

TAMPINES MERIDIAN JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATION

H2 ECONOMICS

Paper 1

9570/01

9 September 2024

2 hours 30 minutes

Additional materials

Two Answer Booklets

READ THESE INSTRUCTIONS FIRST

Write your name and Civics Group on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use an HB pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, glue or correction fluid.

Answer **all** questions.

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

Begin each Case Study Question on a **new** answer booklet.

Submit Question 1 and Question 2 **separately**.

Answer all questions.

Question 1: The changing landscape of European Energy Market

Extract 1: European Liquefied Natural Gas (LNG) prices reach five-month high

Liquefied natural gas (LNG) is natural gas, predominantly methane, converted into liquid form for ease of storage or transport. LNG is increasingly used as an alternative fuel for ships and lorries. Ensuring that all EU countries have access to LNG markets is a key objective of improving EU energy security in the short-term, while more sustainable solutions towards full decarbonisation by 2050 are established.

European LNG prices rose to a five-month high due to ongoing geopolitical risk factors and tightness in European LNG supply. Heightened geopolitical tension, especially with the ongoing war in Ukraine and disruption of shipping on the Red Sea, has adversely affected LNG supply. The EU's 14th package of sanctions against Russia includes measures which target LNG specifically. The EU prohibits all future investments in Russia. Moreover, heat waves in Europe have sparked stronger seasonal demand due to increased power demand, as the use of air conditioning climbs.

Although EU plans to steadily increase its LNG import capacities by developing new LNG port terminals to combat supply interruptions from the remaining Russian pipeline imports, bottlenecks and infrastructural limitations still exist in some regions.

Source: various sources

Extract 2: Energy companies in Europe, Repsol and EDF Renewables, to join forces for Iberian offshore wind

Spanish oil company Repsol and French power giant EDF Renewables have reached an exclusivity agreement to join forces in anticipation of future bids for offshore wind projects in Spain and Portugal. This collaboration is driven by the significant growth opportunities offered by the Iberian Peninsula, located in southwestern Europe and primarily occupied by Spain and Portugal.

The cooperation brings together Repsol's knowledge of the Spanish and Portuguese markets and EDF Renewables' expertise in both fixed and floating offshore wind, and will support Spain and Portugal's objectives in renewables. EDF Renewables benefits from more than 10 years of experience in offshore wind power and is also one of the pioneers of floating offshore wind technology. The lower costs from the shared resources will see a reduction in energy bills for consumers and increase affordability. As a major player in the energy transition worldwide, EDF Renewables develops, builds, and operates competitive, responsible, and value-creating projects to fight against climate change.

Consumers might benefit from the collaboration between Repsol and EDF Renewables, two of the most significant energy companies in Europe, by gaining access to better quality renewable energy solutions or more reliable services, resulting in fewer disruptions to renewable energy. However, critics are also concerned that the



exclusivity agreement may reduce competition among these firms, thereby limiting consumer choices.

Source: Energy Global, 22 July 2024

Extract 3: Climate Change and the EU Emissions Trading Systems (ETS)

In recent years, the global concern over climate change and its environmental impact has grown significantly. The negative impacts that non-renewable energy sources like fossil fuels such as coal, petroleum and natural gas have on climate change, and environmental health have become increasingly clear. Aside from relying on dwindling and expensive resources, fossil fuel combustion creates vast harm by releasing toxic air pollution and greenhouse gases that threaten air quality and climate health.

The EU Emissions Trading System (ETS) was initially established in 2005 as a market-based mechanism to tackle greenhouse gas emissions within the European Union. The EU ETS follows a 'cap-and-trade' approach: the EU sets a cap on how much carbon dioxide (CO₂) can be emitted – which decreases each year – and companies need to have a European Emission Allowance (EUA) for every tonne of CO₂ they emit within one calendar year. Companies are therefore incentivised to reduce emissions by investing in energy efficiency as they can then sell excess allowances. The revenues of the EU ETS mainly go to member states' budgets, or flow into the EU-wide Innovation Fund and the Modernisation Fund.

Paying for permits is intended to incentivise companies to invest in technologies that reduce emissions. However, much of the deployment of solar and wind technologies are largely driven by the higher energy costs following Russia's invasion of Ukraine.

Sources: Clean Energy Wire, 23 May 2024 & Bloomberg, 23 Jan 2024

Extract 4: Accelerating Europe's green transition

Renewable energy is becoming an increasingly inexpensive, popular, and viable energy source. By increasingly relying on renewable energy sources like wind and solar power, we can reap a wide variety of benefits including reduced air pollution, lower greenhouse gas emission levels, decreased healthcare costs, a more resilient electrical grid, and job generation.

