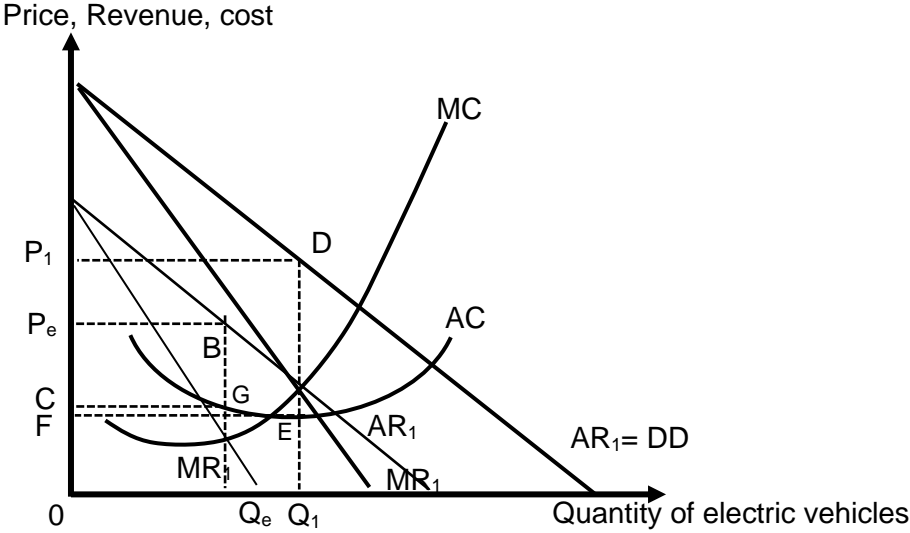


H2 Economics ASRJC Preliminary Examination 2024
Suggested Answers and Markers' Comments

Question 1: Impacts of the Electric Vehicle Industry

a	With reference to Figure 1, compare consumer and government spending on electric cars between 2016 to 2021.	[2]
	<p>Similarity: <u>Both</u> increased between 2016 to 2021.</p> <p>Difference: Consumer spending is always <u>higher or increased by a larger extent</u> than government spending on electric cars between 2016 to 2021.</p>	
	<p>Marker's comments</p> <ul style="list-style-type: none"> • Most students could score for this question. • Students should take note to take the most obvious trend over the entire period, where possible. In this case, there are two obvious overall trends. Hence, students should not take the data for split years. • Some students were still reporting data, instead of showing interpretation such as using comparative words to show similarity or difference. 	
b	Explain two reasons why electric vehicle charging points are not public goods.	[4]
	<p>Public goods are defined by its <u>two key characteristics of non-excludability and non-rivalrous in consumption</u>. In addition, once provided, an additional trait is that it cannot be rejected by the consumers, which means it is also non-rejectable.</p> <p>Charging points are not considered as public good because they are <u>rivalrous in consumption</u>. This means that the benefits will be depleted by additional users. When one driver uses one charging point, it will not be available for charging for the other user and he will have to queue for it, thus making the usage of charging point rivalrous in consumption.</p> <p>Charging points are not considered as public goods because they are <u>excludable in consumption</u>. This means that non-payers can be excluded from using the charging points as users will have to pay a fee to operate the charging points such as having security feature in the device to only allow usage upon payment/ easy to set up payment mode to prevent non-payers from using the charging points.</p> <p>Charging points are not considered as public goods because they are <u>rejectable in consumption</u>. This means that consumers can choose not to consume it once it has been produced. It is possible for consumers to reject the benefits of charging points (i.e. benefits of driving a fully powered electric vehicles) that have been provided for as they have the right to reject, subject to taste and preferences. For example, they can choose not to use it and use petrol for the ICE cars if they prefer.</p> <p>Hence, charging points are not public good.</p>	
	<p>Marker's comments</p> <ul style="list-style-type: none"> • Most students could score at least 2m for this question. Instead of just stating the definition of characteristics in context, students should continue to elaborate how it could be applied to the context. 	

	<ul style="list-style-type: none"> Many students wrote that the characteristics were “not non-excludable” which should be phased as “excludable”. Some students didn’t show understanding of the characteristics of public goods. Some students wrote more than necessary and explained how the characteristics led to market failure which is not required. Some students were confused between the explanation for excludable and rivalrous in consumption. Some students explained excludable as exclusive which was wrong. Some students explained excludable as only those with electric vehicles would require the charging points which is wrong. They should refer to the definition of this term in Economics, rather than in English. 	
c	With reference to Extract 3,	
	(i) State the economic concept you would use to measure the relationship between the fall in price of Tesla’s electric vehicle and the resulting change in demand for Li Auto’s electric vehicle.	[1]
	Cross elasticity of demand	
	Marker’s comments Most students could score for this question.	
	(ii) Explain the value you would expect to get from this measurement.	[3]
	<p>Cross elasticity of demand measures the degree of responsiveness of the demand for China’s Li Auto to a change in price of Tesla, ceteris paribus.</p> <p>Since Tesla and Li Auto are <u>substitutes</u>, the two goods have a <u>positive</u> XED value. The size of the XED coefficient between Tesla and Li Auto is also likely to be <u>large</u> as the two goods are <u>close substitutes</u>. This is evident in Extract 3: Li Auto’s response in providing discounts when Tesla decreased their price.</p> <p>When price of Tesla falls, there will be a rise in quantity demanded for Tesla and consumers will switch away from the relatively more expensive Li Auto. <u>Demand for Li Auto</u> will hence <u>fall more than proportionately</u>.</p>	
	Marker’s comments <ul style="list-style-type: none"> Most students could score at least 2m for this question. They were able to identify that the question requires the value and magnitude to show relationship and closeness of relationship. Part (i) and (ii) are linked. Thus, students should continue to explain how the fall in price of Tesla could affect the demand for Li’s Auto due to the relationship identified. Some students wrongly stated that the quantity demanded for Li Auto was affected, instead of demand. 	

