfect information in their countries.

**Explain why the Kenyan government chose to ban the cream**

- A ban would eliminate overconsumption due to both **negative externalities** and **imperfect information**.

**Figure 3: Ban of skin whitening cream in Kenya**





- As explained in part (a) and with reference to Fig 3 above, there is an overconsumption of the beauty cream by quantity  $Q_m - Q_s$ , which results in a deadweight welfare loss of area Y.
- When there is a total ban, zero quantity of the cream is consumed.
- In such a situation, there would be a loss of Area X ( $0ABQ_s - 0CBQ_s$ ) measured in terms of potential net welfare benefit forgone if the socially efficient quantity of good was produced.
- On the other hand, a stoppage of production would result in a welfare gain of Area Y from the removal of the deadweight welfare loss caused by over-production of  $Q_m - Q_s$ . Hence, final outcome on welfare would depend on the relative size of Area X & Area Y.
- The Kenyan government had likely decided to ban the cream because they assessed  $\text{Area Y} > \text{Area X}$  due to a very large MEC, and there is net welfare gain from imposing the ban. Hence a ban would address **overconsumption from negative externalities**.
- Since beauty cream cannot be sold altogether, **overconsumption from imperfect information would also no longer be a problem**.

Limitation to measure:

- However, if  $\text{Area X} > \text{Area Y}$ , then the ban would lead to a welfare loss in terms of more potential benefits that could have been gained.

### Explain how screening by FDA works for the US

- Students can explain this either as a form of regulation or legislation or licensing that is required for the beauty cream.
- In any case, any skin whitening cream would have to be screened by FDA and approved before it could be so. In this way, the extent of imperfect information as well as the size of the MEC would have been smaller or even non-existent.
  - There is no need for students to illustrate this, but they would have to clearly explain that for imperfect information, MPB perceived would become closer to MPB actual and  $Q_m$  would be closer to  $Q_s$ , reducing

over-consumption. If all screened products do not contain toxic ingredients,  $Q_m$  can even become equal to  $Q_s$ .

- For negative externalities, MSC would become closer to MPC due to a smaller MEC, causing  $Q_s$  to be closer to  $Q_m$ , reducing overconsumption. In the extreme case,  $Q_m = Q_s$  as the approved products do not lead to any external costs.

Limitation:

- As suggested above, the effectiveness of this measure depends on the ability of the government in screening the products. If proper screening is not done, the approved products may still lead to some extent of external costs.

### Evaluation:

**Reasons for different approaches: (students to choose at least One reason for each country's choice below + demonstrate comparison) )**

It is likely that the US did not choose to ban skin whitening cream because:

- **Imperfect information is a less serious problem.** The extent of market failure due to imperfect information in the US is lesser as consumers are more aware of the problems with the beauty cream. Hence the extent of overconsumption may not be so significant.
- **External costs from consumption of the cream is lesser.** Ban area X is greater than area Y for the US, possibly because MEC in terms of health costs arising from the toxicity of the cream is low, leading to a small area Y. This can be explained by better personal hygiene and habits of the Americans, as well as more advanced medical treatment in the US that limits the extent to which negative health costs would impact for instance the productivity of the economy.
- It is likely that Kenya chose to ban the cream instead of regulating it because:
  - A ban may be easier for Kenya than assessing each new product given the challenges posed by corruption and relatively weaker administrative capabilities as compared to the US.
- The choice of either implementing a ban or vetting products depends on the context of the US and Kenya, a more developed vs a developing country, according to:
  - The level of consumer awareness of the problem.
  - Ease of enforcement of the policies based on the government's administrative capabilities
- While a ban in Kenya comes with the challenge of enforcement, it will still be easier than to enforce vetting of the products.
- In the long run, however, Kenya may switch to vetting instead because:

- The widespread ban after taking root may have created sufficient awareness among the users.
- As its economy becomes more developed and its people become more educated, and its administrative capabilities improve, vetting becomes more feasible.

Level	Descriptors	Marks
L3	Breadth <ul style="list-style-type: none"> <li>• Explains how a ban and screening of products each address <b>one</b> type of market failure</li> </ul> Depth <ul style="list-style-type: none"> <li>• Explains with detail, rigour and diagrams</li> </ul>	8-10
L2	<ul style="list-style-type: none"> <li>• Lacking in any one of the L3 criteria</li> </ul>	5-7
L1	<ul style="list-style-type: none"> <li>• Largely irrelevant response</li> <li>• Descriptive response with non-existent or minimal or application of economic concepts or theories</li> <li>• Serious and pervasive conceptual errors</li> </ul>	1-4
Evaluation		
E3	<ul style="list-style-type: none"> <li>• Takes a clear overall stand that is <b>comprehensively</b> justified by providing <b>convincing</b> evaluative comments on the <b>relative importance of most</b> of the points covered in the body</li> <li>• Students must state at least one reason for each measure chosen + discuss/compare them</li> </ul>	4-5
E2	<ul style="list-style-type: none"> <li>• Takes a <b>clear overall stand</b> which is only <b>partially justified</b> as               <ul style="list-style-type: none"> <li>○ Only <b>some</b> of the <b>points</b> in the body were evaluated</li> <li>○ The overall stand was <b>largely justified</b> by the inclusion of <b>additional concluding points</b> to <b>sway</b> the overall argument</li> <li>○ The arguments used to evaluate individual points were <b>unconvincing</b> or somewhat <b>flawed</b></li> </ul> </li> <li>• Evaluates at least one of the points covered in the body but the <b>overall stand is unclear</b></li> <li>• Provides <b>insightful opinion(s)</b> which are however <b>not directly relevant</b> to the requirements of the question</li> </ul>	0.
E1	<ul style="list-style-type: none"> <li>• Provides unsubstantiated opinion(s)</li> </ul>	1

## Q3

Ride hailing startup Gojek started increasing its trip fares in Singapore at the end of March 2022. Following Gojek's announcement, larger firms like Grab and ComfortDelgro announced similar moves. This came on the back of rising fuel prices in Singapore and increasing ridership due to the loosening of pandemic restrictions.