The European Green Deal is a package of policy initiatives, which aims to set the EU on the path to a green transition, with the ultimate goal of reaching climate neutrality by 2050. The main purpose of the Green Deal, a 30-year action plan, is to meet climate goals and stop global warming. Its implementation promises benefits such as cleaner air, water and soil due to reduced environmental pollution, more liveable cities due to the development of public transportation and non-polluting forms of mobility, as well as an end to dependence on fossil fuels.

Energy efficiency is a key area of action, without which the full decarbonisation of the EU economy cannot be achieved. Within this context, investments in energy-efficient



infrastructure and production processes need to be increased in all sectors of the economy. This is the most cost-effective and sustainable way towards climate neutrality.

The European Green Deal provides subsidies for energy efficiency to support research, innovation, technology development, and capacity building of private and public entities. This helps to reduce barriers to entry in the renewable energy industry. However, there are high implementation costs associated with the Green Deal, as it requires significant investment in green technologies and infrastructure, which may make European companies less competitive globally.

Source: European Commission

Questions

- (a) (i) Using Extract 1, explain one demand factor and one supply factor to account for the rise in price of liquefied natural gas (LNG) in Europe. [4]
- (ii) Explain the likely value of price elasticity of supply for LNG. [2]
- (b) Explain how the rise in price of LNG might affect the aggregate supply of a European country. [2]
- (c) Considering the possible advantages and disadvantages to consumers, assess whether the exclusivity agreement between Repsol and EDF Renewables is likely to be of overall benefit to consumers. [8]
- (d) With reference to Extract 3, explain the source of market failure for the non-renewable energy market. [4]
- (e) Discuss whether the EU Emissions Trading System (ETS) is the best way to achieve efficiency and equity in the energy market. [10]

[Total: 30]



Question 2: Is ASEAN winning the globalisation game?

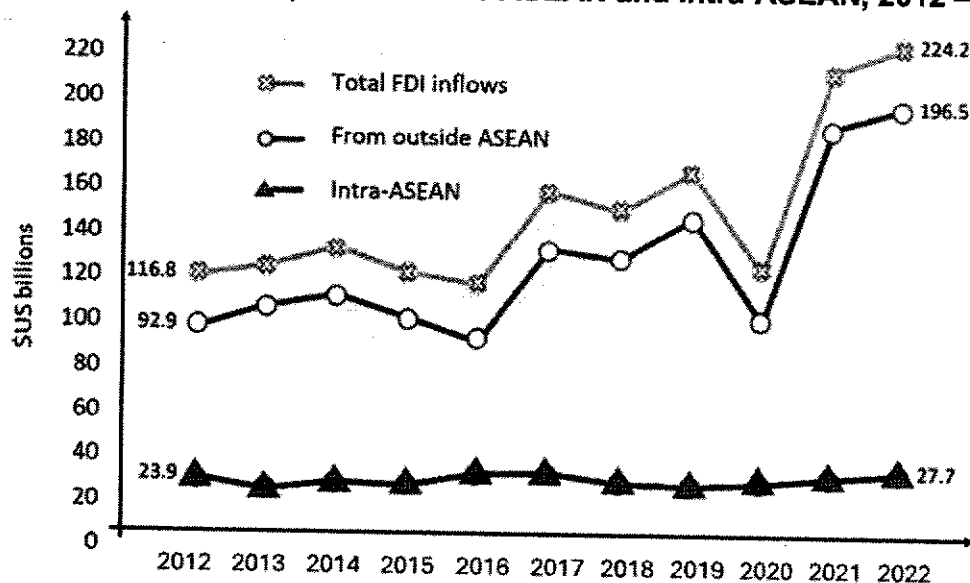
Extract 5: The rise of ASEAN amid economic resilience and opportunities

The latest United Nations Conference on Trade and Development (Unctad) report on ASEAN¹ investments showed that inflows of foreign direct investment (FDI) into the region rose 42 per cent in 2021 to US\$174 billion. Second only to China, the rebound in FDI underscores confidence in ASEAN, which has emerged resiliently from the pandemic. Today, ASEAN is the fifth largest economy in the world, with a gross domestic product (GDP) of US\$3.1 trillion. It is expected to rise to fourth place by 2030, with GDP more than doubling to US\$6.6 trillion. Meanwhile, ASEAN's middle-income population is anticipated to grow from 172 million in 2010 to 472 million in 2030.