d	<p>Imagine that you are a potential new firm trying to enter the electric vehicle market in China.</p> <p>Considering the developments described in Extracts 2 and 3, discuss whether you should enter the electric vehicle market in China.</p>	[8]
	<p>The objective of the potential new firm is to maximise profits. It should consider costs and benefits of entering the market. In this case, the firm should consider <u>cost and revenue advantages</u> of entering the electric vehicle market.</p> <p>R1: New firm could consider entering the market due to relatively low BTE and prospect for profits since the electric vehicle market is booming. With an increase in trends towards sustainability and usage of electric vehicles (Extract 2: “China’s supremacy in the electric vehicle (EV) industry and its exports are reshaping the global automotive landscape”), demand is likely to increase from domestic or overseas markets, especially if China has a large export of electric vehicles to overseas markets. Thus, <u>demand for the new firm will likely increase</u>, shifting the AR and MR curves to the right from AR & MR to AR₁ to MR₁, as shown in Figure 1. Thus, equilibrium price and quantity increase from P_e and Q_e to P₁ and Q₁. <u>Supernormal profit increases</u> from area P_eBGC to P₁DEF.</p>  <p>Figure 1: Increase in profit during to increase in DD</p> <p>In addition, there is low barrier to entry and relatively lower fixed costs since infrastructure exists and potential economics of scale to be enjoyed (Extract 2: “absence of significant entry barriers or bottlenecks”, “EV production involves readily available technology and less complex manufacturing processes”). Thus, the new firm could tap on the <u>economics of scale and enjoy cost savings</u>, the average costs is low and there is opportunity to earn profits. Hence a new firm should enter. Moreover, technological enhancement and less complex manufacturing process from EV, firms producing EV benefit from lower average costs. Hence, <u>profit could increase</u> from area (P₀-C₀)*Q₀ to (P₁-C₁)*Q₁. Hence the greater profit project should encourage new firms to enter.</p>	

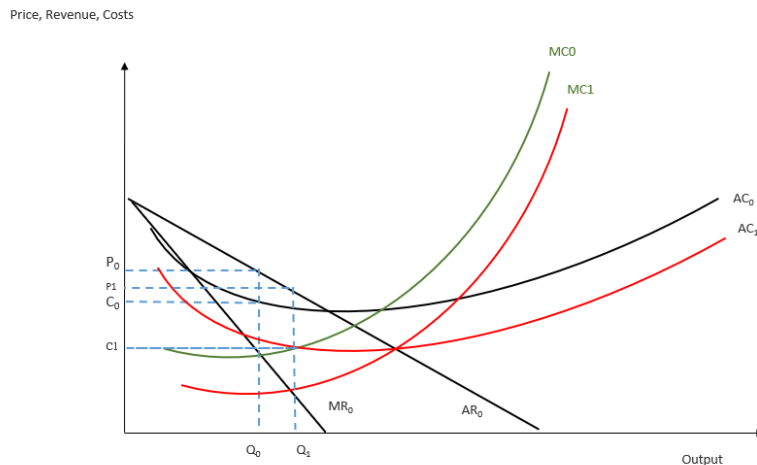


Figure 2: Increase in profit during to fall in costs

R2: However, new firm may need to consider the difficulty in earning profits since competition is quite stiff. For example, China EV's price war (Extract 3: "Tesla's price cuts in China could cost the carmaker the entirety of its operating profit in the world's biggest electric-vehicle market"). With the fall in price of Tesla, demand for close substitutes such as the new firm will likely fall by a greater extent (shift of AR and MR curves to the left from AR, MR to AR₁, MR₁ as shown in Figure 3), leading to a fall in price and quantity. Profit will also fall from area P_eDEF to area P₁BGC.

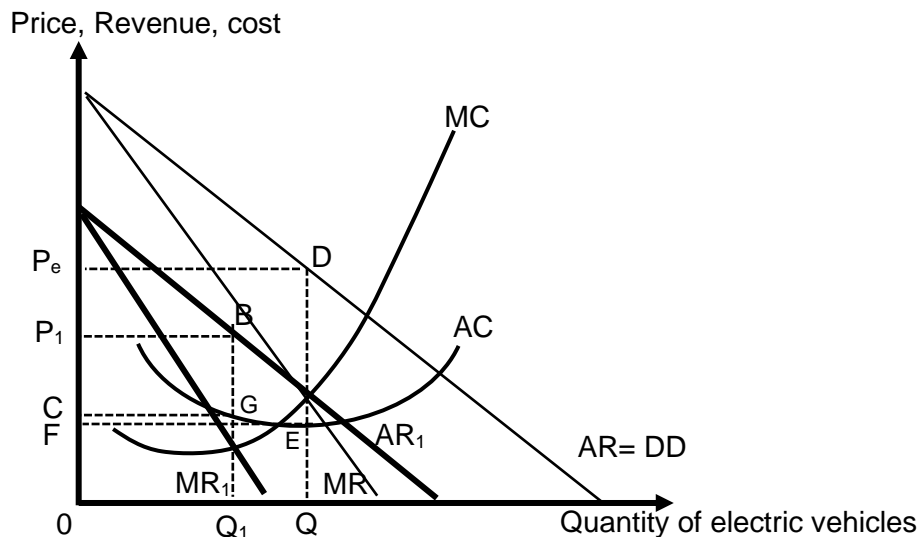


Figure 3: Decrease in profit during to fall in DD

To beat the competition, significant cuts in prices by the new firms is necessary to match Tesla's price cut which may lead to greater fall in profit for the new firm. Hence, it is not sustainable to continue with price cut over the longer term.

EV:

Whether the potential new firm will decide to enter the electric vehicle market in China depends on the marginal benefits vs marginal costs. The firm may decide to enter if marginal benefit is more than or equal to marginal cost or will not go ahead if marginal cost is more than marginal benefit.

In this case, the benefits may outweigh the costs. For example, the costs incurred by new firm deciding to enter the electric vehicles market may not be as high due to current infrastructure/ inventory of firm to switch production (Extract 3: "China's automakers can leverage their existing production facilities and skilled labour force to scale up EV production rapidly"). Thus, the potential new firm may want to go ahead with the decision.

OR

The costs may outweigh the benefits. For example, the competition is very stiff since even established firms are not meeting sales targets. Moreover, demand may not be as strong as expected as the incumbent firms already establish reputation and brand loyalty, thus consumers may not switch easily to other substitutes like the new firm. Furthermore, competition "has shown little sign of abating this year" (Extract 3), thus it is unlikely for the new firm to be able to sustain and enter the market if they are likely to make losses at the start, unlike those incumbent firms with past profits as buffer. Thus, the potential new firm may not want to go ahead with the decision.

Knowledge, Application, Understanding and Analysis		
L2	Answers in this level will provide detailed explanation on revenue and cost advantages in the decision to enter the industry.	4-6
L1	Answers in this level will have some limited explanation on revenue and cost advantages in the decision to enter the industry.	1-3
Evaluation		
E	Evaluation marks will be awarded for a comment on whether the firm should proceed with the decision in weighing the benefits and costs	1-2

Marker's comments

- General comments:
 - Most students could score at least 4m for this question.