- a. Explain how barriers to entry impact a firm's ability to retain excess profits in the long run. (10)
- a. Discuss whether the rise in trip fares by the ride-hailing firms is due to collusion or other factors mentioned above. (15)

Introduction:

**Barriers to entry are obstacles that prevent new firms from entering a market to compete with the existing firms.** High barriers to entry lead to lower levels of competition, as is characteristic of market structures like oligopolies and monopolies. An example of high barriers to entry would be high sunk costs which require the scale of production to be massive to reap sufficient economies of scale. Another example would be strong brand loyalty, like the brand loyalty built up by famous brands like Coca-Cola.

When a firm gains excess profits, also known as supernormal profits, this will attract other firms to enter the industry. However, if the barriers to entry are high, for example everyone knows the soft drink brand coca-cola reaps massive supernormal profits. If a new company wants to enter the cola industry to gain market share away from coca-cola, this new entrant will have to spend massive amounts of advertising dollars to nudge people into purchasing their product. And their advertising efforts may not even be successful given that coca-cola is continually getting new celebrities to endorse it. As such, this high barrier to entry deters new entrants and coca-cola has been able to retain its supernormal profits over the years with only Pepsi being any sort of threat to its market share. Show diagram.

On the other hand, if there are low or no barriers to entry. This leads to high levels of competition, as is typical of perfectly competitive and monopolistically competitive market structures. For these firms, it is possible to make short run supernormal profits(draw diagram. (Shifting AR to show normal profits in a monopolistically competitive firm is also accepted)

With reference to Figure,

- We see that the perfect competitive firm was initially enjoying supernormal profits of  $P_1C_1AB$  at the price  $P_1$  and output  $Q_1$ , where  $MC=MR$  and  $MC$  is rising.
- When new firms are attracted into the industry, the market supply increases from  $S_1$  to  $S_2$  and the market price falls from  $P_1$  to  $P_2$ . Hence, the firm's demand curve falls from  $AR_1=MR_1$  to  $AR_2=MR_2$ .
- Firms will continue entering the industry until the supernormal profits in the industry falls to normal profits in the long run where  $P_2$  (AR) is equal to the average cost  $C_2$ , producing at  $Q_2$ .

It is possible too much competition enters the industry and firms in the industry start making subnormal profits. However, this will lead to firms shutting down, and the remaining surviving firms AR will increase until it hits normal profit level.

In conclusion, barriers of entry affect a firm's ability to retain excess profits because they are related to the levels of competition a firm faces. Low barriers to entry mean high levels of competition which mean inability to retain excess profits. High barriers to entry mean low levels of competition which mean high ability to retain excess profits.

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> <li>• Breadth               <ul style="list-style-type: none"> <li>• Explains how high barriers to entry allow firms in an oligopoly or monopoly to retain excess/supernormal profits</li> <li>• Explains how low/no barriers to entry causes firms in perfect competition or monopolistic competition to lose excess profits</li> </ul> </li> <li>• Depth               <ul style="list-style-type: none"> <li>• Applies cost-revenue diagrammatic analysis</li> <li>• Explains with rigour and detail</li> <li>• Explains and illustrates with relevant diagrams and examples</li> </ul> </li> </ul>	8-10
L2	<ul style="list-style-type: none"> <li>• Lacking in any one of the L3 criterions</li> </ul>	5-7
L1	<ul style="list-style-type: none"> <li>• Largely irrelevant response</li> <li>• Descriptive response with non-existent or minimal or application of economic concepts or theories</li> <li>• Serious and pervasive conceptual errors</li> </ul>	1 – 4

**b) Discuss whether the rise in trip fares by the ride-hailing firms is due to collusion or other factors mentioned above. (15)**

1. Explain how price leadership works and apply to the context of ride-hailing.

2. Explain how opening up of the economy can lead to increase in demand and higher prices. Shifting AR and MR curve to the right, concepts of consumer confidence and/or income increase and ride-hailing being a normal good. A rise in demand will cause  $AR_0$  and  $MR_0$  to increase to  $AR_1$  and  $MR_1$  respectively. This will result in **an increase in output from  $Q_0$  to  $Q_1$ , an increase in price from  $P_0$  to  $P_1$  and a fall in unit cost from  $C_0$  to  $C_1$ . Profit increases from  $P_0C_0BA$  to  $P_1C_1YX$ .**

3. Explain how increasing variable cost due to increasing fuel prices lead to increase in MC/AC and thus price increases. Cost revenue diagram showing how increased MC/AC can lead to higher prices.

From Figure, we can see that a rise in variable costs will increase average costs from  $AC_0$  to  $AC_1$  and marginal costs from  $MC_0$  to  $MC_1$ . These will result in a fall in **output from  $Q_0$  to  $Q_1$ , an increase in price from  $P_0$  to  $P_1$  while unit cost increases from  $C_0$  to  $C_1$ . Profit decreases from  $P_0C_0BA$  to  $P_1C_1YX$ . Due to the increase in price, consumer surplus decreases by  $P_0P_1XA$ .**

EV: Weigh between collusion, demand and cost reasons.