As the developed world grapples with slower economic and productivity growth, ASEAN provides enormous opportunities via three key areas. First, the relatively young ASEAN population will grow to 726 million in 2030. At a size of half the Chinese population, this will be a massive market that the world cannot ignore. Second, the United Nations forecast predicts that ASEAN's urbanisation rate will increase strongly from 49 per cent in 2018 to 56 per cent in 2030, which raises level of education. Higher levels of education will generate greater FDI inflows, technological transfer, and the creation of new industries. Third, ASEAN's participation in the Regional Comprehensive Economic Partnership – the world's largest trade agreement – will bring about a virtuous cycle of global investment and talent flows into this region.

Source: *The Business Times*, 8 March 2023

Figure 1: Inflows of FDI, from outside ASEAN and intra-ASEAN, 2012 – 2022

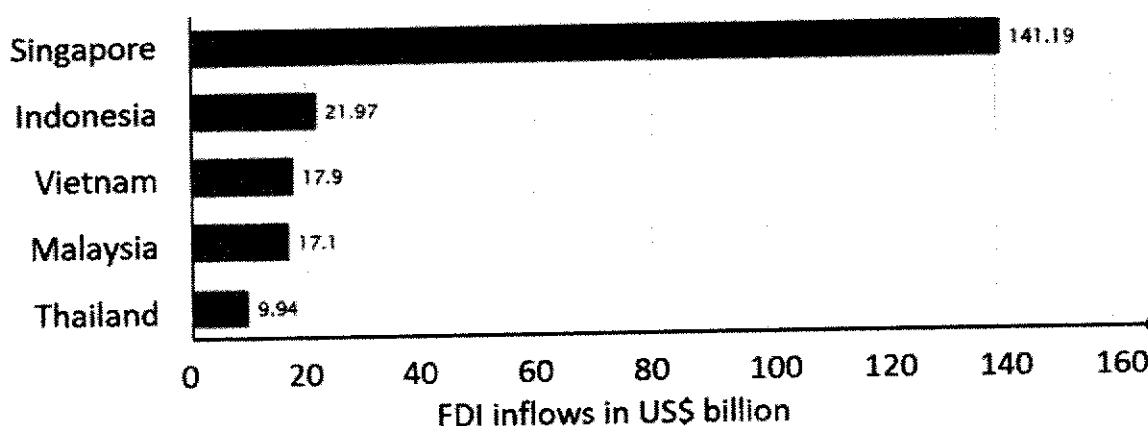


Source: *ASEAN Statistical Highlights 2023*

¹ The Association of Southeast Asian Nations (ASEAN) is a regional organisation that aims to promote economic and security cooperation among its ten members: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.



Figure 2: ASEAN countries with the highest amount of foreign direct investment (FDI) inflows in 2022 (US\$ billion)



Source: Statista Research Department, 17 April 2024

Table 1: Selected indicators for Singapore, Thailand and Vietnam in 2022

	Singapore	Thailand	Vietnam
GDP per capita (US\$)	82 795	7494	4110
Urban population (%)	100.0	51.4	37.6
Population living below national poverty line	N.A.	6.8	4.4
Adult literacy rate (%)	97.6	93.8	96.1
Life expectancy (years)	83.0	76.2	73.6

Source: ASEAN Statistical Highlights 2023

Extract 6: RCEP's impact on trade and growth in the Asia Pacific

The Regional Comprehensive Economic Partnership (RCEP) brings together the ten ASEAN countries with Australia, New Zealand, and the three North Asian countries of China, Japan and South Korea. The world's largest trade agreement comprises about 30 per cent of global GDP and the world's population.

The RCEP will open new opportunities and offer preferential access into growing markets in the region. On average, there is tariff elimination for about 92 per cent of goods traded amongst participating countries. While direct impact on ASEAN countries is limited as the RCEP consolidates ASEAN's existing trade agreements with other RCEP signatories, it is the first formal trade agreement between Japan and each of the other two North Asian countries. Simplified customs procedures will also allow efficient and faster clearance of goods which will facilitate cross-border integration of supply chains and draw FDI flows into the region.

Source: Various



Extract 7: ASEAN poised to increase share of global trade as manufacturers seek more resilient supply chains

Singapore and other ASEAN economies may have a unique opportunity to increase their share of world trade as an increasing number of global manufacturers seek to move sourcing of supplies and production out of China. China's disruptive Covid-19 lockdowns and intensifying tensions with the United States have further urged multinational companies to seek resilient and conflict-free supply chains.