QA	<ul style="list-style-type: none"> - Students should identify that this is a cost-benefit analysis question. Thus, they should consider the cost and benefits from the perspective of a firm. - For scope, it would be good to explain at least 1 point on cost advantage and 1 pt on revenue advantage.
CK	<ul style="list-style-type: none"> - Some students shifted the wrong curves in their diagrams.

	AR	- Many students lacked the elaboration even though they were able to write relevant points. For example, they were able to identify the cost advantages but did not elaborate how that would be beneficial to the new firm (i.e. link to profit considerations).	
	AP	<ul style="list-style-type: none"> - Most of them showed understanding of the context and made appropriate reference from case materials. However, students should not just quote without much analysis. They needed to be more explicit in the application of economic analysis (i.e. how demand of the new firm would be affected and thus revenue and profit). - Some students identified the market structure as monopolistic competition but this is unlikely due to the nature of the good (electric vehicle). This is clearly different from those small firms like bakery shops. The likely market structure for electric vehicles should still be oligopolistic. 	
	EV	- For evaluation, students should consider the context to weigh, instead of giving a generic one. For example, students could consider the context of how the situation (price war) may likely to continue and the impact on the new firm.	
e	Explain the externality that exists in the internal combustion engine (ICE) car market.		[2]
	<p>Negative externality.</p> <p>In the usage of ICE cars, it will emit air pollutants to the environment and affects the health of other road users.</p>		
	<p>Marker's comments</p> <ul style="list-style-type: none"> • Most students could score for this question. • Students need to note that there should be explanation of third party which should be on human beings. 		
f	Discuss whether banning new ICE cars or provision of more electric vehicle charging points is more effective in achieving efficiency in resource allocation in the ICE car market.		10
	<p>As explained in part (e), there is presence of negative externality in the ICE car market. This causes a divergence between the marginal private cost (MPC) and marginal social cost (MSC). Self-interested consumers will consume ICE cars at Q_e where $MPC = \text{marginal private benefit (MPB)}$ to maximise their own utility while the socially optimal output level is at Q_s, where marginal social benefit (MSB) equal to the MSC. As Q_e is greater than Q_s, there is over-consumption of ICE cars. Between Q_s and Q_e, the MSC is greater than MSB. Consuming these additional units of ICE cars reduces the society's welfare. Summing the excess social costs over social benefits, the over-consumption of ICE cars leads to deadweight loss to the society. Hence, government could intervene in the</p>		

ICE car market through banning new ICE cars or provision of EV charging points to achieve efficiency in resource allocation.

R1: Banning new ICE cars may be more effective in achieving efficiency in resource allocation in the ICE car market. The government plans to cease the registrations of ICE cars and taxis in 2030 and by the end of the 10 years COE period, most cars would be deregistered or scrapped. This may work like a ban which limits the usage of ICE cars eventually (Quantity = 0). With the ban on ICE cars, this will reduce the negative externality caused by usage of ICE cars totally, reduce usage of ICE cars to zero, thus achieving socially optimum level.

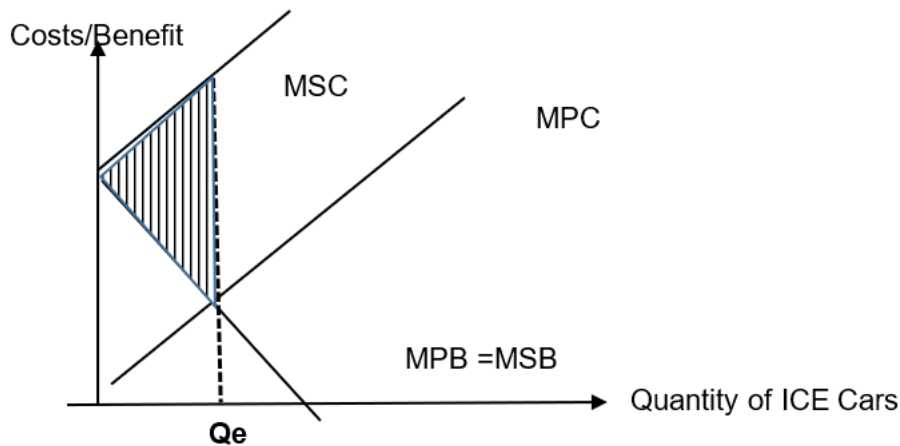


Fig: A ban on consumption eliminates the deadweight loss

However, it may take longer than planned to omit the usage of ICE cars totally if the government does not take the drastic measure to stop extension of COE for ICE cars beyond the first 10 year of usage. So, it depends on the government's follow-up policy once the cars reach the end of their 10 years COE.

In addition, they may also incur higher deadweight loss if the negative externality is not very high. Exhaust from ICE cars is not the only contributing polluting factor in the country and major factories from within the country or in nearby countries may contribute more significantly to air pollution. Hence it is unlikely that the negative externality will be very large. The deadweight loss at market equilibrium level of output, Q_e (Area B) is smaller than the deadweight loss when output is zero because of a ban on ICE cars (Area A), as shown in Figure 4. In this case, total ban on ICE cars may result in greater deadweight loss.

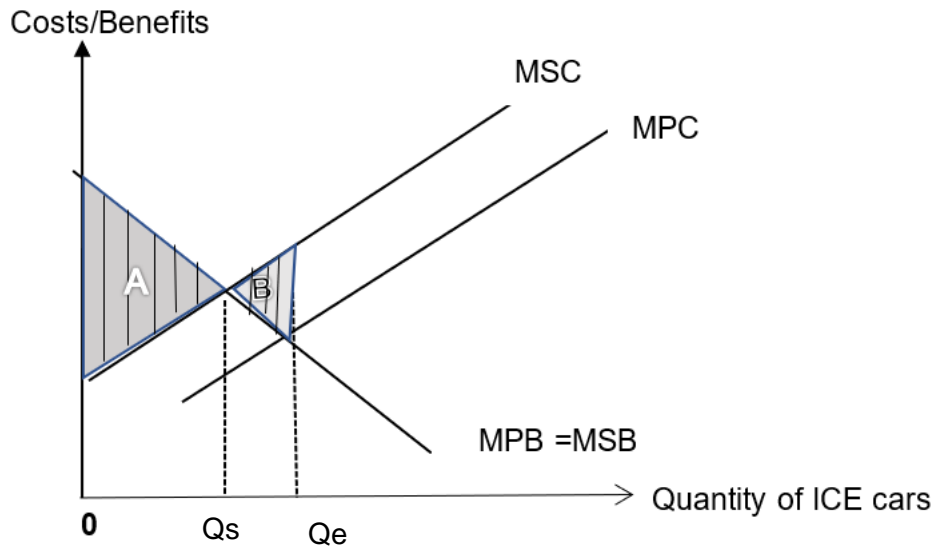


Figure 4: A ban on consumption may lead to greater deadweight loss

R2: Provision of charging points may be more effective in achieving efficiency in resource allocation in the ICE car market.