Collusion is unlikely to be the reason since Price Leadership typically involves the firm with the largest market share being the leader and the preamble mentioned that Grab and ComfortDelgro are larger firms. Between demand and cost reasons, it is up to the students' contextual knowledge and reasoning.

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> <li>• Breadth               <ul style="list-style-type: none"> <li>• Explains price leadership as tacit collusion</li> <li>• Explains how rising fuel prices cause increase in MC/AC and a rise in trip fares</li> <li>• Explains how increasing ridership causes increasing AR/MR and a rise in trip fares</li> </ul> </li> <li>• Depth               <ul style="list-style-type: none"> <li>• Applies relevant cost-revenue diagrammatic analysis</li> <li>• Explains with rigour and detail</li> </ul> </li> </ul>	8 – 10
L2	<ul style="list-style-type: none"> <li>• Lacking in any one of the L3 criterions</li> </ul>	5 – 7
L1	<ul style="list-style-type: none"> <li>• Largely irrelevant response</li> </ul>	1 – 4

	<ul style="list-style-type: none"> <li>• Descriptive response with non-existent or minimal or application of economic concepts or theories</li> <li>• Serious and pervasive conceptual errors</li> </ul>	
<b>Evaluation</b>		
E3	<ul style="list-style-type: none"> <li>• Takes a clear overall stand that is comprehensively justified by providing convincing evaluative comments on the relative importance of most of the points covered in the body</li> </ul>	4 – 5
E2	<ul style="list-style-type: none"> <li>• Takes a clear overall stand which is only partially justified as             <ul style="list-style-type: none"> <li>• Only some of the points mentioned in the body were evaluated</li> <li>• The overall stand was largely justified by the inclusion of additional concluding points to sway the overall argument</li> <li>• The arguments used to evaluate individual points were unconvincing or somewhat flawed</li> </ul> </li> <li>• Evaluates at least one of the points covered in the body but the overall stand is unclear</li> <li>• Provides insightful opinion(s) which are however not directly relevant to the requirements of the question</li> </ul>	2 – 3
E1	<ul style="list-style-type: none"> <li>• Provides unsubstantiated opinion(s)</li> </ul> <p><i>Note: An opinion is NOT a STATEMENT (Tips: Use normative words: best, more, less, large/small extent)</i></p>	+1

Q4

**Current global economic developments have led to slow growth and high inflation in many economies.**

- (a) **Explain the adverse consequences of slow growth and high inflation in an economy. [10]**
- (b) **Discuss possible policies that governments could implement to manage the effects of current global economic developments. [15]**

**Part (a)**

Adverse consequences of slow growth:

- When economic growth slows down, AD increases at a slower rate, hence output will be produced at a slower rate. This will mean that factors of production will be employed at a slower rate and there will be **slower job creation** to reduce existing demand-deficient unemployment. Can draw AD-AS diagram to illustrate.

- When economic growth slows down, the tax revenue collected **might not be sufficient** to meet the economic needs and social needs of an economy. For example, less revenue might be spent on infrastructure, leading to **slower potential growth**. Less revenue might be spent on healthcare, education and amenities, leading to **lower standard of living**.

Adverse consequences of high inflation:

- High inflation will create greater uncertainty for firms in estimating their expected returns. This might cause a fall in I, AD, and multiple fall in real GDP, leading to **slower economic growth and increase in demand-deficient unemployment**. Can draw AD-AS diagram to illustrate.
- A country suffering from high inflation rates will experience a fall in the quantity demanded of their exports as prices of their exports increase and their trading partners switch to cheaper alternatives from other countries. If  $|PED_x| > 1$ , quantity demanded will fall more than proportionately and export revenue falls. The effect is exacerbated if the country's inflation rate is higher than other countries as the country's exports will be relatively more expensive and its trading partners will switch to the relatively cheaper exports from other countries, leading to a fall in the demand for the country's exports and a further fall in export revenue. Higher inflation at home will also likely increase the demand for imports, as foreign goods are now relatively cheaper than domestic goods, leading to an increase in import expenditure. Falling export revenues and rising import expenditure would cause the **balance of trade to worsen**

### Mark Scheme

Level	Descriptors	Marks
L3	Breadth <ul style="list-style-type: none"> <li>• Explain adverse consequences of slow growth</li> <li>• Explain adverse consequences of high inflation</li> <li>• At least 2 distinct points</li> <li>• Link to macroeconomic goals/ impact on economy</li> </ul> Depth <ul style="list-style-type: none"> <li>• Applies relevant economic analysis</li> <li>• Explains with rigour and detail</li> <li>• Explains and illustrates with relevant diagrams and examples</li> </ul>	8 – 10
L2	<ul style="list-style-type: none"> <li>• Lacking in any one of the L3 criteria</li> </ul>	5 – 7
L1	<ul style="list-style-type: none"> <li>• Largely irrelevant response</li> <li>• Descriptive response with non-existent or minimal or application of economic concepts or theories</li> <li>• Serious and pervasive conceptual errors</li> </ul>	1 – 4

### Part (b)



## INTRODUCTION

The current global economic development includes the Ukraine-Russia war and Covid-19 pandemic. The **Ukraine-Russia war** leads to rising energy prices that causes **SRAS to fall** and the **pandemic** leads to supply chain disruption that causes **SRAS to fall** and the opening up of economies/ pent-up demand/ overly expansionary fiscal policy in 2020 and 2021 that causes **AD to rise**. Overall, these developments have led to **slow growth and high inflation** in many economies. This essay will discuss possible policies that governments could implement to manage slow growth and high inflation.