Competing with China is a tall order. In 2021, China accounted for over 15 per cent of global goods exports. In comparison, ASEAN's share was only 7.8 per cent. China's dominance of global goods exports follows decades of strong foreign direct investment that helped it scale up manufacturing and the skill set of its labour force.

That said, China has lost cost competitiveness in many industries as its cheap migrant workforce has been shrinking. As wages rose, the cost of many manufacturing inputs soared as well. Meanwhile, increasing emphasis on weaning away growth drivers from trade to domestic consumption means China's overall policy framework of incentives and subsidies is now more tilted in favour of producing higher-value goods and services.

In the past decade, several foreign and even Chinese producers of lower value-added industries such as footwear and garment manufacturing have moved to Vietnam, Cambodia and Myanmar – a strategy popularly known as “China-plus-one”. But even these offshore operations remain heavily reliant on imports from China for inputs and capital goods that are essential to them. Japanese companies that were among the first movers under the China-plus-one strategy found that their manufacturing facilities in ASEAN were still sourcing 13.5 per cent of raw materials and parts from China. Meanwhile, their factories operating in China sourced more than 90 per cent of inputs locally, and the rest from Japan, making them less vulnerable to external shock.

Analysts have said that the rise in China's cost base and its intent to move up the value chain give an opening to some Southeast Asian economies to replace China in the global value chain. However, breaking the dependency on China will involve a far higher degree of intra-ASEAN connectivity and vertical integration – taking direct ownership of various stages of production rather than relying on external suppliers.

Boosting intra-ASEAN trade will become even more important as the world's largest economies – the US, China and the Euro zone – increase their efforts to localise their supply chains and production. This trend could intensify over time and have an adverse impact on overall output in the rest of Asia. Experts believe ASEAN could increase its footprint in global manufacturing output by putting to greater use the diversity of its ten economies, some of which offer a cheaper cost base while others higher productivity, innovation and the access to higher-value chains.

Source: *Singapore Economic Development Board*, 4 May 2023



Questions

- (a) 'Higher levels of education will generate greater FDI inflows.' (Extract 5)
- (i) Explain how information in Figure 2 and Table 1 supports the above statement. [2]
- (ii) Explain why higher levels of education will generate greater foreign direct investment (FDI) inflows. [2]
- (b) Using a production possibility curve diagram, explain how FDI inflows can affect a country's current employment and future output. [5]
- (c) Explain one way in which the Regional Comprehensive Economic Partnership (RCEP) can affect the multiplier size of a participating country. [3]
- (d) With reference to Table 1, discuss whether it can be said that Thailand has a higher standard of living than Vietnam in 2022. [8]
- (e) Discuss whether increasing intra-ASEAN economic cooperation or increasing economic cooperation with countries beyond ASEAN has more benefits than costs for ASEAN economies. [10]

[Total: 30]

- End of Paper -



Question 1: The changing landscape of European Energy Market

Suggested Answers

a)	i) Using Extract 1, explain one demand factor and one supply factor to account for the rise in price of liquefied natural gas (LNG) in Europe.	[4]
<p>"heat waves in Europe have sparked stronger seasonal demand due to increased power demand, as the use of air conditioning climbs" → increase in demand for power/energy for the use of air conditioning → as LNG is a derived demand for energy → increase in demand for LNG</p> <p>"Heightened geopolitical tension, especially with the ongoing war in Ukraine and disruption of shipping on the Red Sea, has adversely affected LNG supply" → production process of LNG is disrupted with war → fall in supply for LNG</p> <p>The increase in demand and fall in supply will cause a shortage accounting for a rise in price.</p>		
Markers' Report		
Skills		Aha moment!
<p>Strengths (+): What are the required skills that were well-demonstrated?</p> <p>Areas for improvement (-): What are the skills that were lacking/ not well-demonstrated?</p>		
(+)	Students generally interpreted the question correctly i.e. they have elicited demand and supply factors and linked how these factors can result in a rise in price of LNG.	
(-)	A significant minority of students did not explain how the shortage will eventually lead to a rise in price of LNG.	
Content		Aha moment!
<p>Strengths (+): What are some concepts that were well-explained with clear linkages made?</p> <p>Areas for improvement (-): What are some concept gaps / conceptual errors?</p>		
(-)	However, a significant number of students merely elicited the evidence from the extract and stated that demand rose, and supply fell, without explaining the Economic concepts e.g. how the rise in demand for power for the use of air conditioning may result in the rise in derived demand for LNG is not clear.	