The government is looking at expanding public charging infrastructure which aims to increase the convenience of using EV and this will increase the taste and preference for EV. Thus demand for electric vehicles will rise. Since electric vehicles and ICE cars are substitutes, there will be a fall in demand for ICE cars, shifting the MPB curve to the left (Figure 5). Thus, quantity for ICE cars fall from Q_e to Q_e' , closer to socially optimum level, Q_s .

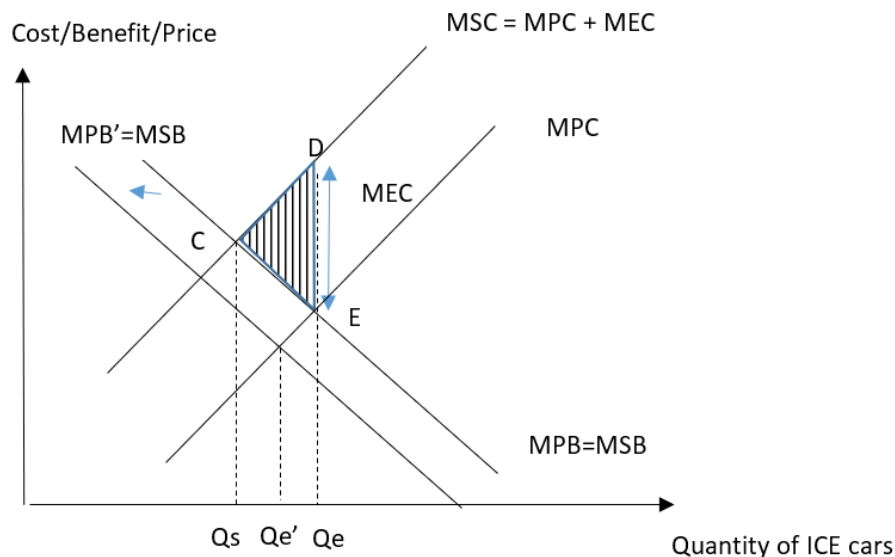


Figure 5: Fall in demand for ICE cars

However, it may be difficult to change the mindset or takes time to change mindset. Drivers may not be receptive to switch to driving electric vehicles yet as this is still a developing technology (i.e. queries on the battery life and safety issue). Thus, the overall increase in demand due to greater availability of convenient charging points might not be significant. The increase in usage of EV might not be significant. In addition, there may still be issue of

negative externality due to congestion when people drive EV, even though there may be a switch from ICE cars to EV.

Evaluative Conclusion

Depends on the time period/ urgency.

The provision of charging points may be better than phasing out ICE cars as a ban cannot be immediate as there are existing ICE cars on the road with up to 10 years of COE left. So, the earliest that the government can achieve zero ICE cars on the road would be 10 years later. In the meantime, having more accessible EV charging points could encourage existing ICE car drivers to switch to EVs by selling their ICE car even before the end of their COE. This can have a more immediate effect at reducing the ICE car usage.

Moreover, it is still likely that electric vehicles and ICE cars are not close substitutes due to the perception/ low receptivity of this new technology (i.e. potential danger of the battery). Moreover, such news regarding battery problems and fire hazard of EV kept appearing every now and then and consumers are constantly reminded about the potential problems of EV. Such **salience bias** would deter drivers from switching to electric vehicles. Thus the switch from electric vehicles to ICE cars may not be as significant despite the government policies thus the demand for ICE cars may not fall as much. In this case, the quantity may not be close to socially optimum level.

Knowledge, Application, Understanding and Analysis		
L2	<p>Answer that shows developed analysis of the working of the two policies to correct the above market failure.</p> <p>To score: Candidates must have answer that is relevant to the question with good use of well-explained theory. Answer is written with clear explanation that is supported by a tool of analysis such as a diagram.</p>	4-7
L1	<p>Answer that shows knowledge with understanding of the working of at least one policy to correct the above market failure.</p> <p>The explanation of the policy tends to be cursory and descriptive.</p>	1-3
Evaluation		
E	<p>Evaluation marks will be awarded for a realistic assessment of the policies in Singapore. A conclusion must be provided.</p> <p>To achieve E3 (3m): Candidate are required to synthesise arguments and make evaluative judgements and consider the extent of appropriateness leading to a decision based on judgements.</p> <p>One developed evaluative decisions/judgements that is well explained and reasoned. An evaluative judgement or decision that is supported by the arguments presented in the answer and is link to the context of the question. This may involve a summative conclusion.</p>	1-3

Marker's Comments

- General comments:
 - Most students could score at least 5m for this question.
 - The policies tested were not the usual/ standard policies that students might be more familiar with. For such a question which dictates the policies, there is no option for students to write what they are good at. Thus, this is a learning point to be familiar with the syllabus requirement.
 - **Time management** issue: Almost everyone could complete CSQ 1 as it was the first question. The length of answer for CSQ 1 was also quite long. Students would need to consider to better allocate their time to ensure that they answer all questions (both CSQ 1 and 2) and write appropriate length for the right mark allocation. For example, some students wrote longer answer for part d which was worth 8m as compared to part f which was worth 10m.