*Note: Not recommended to suggest fall in SRAS and fall in AD as this will lead to fall in output, rather than slower rise in output.*

## BODY

### 1. Contractionary Monetary Policy

- For countries like US, the Central banks could increase interest rate to increase the cost of borrowing. Consumers would borrow less to purchase big-ticket items like cars hence C will fall. Firms would borrow less as  $MEI < r$ , hence I will fall. The fall in C and I will cause AD to fall by a multiple (draw AD-AS diagram), leading to a fall in general price level. This would help to **tackle demand-pull inflation**.
- Limitations: The fall in AD will cause economic growth to slow down further. This will **worsen the current situation of slow growth**. Moreover, due to optimism and the overly expansionary fiscal policy that resulted in transfer payments to consumers that many were cautious in spending during the pandemic due to uncertainty, even when interest rates increase, it **might not dampen C and I much**.
- For countries like Singapore, the MAS could appreciate Singapore dollars to **tackle cost-push inflation**. A stronger S\$ means that the prices of imported inputs will be lower in S\$, leading to lower cost of production. Hence, SRAS rises (draw AD-AS diagram), leading to a fall in general price level.
- Limitations: A stronger S\$ will mean that prices of exports will be more expensive in foreign currencies, leading to a fall in quantity of exports demanded. Prices of imports will be cheaper in S\$, leading to consumers switching to imported goods, hence import increase. A fall in X and rise in M will cause AD to fall, leading to fall in real GDP and slower economic growth. This will **worsen the current situation of slow growth**.

### 0. Short-run supply side policies

- Governments could implement short-run supply side policies to reduce cost of production to increase SRAS (draw AD-AS diagram). For example, wages could be subsidised and utilities/ rental rebates could be given. The increase in SRAS will

reduce general price level and increase real GDP. This will help to **tackle cost-push inflation and leads to actual growth.**

- **Limitations:** Such policies are costly to implement, especially when most governments had already spent a lot during the pandemic to support their economy.
- **Note: It is not appropriate to suggest expansionary dd-mgmt policies** given that there's no recession and it'll worsen dd-pull inflation. Nevertheless, if the students did suggest expansionary policies, they will need to recognise that there will be dd-pull inflation and complement this with SSP to tackle inflation.
- **It is not appropriate to suggest LR SSP** since it does not solve the current problems of slow growth and high inflation.

### **CONCLUSION**

- In conclusion, which policies governments should use will depend on the **underlying causes** of slow growth and high inflation in their economy and the **severity of the problems**, i.e. whether there is a need to prioritise one goal over the other.
- For example, US is facing high demand-pull inflation and moderate growth due to higher energy prices and overly expansionary FP. Hence, the government should tackle inflation first by implementing contractionary monetary policy. Given the huge budget deficit that the US government faces, SSP will be less feasible.
- As for Singapore, we lack resources and imported most items that we need. Hence, the increase in oil prices and supply chain disruption have resulted in imported-inflation. The Sg government should strengthen S\$ to tackle this. The resulting fall in AD due to fall in X is less of a concern for Singapore since the pent-up demand has resulted in growing consumption with the opening of the economy. This should be complemented with SSP to prevent the further slowdown in economic growth. SSP is feasible in Singapore given our ample reserves and the tools available to the government to provide both utilities and rental rebates.

### **Mark Scheme**

<b>Level</b>	<b>Descriptors</b>	<b>Marks</b>
L3	<b>Breadth</b> <ul style="list-style-type: none"> <li>• Contextualise and explain current economic developments leading to slow growth and high inflation</li> <li>• Explain at least 1 policy to tackle high inflation + limitations</li> <li>• Explain at least 1 policy to tackle slow growth + limitations</li> <li>• At least 2 distinct points</li> </ul> <b>Depth</b> <ul style="list-style-type: none"> <li>• Applies relevant AD-AS analysis</li> </ul>	8 – 10

	<ul style="list-style-type: none"> <li>Explains with rigour and detail Explains and illustrates with relevant diagrams and examples</li> </ul>	
L2	<ul style="list-style-type: none"> <li>Lacking in any one of the L3 criterions</li> </ul>	5 – 7
L1	<ul style="list-style-type: none"> <li>Largely irrelevant response</li> <li>Descriptive response with non-existent or minimal or application of economic concepts or theories</li> <li>Serious and pervasive conceptual errors</li> </ul>	1 – 4
<b>Evaluation</b>		
E3	<ul style="list-style-type: none"> <li>Takes a clear overall stand that is comprehensively justified by providing convincing evaluative comments on the relative importance of most of the points covered in the body</li> </ul>	4 – 5
E2	<ul style="list-style-type: none"> <li>Takes a clear overall stand which is only partially justified as <ul style="list-style-type: none"> <li>Only some of the points mentioned in the body were evaluated</li> <li>The overall stand was largely justified by the inclusion of additional concluding points to sway the overall argument</li> <li>The arguments used to evaluate individual points were unconvincing or somewhat flawed</li> </ul> </li> <li>Evaluates at least one of the points covered in the body but the overall stand is unclear</li> <li>Provides insightful opinion(s) which are however not directly relevant to the requirements of the question</li> </ul>	2 – 3
E1	<ul style="list-style-type: none"> <li>Provides unsubstantiated opinion(s)</li> </ul>	+1

Q5

**Developing economies like China have lifted many people out of poverty by pursuing economic growth through industrialization. However, governments all over the world have realised economic growth brings with it trade-offs in terms of income inequality and environmental sustainability.**

- a) **Explain how economic growth might cause trade-offs in terms of income inequality and environmental sustainability respectively. (10)**
- b) **Discuss whether subsidizing education and training is the best policy to achieve inclusive growth. (15m)**

### **Introduction**

Economic growth is generated when the output of the economy increases over time. Non-inflationary economic growth is achieved when the aggregate demand and aggregate supply of the economy increases in tandem. Governments pursue economic growth because of its ability to uplifting the standard of living of its people, but these

benefits are increasingly being overshadowed by trade-offs. This essay seeks to explain the trade-offs between economic growth and inclusiveness and sustainability.