	Hence, this means that the rigour in the explanation of factors is not evident.	
(-)	A handful of students thought that power and LNG are complements instead of derived demand; the relationship between the 2 goods is not accurate.	
ii) Explain the likely value of price elasticity of supply for LNG.		[2]
<p>"Bottlenecks and infrastructural limitations still exist in some regions" → supply will be more price inelastic and value of PES will be smaller than 1 due to lack of spare capacity/factor immobility as producers find it difficult to increase their production due to bottlenecks and infrastructural limitations.</p>		
Markers' Report		
Skills		Aha moment!
<p>Strengths (+): What are the required skills that were well-demonstrated? Areas for improvement (-): What are the skills that were lacking/ not well-demonstrated?</p>		
(+)	Majority students understood the requirements of the question, where they have to identify the PES value and justify with determinants.	
(-)	Some students identified the right PES determinant(s) e.g. spare capacity but determined the value of PES wrongly e.g. they wrote that $PES > 1$. This is attributed to the wrong elicitation of evidence. Students are reminded to read the extracts carefully and gather the right evidence to support their answers.	
(-)	Some students did not interpret the question correctly. The question asked for the likely value of PES, and hence students are required to state the value i.e. $PES < 1$, and not just merely state that supply is price-inelastic.	
Content		Aha moment!
<p>Strengths (+): What are some concepts that were well-explained with clear linkages made? Areas for improvement (-): What are some concept gaps / conceptual errors?</p>		
(+)	Majority of the students are able to identify that the value of PES is less than 1.	
(-)	A significant number of students conflated PES determinants with PED determinants. For instance, many of them justified that $PES < 1$ because LNG is a necessity or has low availability of substitutes.	



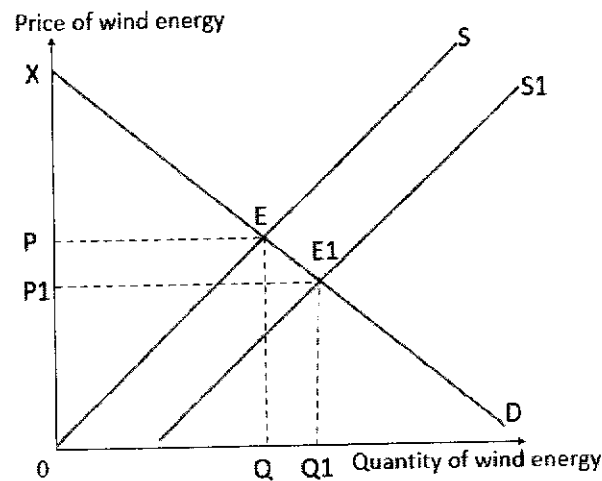
	However, the degree of necessity and the availability of substitutes are PED determinants.																																
b)	Explain how the rise in price of LNG might affect the aggregate supply of a European country.	[2]																															
<p>A rise in the price of LNG increases the unit cost of production.</p> <p>Ceteris paribus, profits fall which lower individual supply curves and hence total output produced in economy fall, causing fall in short run aggregate supply.</p> <table border="1"> <tr> <th colspan="2">Markers' Report</th> <th></th> </tr> <tr> <th colspan="2">Skills</th> <th></th> </tr> <tr> <td colspan="2">Strengths (+): What are the required skills that were well-demonstrated?</td> <td rowspan="2">Aha moment!</td> </tr> <tr> <td colspan="2">Areas for improvement (-): What are the skills that were lacking/ not well-demonstrated?</td> </tr> <tr> <td>(+)</td> <td>Majority of the students understood the requirements of the question to provide the explanation how increase in unit cost of production affected aggregate supply.</td> <td></td> </tr> <tr> <td>(-)</td> <td>Handful of students included diagram which is not required of the question and marks allocated.</td> <td></td> </tr> <tr> <th colspan="2">Content</th> <th></th> </tr> <tr> <td colspan="2">Strengths (+): What are some concepts that were well-explained with clear linkages made?</td> <td rowspan="2">Aha moment!</td> </tr> <tr> <td colspan="2">Areas for improvement (-): What are some concept gaps / conceptual errors?</td> </tr> <tr> <td>(+)/(-)</td> <td>Majority of students were able to explain how LNG is a crucial factor input and thus make the linkage to an increase in unit COP resulting in a decrease in SRAS. However, they were a handful which erroneously linked to an increase in SRAS instead.</td> <td></td> </tr> <tr> <td>(-)</td> <td>Weaker responses gave an undeveloped explanation on how rise in price of LNG led to a decrease in productive capacity and LRAS.</td> <td></td> </tr> </table>			Markers' Report			Skills			Strengths (+): What are the required skills that were well-demonstrated?		Aha moment!	Areas for improvement (-): What are the skills that were lacking/ not well-demonstrated?		(+)	Majority of the students understood the requirements of the question to provide the explanation how increase in unit cost of production affected aggregate supply.		(-)	Handful of students included diagram which is not required of the question and marks allocated.		Content			Strengths (+): What are some concepts that were well-explained with clear linkages made?		Aha moment!	Areas for improvement (-): What are some concept gaps / conceptual errors?		(+)/(-)	Majority of students were able to explain how LNG is a crucial factor input and thus make the linkage to an increase in unit COP resulting in a decrease in SRAS. However, they were a handful which erroneously linked to an increase in SRAS instead.		(-)	Weaker responses gave an undeveloped explanation on how rise in price of LNG led to a decrease in productive capacity and LRAS.	
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Interpret Exclusivity Agreement between Repsol and EDF:																																	