QA	<ul style="list-style-type: none"> - The key focus is on policies, so students should have allocated more time to discuss the policies, rather than writing the full 5-steps externality explanation. This should be kept brief. - This question is on market failure policies, especially when the previous question is on negative externality. - Students should link back to ICE cars market, instead of focusing on electric vehicle market. - Some students misread the question and explained on the provision of electric vehicles instead of charging points.
CK	<ul style="list-style-type: none"> - Some students were not able to explain how the ban policy works. They explained how supply curve would shift, instead of setting the quantity at zero.
AR	<ul style="list-style-type: none"> - Students should explain with economic analysis (i.e. how <u>demand</u>, <u>Q_e</u> and <u>Q_s</u> for ICE cars could be affected with the rise in convenience of owning electric vehicles), instead of giving generic answer for the policies. - Students were not able to explain the limitations of ban (i.e. explain how there might be greater DWL if the negative externality is small).
AP	<ul style="list-style-type: none"> - Students should apply to context, instead of giving generic answer. For example, students should explain why the negative externality may not be as significant in the given context, instead of giving a generic one. - Some students provided a rehearsed answer of how ban may result in black market, but they need to consider the context and the nature of the good. How could one drive the ICE cars bought from black market secretly in SG where all cars need to be registered?
EV	<ul style="list-style-type: none"> - For evaluation, students should weigh the given policies first, instead of suggesting to combine both policies directly. - Students should consider the context to weigh, instead of giving a generic/ rehearsed one. For example, students could consider the implementation time based on the context (i.e. how the ban would not take place immediately as there are ICE cars with existing COE on the road), instead of giving the rehearsed

		<p>answer of how ban would be more immediate as compared to changing people's preferences.</p> <ul style="list-style-type: none">- In weighing both policies, students should consider factors to compare such as <u>greater</u> certainty of outcome, instead of listing the limitations again.	
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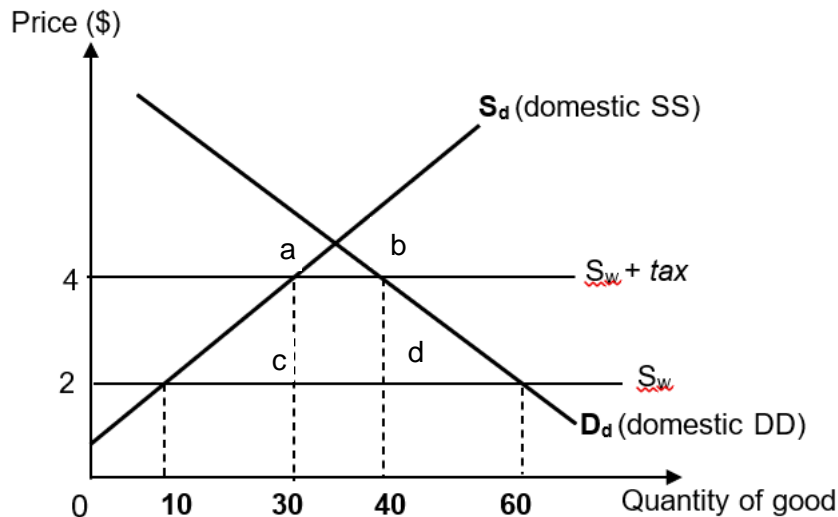
Question 2: Costs and benefits of globalisation

(a)	(i) With reference to Figure 2, compare the changes in GDP between ASEAN, Japan, and India. [2]
	<p>Suggested Answer:</p> <ul style="list-style-type: none"> Nominal GDP of India and ASEAN <u>increase while nominal GDP of Japan decrease</u>. The rate of change is <u>greatest</u> for India <u>followed by</u> ASEAN and Japan. <p><i>Note to students: comparative words such as 'while' and 'greatest' should be seen.</i></p>
	<p>Marker's Comments:</p> <ul style="list-style-type: none"> Many candidates did not get the full 2 marks for this trend question. Many candidates did not use the relevant comparative words to compare the changes in GDP. These candidates simply stated the changes in GDP for the 3 separately. Many candidates compared the GDP of the 3 instead of the changes in GDP, hence incorrectly stating that Japan's GDP has always been the highest among the 3. Many candidates only compared 2 out of the 3 economies instead of all 3 economies as stated in the question.
	(ii) With reference to Extract 5, explain a possible reason for the change in GDP for ASEAN. [3]
	<p>Suggested Answer:</p> <ul style="list-style-type: none"> As mentioned in Extract 5, in a bid to diversify their risk of exposure due to geopolitical challenges such as Sino-US trade war, companies are shifting their supply chains to ASEAN. These companies are <u>fearful of a disruption to their production and detrimental impact on their sales revenue/profits</u>. This suggests that there was an <u>increase in foreign direct investment/investment</u> in ASEAN countries. This will <u>increase AD</u> since I is a component of AD. This will cause an unplanned fall in stocks/ shortage, resulting in an upward pressure on general price level. This incentivizes <u>producers to increase production</u> due to higher profitability. The increase in production triggers the <u>multiplier process</u> and hence lead to a multiplied <u>increase in GDP</u>. <p><i>Note to students: Alternative answer on increase in demand for ASEAN exports as multiple sourcing bases are critical to minimise product disruption is equally acceptable.</i></p>
	<p>Marker's Comments:</p> <ul style="list-style-type: none"> Most students did well in identifying the reason (from Extract 5) for the increase in ASEAN's GDP. Many students who chose to write about the increase in investment in ASEAN, they did not explain that the fall in investment in China is due to lack of confidence in their future expected rates of return or profits. Many students simply stated that the increase in AD will bring about an increase in GDP without briefly explaining the multiplier process. A few students explained that the increase in GDP was due labour force growth. While an increase in labour force does increase productive capacity bringing about an outward shift of the LRAS which will lead to a fall in the cost of production assuming that the economy is producing near Y_f. This could incentivize firms to step up production in the LR and hence GDP increases. It

	<p>does not explain the significant increase in GDP fully. What is more convincing should be an increase in AD given that the significant increase in GDP over the 3 years.</p> <ul style="list-style-type: none"> - Some students recognized that the change in sourcing base away from China would increase AD for ASEAN. However, these students did not identify or lacks explanation on which component of AD would be affected. They should be clearly identified I as the component that increases in ASEAN.
(b)	<p>Extract 6 states that shipping services contributes to about 7% of Singapore's Gross Domestic Product (GDP).</p> <p>Using the concept of comparative advantage, explain why shipping services is a significant component of Singapore's export revenues. [3]</p>
	<p>Suggested Answer:</p> <ul style="list-style-type: none"> • According to the theory of comparative advantage, countries should specialise in the production of goods and services that they have relatively lower opportunity costs in and trade to obtain goods that they have higher opportunity costs in producing. • As mentioned in Extract 6, Singapore is <u>well-endowed</u> with its geographical location capturing the trade flows through the Straits of Malacca and Singapore. • Coupled with its deep-sea making its services <u>more productive</u> as this helps the ships especially bigger container ships to <u>enter the port easily</u>. <p><u>OR</u></p> <ul style="list-style-type: none"> • As mentioned in Extract 6, <u>feeder services</u> from the PSA port offers top-notch productivity. • This means that the feeder services <u>reduce time</u> to transport cargo from place-to-place <u>enhancing productivity</u>. • This means that Singapore developed a comparative advantage in shipping services and is <u>becoming better at producing more shipping services at a lower opportunity cost as compared to another country such as Malaysia. Given a low cost of production giving rise to the price competitiveness of shipping services, it forms a significant component of Singapore's export revenues.</u>
	<p>Marker's Comments:</p> <ul style="list-style-type: none"> - Most students did well in identifying (from extract 6) the underlying reason for Singapore's comparative advantage in shipping. - Many students did not explain how the different reasons lead to Singapore being more productive than other countries in terms of shipping services. Students should explicitly explain that the higher productivity in Singapore's shipping services is due to a lower cost of production for reasons such as a lower time needed to transport cargo or the ease of entering port to offload goods etc. - Many students did not explain how producing shipping services at a lower cost lead to shipping services being price competitive as compared to other countries and hence forming a significant component of the export revenue. - Many students are unable to provide an accurate definition of comparative advantage.
(c)	<p>With reference to Extract 6, explain a possible cost advantage to a shipment firm operating in Singapore when there is growth in Singapore's transshipment industry. [2]</p>
	<p>Suggested Answer:</p>