### **Trade-off between Growth and Inclusiveness**

#### **Worsen Income inequality**

- Rapid economic growth may result in widening income disparities between the rich and poor. This can be seen by a rising Gini coefficient as rapid GDP growth occurs.
- The rich are usually the more mobile, entrepreneurial and highly-skilled segment of the population. Economic growth presents more opportunities for this group of people to earn higher incomes as well as exploit business opportunities to make profits.
- On the other hand, the poor are usually those who are unskilled with low education. They generally fit into low-paying jobs. Thus, their earning power tends to lag behind that of the rich. **The demand for their labour remains low while the demand for high skilled labour rises together with economic growth. As such the wages of the high skilled increase significantly while the wages of the low income may stagnate.** Can show the gap between them with demand and supply curves of high-skilled vs low-skilled labour.

The growing income divide, if unresolved, poses a potential threat to social and political stability. The poor may become disenchanted with society and the political system. Widening income disparities can become socially divisive as those left behind (i.e. so-called have-nots) feel marginalised. Such social discontent can erupt into civil strife and political upheaval, thus reducing consumer and business confidence and reducing AD and reducing economic growth.

#### **Structural Unemployment (optional)**

- Rapid growth is often accompanied by structural changes associated with a dynamic economy. A dynamic economy is often characterized by rapid innovation and technological changes as the economy moves up the value chain.
- For example, as the Singapore economy grew over the years, the economy transformed itself from dependence on exporting low-end manufacturing to high-end knowledge-based goods and services. Low-skilled workers may find themselves at the mercy of rapid economic growth as their skills and knowledge become obsolete. As a result, the workers may be made redundant as they can be replaced by machines quite easily.
- This form of unemployment is structural as the workers do not have the necessary skills demanded by employers in the new economy.

Interesting analysis from students - Growth may lead to dd-pull inflation and the pace of wage increase of the lower income tends to be slower because their skill sets are not as demanded. As such the real income gap will widen because of dd-pull inflation

### Trade-off between Growth and Sustainability

#### Environmental Pollution, i.e. Negative Externalities

- Economic growth is often accompanied by rapid industrialisation which, unless carefully managed, causes deterioration of the environment such as air and water pollution, industrial noise and stench, congested cities and traffic jams. The more rapid the growth, the more serious is the problem associated with negative externalities.
  
- China for example is amongst the countries which experienced the fastest economic growth, but it is also the top emitter of greenhouse gases each year.
  
- As an economy grows and the country becomes more developed, there is also the problem of urbanisation. Rapid urbanisation leads to the destruction of green spaces (e.g. lush greenery) causing the loss of space for leisure pursuit and loss of a more relaxed lifestyle.

#### Depletion of Natural Resources

- Economic growth that is too rapid may bring about the depletion of non-renewable (e.g. fossil fuels) resources or over-use (i.e. faster than the rate of replenishment) of renewable resources such as over-fishing and over-logging.
  
- Unless measures are put in place to encourage sustainable use of resources e.g. regulation against over-fishing or over-logging, and unless viable alternatives can be found for various minerals and fossil fuels, present growth may lead to insufficient amount of natural resources available for future generations, which impedes potential AS growth.

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> <li>● Breadth               <ul style="list-style-type: none"> <li>● Explains how growth widens the income gap.</li> <li>● Explains how growth may cause pollution and resource depletion.</li> </ul> </li>   <li>● Depth</li> </ul>	8-10

	<ul style="list-style-type: none"> <li>● Applies AD/AS analysis to sustainability (depletion of resources)</li> <li>● Applies AD/AS or labour dd/ss analysis to inclusiveness</li> <li>● Explains with rigour and detail</li> <li>● Explains and illustrates with relevant diagrams and examples</li> </ul>	
L2	<ul style="list-style-type: none"> <li>● Lacking in any one of the L3 criteria</li> </ul>	5-7
L1	<ul style="list-style-type: none"> <li>● Largely irrelevant response</li> <li>● Descriptive response with non-existent or minimal or application of economic concepts or theories</li> <li>● Serious and pervasive conceptual errors</li> </ul>	1 – 4