Renewable energy firms Repsol and EDF will have a larger market share → will lead to both costs and benefits to consumers in terms of price and quality.

R1: Explain the possible advantages to consumers with the exclusivity agreement

- **Internal EOS** → Increase in scale of production allow them to better utilise existing offshore wind power from EDF Renewable (Extract 2) → Cost savings can arise from the use of better and larger machine or indivisible input that is spread over a larger quantity of output → enables them to produce more output and sell their output at lower prices ("increase affordability") → increase in consumer surplus from XEP to XE1P1. Thus, benefitting consumers.



OR

- **Dynamic efficiency:** Higher market share → able to retain supernormal profits → able and willing to engage in R&D → **process innovation**



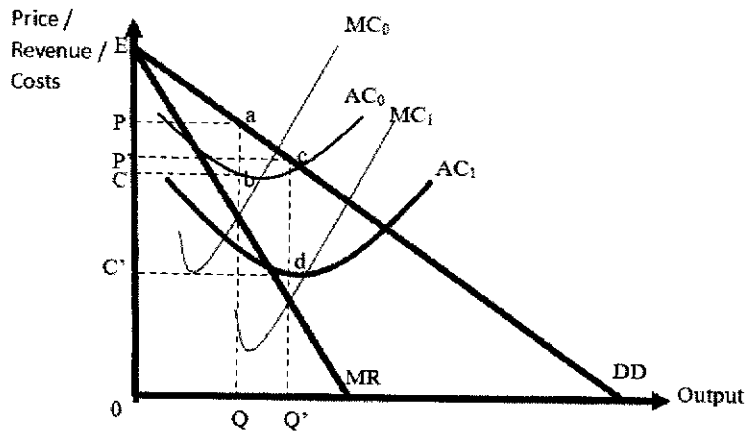


Figure 1

- For example, firms could adopt technology to increase productivity and reduce the manpower needed.
- After successful process innovation, the firm now operates with lower marginal cost of production from MC_0 to MC_1 . Average cost will also fall from AC_0 to AC_1 . When the MC is lowered, the profit-maximising firm now finds that MR exceeds MC and adjusts its output to Q' where MR cuts MC_1 . The firm will charge a lower price at P' and sell more units at Q' . The level of consumer surplus will increase from EaP to EcP' . Thus, benefitting consumers.
- **Dynamic efficiency:** Higher market share \rightarrow able to retain supernormal profits \rightarrow able and willing to engage in R&D \rightarrow product innovation \rightarrow Extract 2 "better quality renewable energy solutions". This will improve consumer welfare and, hence benefitting consumers.

EV: The extent of benefits to consumers depends on the expertise of the firms to ensure a higher success of process and product innovation. **Extract 2:** DF Renewables is an international leader in renewable electricity generation + company benefits from more than 10 years of experience in offshore wind power and is also one of the pioneers of floating offshore wind technology & Repsol's knowledge of the Spanish and Portuguese markets.

Hence, the likelihood of a successful innovation is high due to the firms' many years of experience and deep understanding of the Spanish and Portuguese markets. Hence, the exclusivity agreement is likely to bring about large benefits to the consumers.