	<ul style="list-style-type: none"> • <u>External economies of scale</u> for example economies of concentration is a cost advantage a shipment firm might benefit given that the <u>shipment firm is located in the same area as the other shipment firms</u>. These firms will have <u>ready access to factors of production</u> such as fuel and maintenance services near them. • This will <u>reduce their cost of production due to lower search costs</u> to get the required downstream or upstream services/goods required. <p><u>OR</u></p> <ul style="list-style-type: none"> • <u>External economies of scale</u> for example economies of Information given that there are <u>trade and specialist journals</u> catering to the needs of the shipment firms. <u>Information about the shipping industry becomes more readily available</u>. • This <u>reduces the costs of generating information</u> for the individual shipment firms as the <u>individual shipping firms do not need to hire specialists</u> to generate information/statistics for them. <p><i>Note: It is not necessary for candidates to identify the specific EEOS, namely 'Economies of concentration' or 'Economies of information'. However, students are required to identify the cost advantage as EEOS.</i></p>
	<p>Marker's Comments:</p> <ul style="list-style-type: none"> - Very few students were able to identify the relevant cost saving as external economies of scale. - Very few students were able to explain how being in an expanding transshipment industry could help lower its cost of production. This shows the severe lack of knowledge of external economies of scale. - Some students explained that a reduction on tariffs as a cost advantage due to FTAs forged as there is growth in Singapore's transshipment industry. This analysis is not accepted as FTAs may or may not be signed with or without the growth in Singapore's transshipment industry.
(d)	<p>Extract 8 states that Vietnam's GDP per capita in purchasing power parity (PPP) terms exceeded US\$11,000 per capita in 2021.</p> <p>Explain why GDP per capita in PPP terms is used to compare standard of living across countries in ASEAN. [2]</p>
	<p>Suggested Answer:</p> <ul style="list-style-type: none"> • For Vietnam to compare SOL with other countries, it is necessary to convert Vietnam's GDP to a common currency such as USD at the current market exchange rate. However, the market exchange rate may not reflect the internal purchasing power of Vietnam's currency (i.e. which means how much goods and services a unit of dong can buy in Vietnam). It does not reflect the cost of living in Vietnam. • <u>PPP is the rate at which the currency of one country would have to be converted into that of another country to buy the same amount of goods and services in each country or PPP is determined by the same basket of goods in the countries concerned.</u> • GDP per capita in PPP terms is useful as the problem of <u>differences in cost of living/price differences</u> between Vietnam and other countries could be solved by using PPP exchange rate. This means that it is more accurate in <u>reflecting the internal purchasing power</u> of Vietnam's currency and hence more useful to compare SOL across countries in ASEAN. <p>Note to students: 'Per capita' explanation will only be credited 1 mark as the question is on comparison of SOL across countries. 'PPP' must be addressed to get the second mark.</p>

	<p>Explanation on ‘per capita’: The GDP figure merely gives the total money value of final goods and services made available to the nation. GDP per capita tells us the average income and expenditure of the average person in the country. If the GDP of country A is double of Country B, it does not necessarily mean that the average citizen in Country A is able to enjoy 2 times as many goods and services than an average citizen in Country B. This depends on the population size and hence a more relevant measure of living standards would be real GDP per capita.</p>
	<p>Marker’s Comments:</p> <ul style="list-style-type: none"> - Most students showed a lack of understanding of the concept of PPP and how using GDP per capita in PPP terms is useful to compare SOL among countries. - A few students mentioned that GDP per capita in PPP terms considers the difference in cost of living but these students were not able to elaborate on how it is useful in comparing SOL across countries. - Some students brought in the idea of exchange rate being unreliable in the comparison of SOL by simply stating that the purchasing power of different currencies differ. However, these students were not able to elaborate on it. - Many students were unable to explain why size of population needs to be considered to compare SOL across countries. These students simply stated that population sizes must be considered without any explanation.
(e)	<p>Discuss the benefits and costs of joining Free Trade Agreements (FTAs) such as the Trans-Pacific Partnership (TPP) to countries such as Singapore and the United States (US). [8]</p>
	<p>Suggested Answer:</p> <p>Introduction:</p> <ul style="list-style-type: none"> - According to Extract 6, Minister Ong mentioned that any FTA that substantially removes tariffs imposed by both parties is inherently beneficial to Singapore. - Extract 6 added that Vietnam and Canada have seen large rises in trade possibly due to FTAs and drop in tariffs. - However, there are claims by Mr Trump from the US that trade deals could bring about negative impact. <p>Requirement 1: Benefits of FTAs</p> <ul style="list-style-type: none"> - A country’s domestic demand and supply curves for the good are Dd and Sd respectively. - Initially with tariffs in place, the price of the good in the domestic market is equal to the world price of \$4, and the total quantity demanded is 40 units. - At a price of \$4, domestic producers are willing to supply 30 units of the good. - So, the rest will have to be imported. - The initial quantity of imports is only 10 units.



- With the drop in tariff by \$2 per unit of import, this shifts the world supply curve downwards to S_w and reduces the domestic price of the good to \$2.
- The quantity supplied by the domestic producers decreases from 30 to 10 units. However, the total quantity demanded of good A will increase from 40 to 60 units. **At the same time, the quantity of imports also rises from 10 units to 50 units.**
- This means that the removal of tariffs will **increase the quantity demanded of exports** of a foreign country.
- Assuming that this foreign country's export revenue increases faster than the import expenditure, this will lead to an increase in net exports, and hence its balance of trade improves.
- This is particularly true of countries such as Singapore which does not impose tariffs and is likely to gain much more from the reduction of tariffs of its trading partners in terms of increasing in export revenue without a corresponding increase in import expenditure (since SG already does not impose tariffs on nearly all imports)
- This will lead to an increase in AD, leading to actual growth and a higher level of employment.