**b) Discuss whether subsidizing education and training is the best policy to achieve inclusive growth. (15m)**

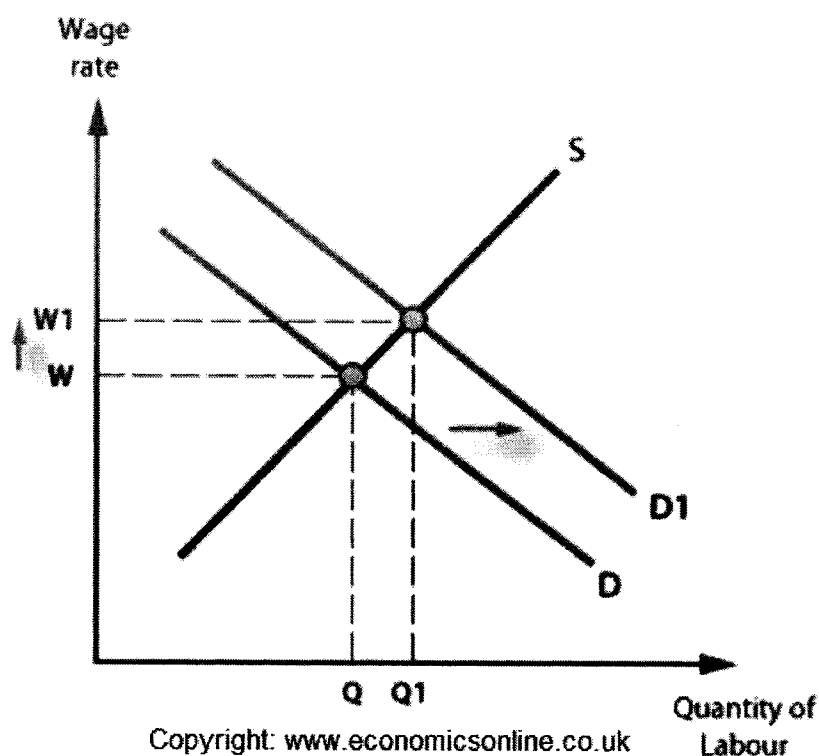
1. Explain how education and training helps achieve inclusive growth

Subsidizing education and training helps improve the overall quality of labour and leads to AS increase. Better quality of labour also attracts investments and leads to AD increase.

Referring to Figure ,

- Initially, real output is at  $Y_0$  and the economy is not operating at full employment.
- An increase in AD from  $AD_0$  to  $AD_1$  will raise the real output from  $Y_0$  to  $Y_{f0}$ . This represents an increase in actual output or **actual growth**.
- An increase in AS from  $AS_0$  to  $AS_1$  will raise the potential full employment output from  $Y_{f0}$  to  $Y_{f1}$ . This represents **potential growth**.
- When AS shifts rightwards together with the increase in AD, real output increases further from  $Y_{f0}$  to  $Y_{f1}$ , and there is actual growth. In this diagram since price level stays at  $P_1$ , non-inflationary growth is achieved.

The better quality workers also receive higher wages because the demand for their labour has increased from D to D1, increasing their wages from W to W1.



Limitations:

The success of subsidizing education and training depends on the attitude and aptitude of the workforce.

0. Explain one other policy and its limitations. Some of the possibilities are listed below:
  - a. Distribution policies. Inclusive Growth is achieved by allowing progressive taxation policies which take more from those who benefit more from economic growth and distribute to those who may not be benefited as much. **The link to growth must be clear. E.g. When there's economic growth, the high-skilled will move up the tax brackets where they pay a higher income tax rate. This higher tax revenue can then be redistributed to the lower-skilled in terms of direct transfers or subsidies for essential goods and services like education and healthcare.** Limitations: Excessively progressive taxation may disincentivize work and investment/entrepreneurship.

a. Industrialisation/Leveraging on CA. Developing economies which embrace industrialization and embrace CA on labour intensive/low cost manufacturing can achieve rapid growth and create better paying jobs relative to an agrarian economy which can lift many out of poverty, creating inclusive growth. Limitations: This works in the early stages of development, but once economic growth becomes stable, the trade-offs with inclusiveness as mentioned in part a) will kick in.

b. Expansionary demand management policies. When a recession happens, there will be lower demand for labour, causing wages to stagnate and jobs to be lost. In such a situation, expansionary fiscal/monetary policies can help stimulate the economy and prevent many from slipping into poverty.

**Evaluation:**

Depends on the alternative policy. The evaluation should include normative assessments of the limitations plus a summative conclusion.

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> <li>● Breadth               <ul style="list-style-type: none"> <li>● Explains how subsidizing education and training can lead to actual and potential growth and also better wages for labour.</li> <li>● Explains 1 other relevant policy which can lead to inclusive growth. This can include the following: distribution policies, expansionary fiscal/monetary policies, industrialisation/leveraging on CA etc.</li> <li>● Limitations of both policies to be explained</li> </ul> </li> <li>● Depth               <ul style="list-style-type: none"> <li>● Applies relevant AD-AS and labour DD/SS analysis</li> <li>● Explains with rigour and detail</li> <li>● Explains and illustrates with relevant diagrams and examples</li> </ul> </li> </ul>	8 – 10
L2	<ul style="list-style-type: none"> <li>● Lacking in any one of the L3 criteria</li> </ul>	5 – 7
L1	<ul style="list-style-type: none"> <li>● Largely irrelevant response</li> <li>● Descriptive response with non-existent or minimal or application of economic concepts or theories</li> <li>● Serious and pervasive conceptual errors</li> </ul>	1 – 4
<b>Evaluation</b>		



E3	<ul style="list-style-type: none"> <li>• Takes a clear overall stand that includes normative comments on the policies and limitations.</li> </ul>	4 – 5
E2	<ul style="list-style-type: none"> <li>• Takes a clear overall stand which is only partially justified as             <ul style="list-style-type: none"> <li>• Only some of the points mentioned in the body were evaluated</li> <li>• The overall stand was largely justified by the inclusion of additional concluding points to sway the overall argument</li> <li>• The arguments used to evaluate individual points were unconvincing or somewhat flawed</li> </ul> </li> <li>• Evaluates at least one of the points covered in the body but the overall stand is unclear</li> <li>• Provides insightful opinion(s) which are however not directly relevant to the requirements of the question</li> </ul>	2 – 3
E1	<ul style="list-style-type: none"> <li>• Provides unsubstantiated opinion(s)</li> </ul> <p><i>Note: An opinion is NOT a STATEMENT (Tips: Use normative words: best, more, less, large/small extent)</i></p>	+1