R2: Explain the possible disadvantages to consumers with the exclusivity agreement

- Reduce competition → abuse market power and set higher price → greater extent that P is above marginal cost ($P > MC$), resulting in greater underproduction. This implies that consumer welfare is not maximised because the value that consumers place on the additional units (represented by price) is higher than what it cost the producer to produce 1 more unit of the good (represented by marginal cost), showing that more output is desired by consumers. Hence, there will be a fall in consumer surplus due to rise in price and fall in output, thus not benefitting consumers.
- With the exclusivity agreement → reduced competition with other firms → more complacent and lack the incentive to innovate and invest in R&D → lack of variety and choices → “Limiting consumer choices” → will worsen consumer welfare and hence does not benefit consumers.

Evaluative conclusion [Criterion: Nature of the industry – extent of contestability]:

Whether the exclusivity agreement benefits the consumers depends on the extent of contestability in the renewable energy industry. The EU's renewable energy industry is facing increasing competition from both European and non-European producers. Hence, the firms may still behave more competitively, and the price charged will thus be relatively lower. They may also have a stronger incentive to innovate and produce better quality products to maintain its position and market share as the renewable energy industry is highly contestable. Thus, the exclusivity agreement is likely to be highly beneficial to consumers.

Level	Knowledge, Application/Understanding, and Analysis	Marks
L2	For a well-developed answer that has: <ul style="list-style-type: none"> • good scope and balance – explain the benefit AND cost to consumers for firms with larger market share or after signing the exclusivity agreement • good rigour – explain using firm diagram and link to impact to consumer surplus, choices and consumers to link to consumers. • good application to context – use the case material where appropriate, to support analysis 	4 – 6
L1	For an under-developed answer that:	1 – 3



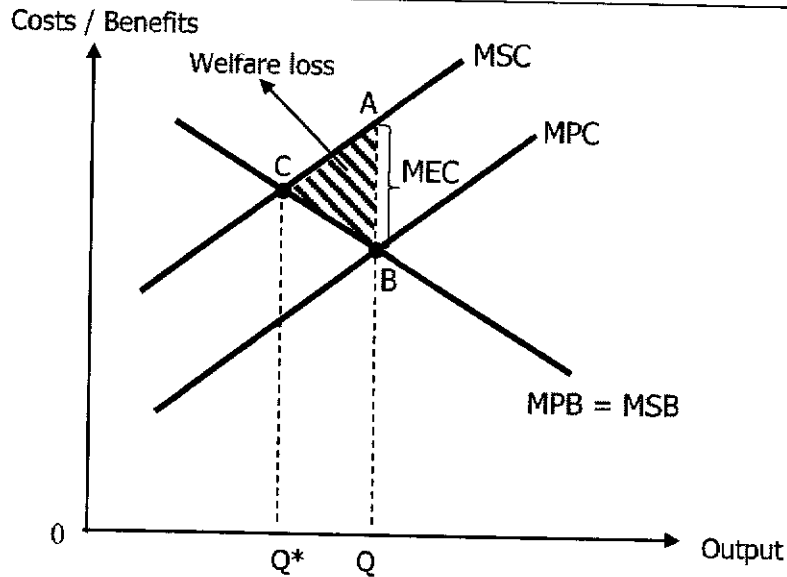
	<ul style="list-style-type: none"> lacks scope and balance – only benefit OR cost to consumers for firms with larger market share or after signing the exclusivity agreement only explain iEOS and dEOS or efficiency for R1 and R2 <p>and/or</p> <ul style="list-style-type: none"> lacks rigour – descriptive explanation with little use of economic analysis lacks application to context – limited use of case material to support analysis 		
Level	Evaluation	Marks	
E2	One well-explained evaluative statement.	2	
E1	One evaluative statement that may be poorly substantiated or not supported by the arguments presented in the answer. <ul style="list-style-type: none"> No marks for listing down of irrelevant evaluative points. 	1	

Markers' Report	
Skills Strengths (+): What are the required skills that were well-demonstrated? Areas for improvement (-): What are the skills that were lacking/ not well-demonstrated?	Aha moment!
(+) Most students understood the question requirement and explained both the costs and benefits to consumers.	
(+)/(-) Most students attempted to write an evaluative conclusion. However, for some students the evaluative conclusion can be improved. Students need to have a stand and an opinion that is contextualised and supported by economic reasoning for a good evaluative conclusion.	
(-) Poor time management. Many students wrote more costs and benefits than requirement. This may affect students' ability to complete the paper.	
Content Strengths (+): What are some concepts that were well-explained with clear linkages made? Areas for improvement (-): What are some concept gaps / conceptual errors?	Aha moment!