Requirement 2: Costs of FTAs

(a) Removal of Tariffs (costs of free trade)

- According to Extract 7, Donald Trump moved to kill TPP because he believes that TPP will harm US manufacturing and cost millions of US jobs.
- The increase in imports from foreign countries will reduce the demand for similar products such as US manufactured goods. M expenditure increases.
- $(X-M)$ decreases assuming X remains constant. Since $(X-M)$ is a component of AD, AD falls which leads to negative economic growth and this decrease in domestic output will lead to a decrease in derived demand for workers and thus, leads to a rise in demand deficient unemployment in America.

(b) Reduce vulnerability (Benefits of tariffs)

- Without protectionist measures such as tariffs, countries will import more from other countries.
- Extract 5 mentioned how Western consumer goods companies have been highly reliant on a single manufacturing partner: China.
- Mr. Trump claimed that over-reliance on China and other trading partners will bring about negative impact and would like to diversify US risk of exposure.

	<ul style="list-style-type: none">- Trade wars and natural causes as mentioned in Extract 5 are also reasons to protect US domestic industries, producers and consumers.- Should trade be disrupted, producers may not be able to get the essential resources for production and consumers may not be able to get essential goods for consumption which will be detrimental to various economic agents in the US and eventually lower economic growth and standard of living in the US. <p>Overall Evaluation: Depends on the significance of the benefits or costs for SG and US.</p> <ul style="list-style-type: none">- For a country which is not self-sufficient such as Singapore as mentioned by Minister Ong, Singapore has to embrace globalisation to survive and inking free trade agreements (FTAs) is one way of doing so. TPP would bring about greater benefits relative to costs given that net exports among all other aspects of AD is the most important component to stimulate economic growth.- However, for bigger countries which have a huge consumer market, its dependence on net exports is less significant. At the same time, big countries such as US have to consider geopolitical tensions and national security due to the risk of over-reliance on trade in deciding whether to join the TPP.															
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		will increase net exports. MLC is only used to explain the effect on NX when there is depreciation/ appreciation of the currency.
	AR	<ul style="list-style-type: none"> - The quality of the explanation of a reduction of tariffs differs widely among students, with some providing good explanation of how a reduction in tariff affects the quantity of domestically produced goods and quantity of imports with the aid of a diagram while some students simply stated that a reduction in tariffs will increase the quantity of exports of SG. - Many students highlighted the nature of Singapore's economy being small and open and hence import-reliant. While this is an irrefutable fact, what is more important for this question is for students to utilise the fact that Singapore economy being export driven and hence will benefit significantly from a reduction in tariffs on its exports. This is because Extract 7 mentioned that Singapore is already very open and does not impose tariffs on most goods and services, this implies that there is no reduction of tariffs on Singapore's imports as it does not exist in the first place. However, the positive impact on reduction in COP and hence increase in SRAS can still be applied on other countries such as US which may originally impose tariffs on import and will only reduce the tariff with the signing of the FTAs.
	AP	<ul style="list-style-type: none"> - Some students were able to apply the benefits of a reduction of tariff concept/diagram to the context of Singapore well. However, not all students bring in the information from the case materials to explain the negative impact. Instead, some responses provided a theoretical answer. - Many students were able to bring in relevant information from Extract 6 to explain the benefits of FTAs with respect to Singapore in terms of an increase in export revenue. However, some students explained that joining FTAs will also increase import expenditure for Singapore given that import tariffs are lowered for Singapore's imports. This is inaccurate as Extract 6 stated that Singapore is already very open and did not impose tariffs on most goods and services even before the signing of FTAs. - Many students provided purely theoretical answers without any reference to the case materials and context.
	EV	<ul style="list-style-type: none"> - Most students were unable to provide an evaluation. For the minority who did provide a conclusion that distinguish the differences of the cost and benefits based on the characteristics of SG and US. - Some students evaluated the extent of the benefits of increased GDP due to increase in (X-M) by using the small multiplier size of SG. While this is relevant, it is not a significant point as gross exports and imports of goods and services are more than 300 percent of GDP in a small and open economy such as Singapore. Therefore, any initial changes in net export is likely to be significant with the signing of the FTA for SG and it is likely to still lead to a significant change in GDP.

(f)	Discuss whether 'more efforts to upgrade education and training' will necessarily bring about higher standard of living for Vietnam. [10]
	<p>Suggested Answer:</p> <p>Introduction:</p> <ul style="list-style-type: none"> - Standard of living refers to the level of material (quantitative) and non-material (qualitative) well-being of an individual and household. - Material standard of living measures the amount of goods and services that individuals in the country have available for consumption. - Non-material of living refers to the quality of life and involves indicators such as level of pollution, standard of education etc. - Upgrading education and training might bring about higher standard of living in terms of higher real national income and the attainment of knowledge, other factors such as availability of stable electricity, continuing amendment of PDP-8 and environmental problems could affect the SOL of Vietnamese negatively. <p>Requirement 1: efforts to upgrade education/ training will improve standard of living</p> <p>Material standard of living:</p> <ul style="list-style-type: none"> - According to Extract 8, Vietnam lacks the skilled labour needed to attract FDI. Vietnam finds it challenging to move further up the value chain to competitive chip manufacturing as it lose the expansion of an incumbent and major firm, Intel. It could also limit the inflow of high-tech FDI that would allow Vietnam to transform its economy into 'Industry 4.0' and improve productivity. - By investing in training and retraining of workers by improving education and training will raise workers' productivity and increase their flexibility and mobility. Government can provide educational facilities to increase accessibility to education. This ensures that sufficient training is provided and there is sufficient supply of skilled labour (e.g. scientists and engineers) to promote research and development. - This would enhance the skills of workers and attract FDI in the high skilled industries. This will increase FDI and hence AD, given that FDI is a component of AD. This will increase real national income via the multiplier process. Disposable incomes of Vietnamese will increase and hence able to consume more goods and services with greater purchasing power, leading to an improvement in <u>current material standard of living</u>. - This will also lead to an improvement in quality and quantity of workers and increases the productive capacity which will lead to a shift in the LRAS. This will likely lead to an improvement in <u>future material standard of living</u> for Vietnamese since there is an increase in full employment output. <p>OR</p> <ul style="list-style-type: none"> - This would enhance the skills of workers. When more workers are employed and utilised, there will be a movement towards the PPC achieving actual growth. Disposable incomes of Vietnamese will increase and hence able to consume more goods and services with greater purchasing power, leading to an improvement in <u>current material standard of living</u>. - This will also lead to an improvement in quality and quantity of workers and increases the productive capacity which will lead to a shift in the PPC. This will likely lead to an improvement in <u>future material standard of living</u> for Vietnamese since there is an increase in full employment output. <p>Non-material standard of living:</p> <ul style="list-style-type: none"> - With higher real disposable income, consumers have the economic means to gain access to better healthcare facilities and education services. This

will lead to longer life expectancy, lower mortality rate and higher literacy rate, causing an improvement in non-material standard of living.