Q6

**10 ASEAN members and five regional partners (Australia, China, Japan, South Korea, and New Zealand) signed the Regional Comprehensive Economic Partnership (RCEP) on 15 Nov. It is the world's largest free trade agreement (FTA), comprising about 30% of global GDP and the world's population.**

**Adapted from CNA, 18 Nov 2020**

**a. Explain how the signing of FTAs will affect consumers and producers in participating economies. [10]**

**a. Discuss whether the signing of FTAs is the best measure to create jobs for an economy. [15]**

### **Part (a)**

#### **INTRODUCTION**

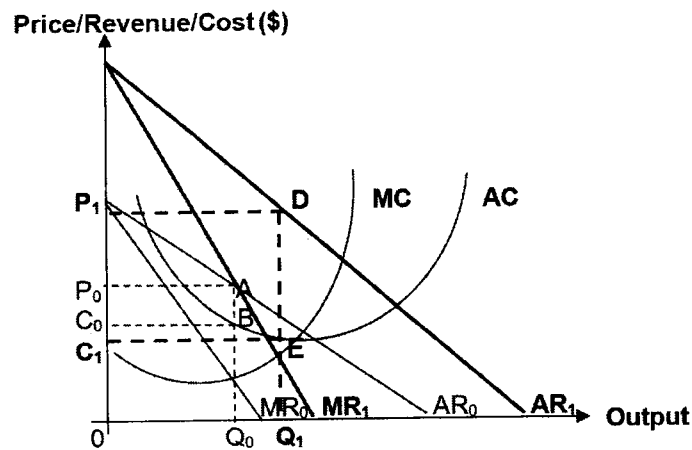
The signing of FTAs will help participating economies by expanding their exports markets and the removal of tariffs will help to reduce cost of production. This will affect consumers in terms of prices and variety of goods and services and affect producers in terms of profit.

#### **BODY**

##### **1. Expand exports markets**

- The signing of FTAs will facilitate more trade activities among participating economies, possibly leading to **more variety of goods and services for consumers**.
- By expanding the exports markets, demand for firms' products will increase, leading to an increase in AR from  $AR_0$  to  $AR_1$ , as shown in Figure 1. This will lead to an increase in price from  $P_0$  to  $P_1$ , an increase in quantity from  $Q_0$  to  $Q_1$ , and an increase in profits for producers from  $P_0ABC_0$  to  $P_1DEC_1$ .

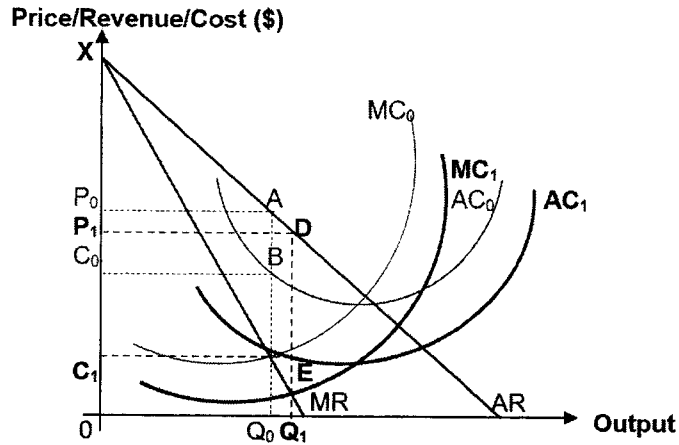
Figure 1: An increase in demand



#### 0. Reduce cost of production

- The signing of FTAs will facilitate the removal of tariffs among participating economies, possibly leading to lower unit costs of production for firms as prices of imported inputs fall. As shown in Figure 2, this will lead to a fall in MC from  $MC_0$  to  $MC_1$  and AC from  $AC_0$  to  $AC_1$ . There will be a fall in price from  $P_0$  to  $P_1$ , an increase in quantity from  $Q_0$  to  $Q_1$ , and an increase in profits for producers from  $P_0ABC_0$  to  $P_1DEC_1$ .
- **Consumers** will benefit from a fall in prices from  $P_0$  to  $P_1$  and an increase in consumer surplus from area  $XAP_0$  to  $XDP_1$ .

Figure 2: A fall in variable costs



**CONCLUSION**

In conclusion, consumers will benefit in terms of lower prices and greater variety of goods and services while producers will benefit from higher profits.

**Note:**

- Other acceptable diagram includes removal of tariff diagram to show lower prices and greater domestic production. Have to link to the impact on consumers in terms of price and variety and impact on producers in terms of profits.
- Alternative, students can argue that there will be greater competition, hence some producers might lose out in terms of fall in demand, and fall in profits. However, consumers will benefit from lower prices.

**Mark Scheme**

Level	Descriptors	Marks
L3	<p>Breadth</p> <ul style="list-style-type: none"> <li>• Explain the impact on consumers (prices, choice and/or variety)</li> <li>• Explain the impact on producers (profits due to change in size of markets, degree of competition, cost of production and/or innovation)</li> <li>• At least 2 distinct points</li> </ul> <p>Depth</p> <ul style="list-style-type: none"> <li>• Applies relevant economic analysis</li> <li>• Explains with rigour and detail</li> <li>• Explains and illustrates with relevant diagrams and examples</li> </ul>	8 – 10
L2	<ul style="list-style-type: none"> <li>• Lacking in any one of the L3 criteria</li> </ul>	5 – 7
L1	<ul style="list-style-type: none"> <li>• Largely irrelevant response</li> <li>• Descriptive response with non-existent or minimal or application of economic concepts or theories</li> <li>• Serious and pervasive conceptual errors</li> </ul>	1 – 4

**Part (b)**

Discuss whether the signing of FTAs is the best measure to create jobs for an economy. [15]

**INTRODUCTION**

Job creation occurs when real GDP, i.e. production of output, increases and firms need to hire more factors of production like labour. This usually happens when AD increases and/or AS increases. This essay will discuss whether the signing of FTAs is the best measure to create jobs for an economy.

**BODY****Thesis: Signing of FTAs could be the best measure to create jobs**

- Signing of FTAs will facilitate more trade and investment activities, hence assuming  $X > M$  and  $FDI > DI$  outflows, **AD will increase** (draw AD/AS diagram), and real GDP will increase by a multiple.
- Signing of FTAs will result in removal of tariffs, hence when prices of imported inputs fall, unit cost of production will fall, **SRAS will increase** (draw AD/AS diagram), and real GDP will increase.
- As production increases, firms will need to hire more factors of production, hence there will be greater job creation, leading to increase in employment.
- Limitations: However,  $M$  might increase more than  $X$ , i.e.  $M > X$ , and  $DI$  outflows might be more than  $FDI$ , leading to fall in AD instead. Hence, there might be higher demand-deficient unemployment.

**Anti-thesis: Other measures might be better (only need to analyse one)**

- **SSP**
  - Creation of new CA via gain in productivity and fall in opportunity cost to increase  $X$  LRAS increases
  - Improve **quality** of  $X$  via R&D AD increase
  - As production increases, greater job creation
  - Limitations: However, innovation involves huge costs and there is no guarantee of success.
- **Protectionism**
  - Tariffs (draw diagram):  $M$  falls, local production increases, greater job creations
  - Subsidies:  $X$  increases, greater job creations
  - Limitations: However, there might be retaliations from trading partners. It is a beggar-thy-neighbour measure. Can only be a short-term solution.

- **Expansionary Ad-mgmt policies (FP/MP)**
  - AD increase, greater job creation
  - Limitations: However, there might be demand-pull inflation. And other limitations specific to FP (e.g. fiscal debt) and MP (e.g. zero bound interest rate).

### **EVALUATIVE CONCLUSION**

- In conclusion, whether the signing of FTAs is the best measure to create jobs for an economy will depend on the nature of the economy and her economic situation.
- For example, US frequently complains that free trade has harmed their economy, resulting in huge BOT deficits. Hence, in recent years, instead of embracing globalisation, US has started to turn inwards and adopt more protectionist measures to encouragement domestic production and create jobs. She is able to do so as she has a huge domestic market and even if other countries retaliate, the impact on growth will not be significant. Hence, signing of FTAs is not the best measure for US to create jobs.
- As for Singapore, being a small and open economy, she has no choice but to embrace globalisation as her domestic market is too small and there is a lack of resources. Hence, signing of FTAs is one of the measures that Singapore uses to access more exports markets. However, being small makes Singapore susceptible to changes in her trading partners' economic situations and instead of depending on FTAs to create jobs, Singapore always depends on SSP to sustain her economic growth. Product and process innovation is very important for Sg to improve the quality and reduce the prices of our exports respectively.
- In addition, DD-mgmt policies are not long-term solutions, i.e. not sustainable, and if economy is not suffering from a recession, expansionary AD policies will result in demand-pull inflation.
- In my opinion, SSP is still the best measure for any types of economy, especially if the government has the budget for it.

### **Mark Scheme**

<b>Level</b>	<b>Descriptors</b>	<b>Marks</b>
L3	Breadth <ul style="list-style-type: none"> <li>• Explain how signing of FTAs can create jobs + limitations</li> <li>• Explain how other measure(s) can create jobs + limitations</li> <li>• At least 2 distinct points</li> </ul> Depth <ul style="list-style-type: none"> <li>• Applies relevant AD-AS analysis</li> <li>• Explains with rigour and detail (<i>Max 9m if no succinct multiplier explanation for changes in AD</i>)</li> <li>• Explains and illustrates with relevant diagrams and examples</li> </ul>	8 – 10
L2	<ul style="list-style-type: none"> <li>• Lacking in any one of the L3 criterions</li> </ul>	5 – 7
L1	<ul style="list-style-type: none"> <li>• Largely irrelevant response</li> <li>• Descriptive response with non-existent or minimal or application of economic concepts or theories</li> </ul>	1 – 4

	<ul style="list-style-type: none"> <li>• Serious and pervasive conceptual errors</li> </ul>	
<b>Evaluation</b>		
E3	<ul style="list-style-type: none"> <li>• Takes a clear overall stand that is comprehensively justified by providing convincing evaluative comments on the relative importance of most of the points covered in the body</li> </ul>	4 – 5
E2	<ul style="list-style-type: none"> <li>• Takes a clear overall stand which is only partially justified as             <ul style="list-style-type: none"> <li>◦ Only some of the points mentioned in the body were evaluated</li> <li>◦ The overall stand was largely justified by the inclusion of additional concluding points to sway the overall argument</li> <li>◦ The arguments used to evaluate individual points were unconvincing or somewhat flawed</li> </ul> </li> <li>• Evaluates at least one of the points covered in the body but the overall stand is unclear</li> <li>• Provides insightful opinion(s) which are however not directly relevant to the requirements of the question</li> </ul>	2 – 3
E1	<ul style="list-style-type: none"> <li>• Provides unsubstantiated opinion(s)</li> </ul>	+1