- There is a larger tax base due to higher income of households and profit of businesses. Given that income and corporate tax are calculated as a percentage of the tax base, there will be higher tax revenue collected. The governments can channel more funds to upgrade healthcare facilities and improve educational standards. This will increase the health and literacy level of citizens. There are also more resources available to employ measures to reduce pollution from productive activities. As such, there may be an improvement in the non-material standard of living.

Requirement 2: may not improve standard of living due to limitations of upgrading of education/ training and/or other factors such as environmental problems

Material standard of living:

- Supply-side policies require long-term structural changes to be made to increase AS in the economy. They have little relevance from the point of view of short-term economic management.
- For example, Vietnamese GDP growth was only about 3 per cent in 2022, about half of its normal 6–7 per cent growth rate reflecting in weak aggregate demand, an increase in the capacity of the economy is of no help unless there is a corresponding increase in AD to increase production. Otherwise, resources will be left unemployed or underemployed.
- Hence Vietnamese real national income might not increase even with an increase in LRAS due to upgrading of education and training. This means that its material SOL may not increase much.
- Investment in human capital means higher expenditure incurred by the government and government resources is finite. Thus, in some cases, the government may need to prioritise or postpone investment projects due to insufficient government budget.
- An example would be that Vietnam is planning to increase transmission and FDI in green energy. The problems with ensuring stable electricity supply also contributed to the slow growth in foreign direct investment (FDI) realisations. This means that the increase in AD and LRAS will be affected negatively leading to SOL not improving much.

Non-material standard of living:

- As output increases in Vietnam, the quality of the environment has deteriorated. The increase in the level of economic activity could cause problems such as polluted air and water, toxic wastes, congestion and noise. These are external costs which are not deducted from total output. Vietnam is facing important environmental problems in the Mekong Delta and cities most likely due to increase in GDP.
- Investment in human capital means higher expenditure incurred by the government and government resources is finite and the government will not have resources to solve these environmental problems. This has a detrimental impact on non-material SOL.

Overall Evaluation:

- Whether 'more efforts to upgrade education and training' will necessarily bring about higher standard of living for Vietnam depends on the effectiveness of the policies to reach the population and the ability to offer the relevant training required by FDI.

	<ul style="list-style-type: none">- Given that the Vietnam have increasing literacy rates, and its people are knowledgeable to understand the importance of education and training to life themselves out of poverty, the policies should be effective as long as the government implements it with thorough consideration of the needs of the citizens. For example, Vietnam is a large country and the government will need to ensure that such upgrading opportunities are located to accessible city areas with convenient transport network or even to make it accessible online. Moreover, Vietnamese government will also need to work with FDI to figure out the types of skills in demand to ensure that the upgrading courses are able to provide workers will the skills needed.- On the other hand, the Vietnamese government should also focus on priorities such as stabilising the electricity supply in the short run given that it is one major issue that discourages FDI as stated in the extract. Otherwise, it would be difficult to increase AD and hence production even if there is higher productive capacity in the economy.- The impact on environment is also a key concern on Vietnamese standard of living. Environmental issues can be better managed once the GDP growth has increased, and government will be able to collect sufficient tax revenues to deal with these issues more effectively.- At the same time, Vietnam can pursue its aim on renewable energy to attract more FDI and further increase its economic growth, leading to an improvement in both material and non-material SOL both in the short and long run.															
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Marker's Comments	
QA	<ul style="list-style-type: none"> - Most candidates understood the requirement of the question, often providing a reasonable explanation of why/ how 'more efforts to upgrade education and training' could lead to an improvement in material SOL and at least one reason why/how it might not. However, there were a handful of candidates who interpreted this question as one which requires an alternative policy which does not fulfill the question requirement. - Some students interpreted the question inaccurately, focusing on the negative impact of the expansion of high-tech FDI, these students elaborated on how the expansion of high-tech FDI will lead to increased structural unemployment.
CK	<ul style="list-style-type: none"> - Most candidates were well-versed in their explanation of how SOL could be improved with education and training, with many using AD-AS analysis.
AR	<ul style="list-style-type: none"> - Candidates were better able to explain the impact on material SOL compared to non-material SOL. Better responses on non-material SOL brought in the issues mentioned in Extract 8 such as the important environmental problems in the Mekong Delta and cities. The environmental problems affect current non-material SOL. As for future non-material SOL, a few students mentioned that Vietnam's plan to increase transmission have been scaled back and will hurt FDI in green technology. However, weaker responses merely regurgitated from what they have learnt previously and wrote about longer working hours and greater income inequality due to expansion of high-end industries.
AP	<ul style="list-style-type: none"> - Many candidates focused merely on how education and training will bring about higher SOL without much consideration of the key issues facing Vietnam (for example, reduced inflow of high tech FDI, structural unemployment, environmental issues and unstable electricity supply etc.). The key issues facing Vietnam needs to be considered in order to justify how important the policy of upgrading education and training would be to bring about higher SOL for Vietnamese. In other words, the answer needs to be contextualized to the issues facing Vietnam in order to provide a meaningful answer.
EV	<ul style="list-style-type: none"> - In general, evaluation from most candidates were considered weak as compared to the previous part i.e. part (e). Most candidates attempted to give a pre-learnt and rehearsed evaluation which focused on the need for other policies to improve SOL. On the bright side, some stronger candidates considered the issues from the case materials and provided an evaluation which were contextually thoughtful. These candidates wrote of the need to not only encourage education and training and also the need to stabilize the electricity supply to attract sufficient high tech FDI for material SOL. As for non-material SOL, candidates mentioned the ability to reduce environmental issues once sufficient tax revenues are collected.