	(+)	Many students were able to explain how the exclusivity agreement affects the price, variety and choice with economic rigour.		
	(-)	However, some students did not link to consumer surplus in their analysis.		
	(-)	Many students quoted the evidence from the extract on the impact on the consumers and explained how it affects SOL and macroeconomics goals. They were not addressing the question. For this question, students need to explain how the exclusivity agreement leads to the different outcomes on the consumers.		
d)	<p>With reference to Extract 3, explain the source of market failure for the non-renewable energy market.</p> <ul style="list-style-type: none"> • Private output (MPB=MPC): The private benefit of producing non-renewable energy includes revenue earned from the sale of non-renewable energy, while the private cost includes the cost of production like wages, factory rental costs etc. Non-renewable energy producers do not consider the external costs and they will produce at <u>private output Q</u>, where $MPB = MPC$. This is where private welfare is maximised. <p><u>Explain the negative externalities in production</u></p> <ul style="list-style-type: none"> • From Extract 3, the production of non-renewable energy using fossil fuels such as coal produces carbon emission and emit toxic air pollution which is cancerous. This affects third parties such as people residing near the factories, who incurred higher costs for medical treatments, which are not compensated for. • [State the divergence]: In the presence of such a negative externality in the production of non-renewable energy, $MSC > MPC$. There is no divergence in the benefit curve as there are no positive externalities present. 			[4]





- **Socially Optimal Output ($MSB=MSC$):** Society's welfare is maximised at $MSB = MSC$, where the socially optimal output level occurs at Q^* .
- **Allocative inefficiency:** At Q , **MSC (distance AQ) $>$ MSB (distance BQ)** and this means that an additional unit of output creates more costs to society than benefits. Hence there is an over-allocation of resources in the form of an overproduction by Q^*Q units.
- **Deadweight loss to society:** Thus, this creates a deadweight loss to society by the amount ABC as total social cost (area $CAQQ^*$) arising from producing Q^*Q is greater than the total social benefit (area $CBQQ^*$).

Markers' Report

Skills		Aha moment!
Strengths (+): What are the required skills that were well-demonstrated?		
Areas for improvement (-): What are the skills that were lacking/ not well-demonstrated?		
(+)(-)	Most students understood the question requirement and explained how the market fails. However, some merely provided the elaboration of marginal external costs.	
(-)	Some students did not make reference to Extract 3 and thus explained the wrong activity that gave rise to negative externalities. Extract 3 "Climate Change and the EU Emission Trading System (ETS)" clearly signals production activity since the ETS is imposed on firms.	



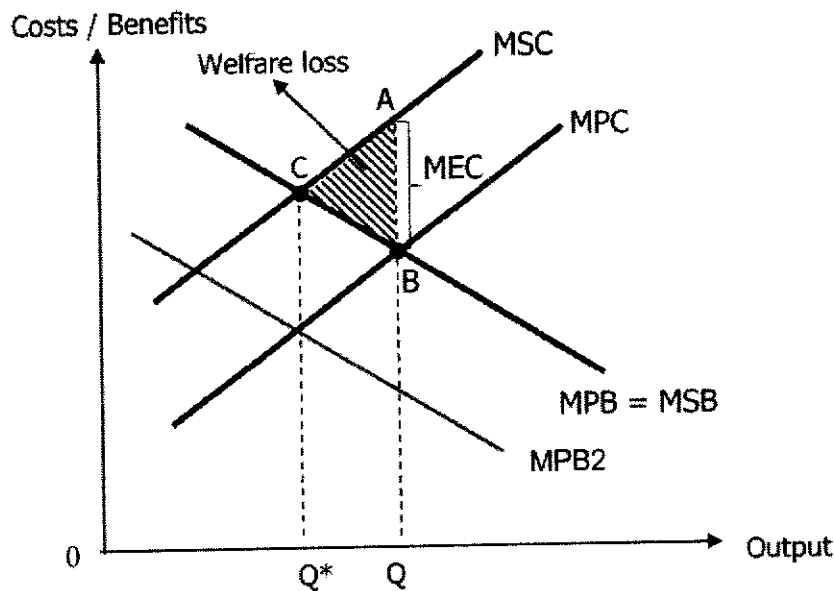
	Content Strengths (+): What are some concepts that were well-explained with clear linkages made? Areas for improvement (-): What are some concept gaps / conceptual errors?	Aha moment!	
	(+)/(-) Majority of students were able to explain how negative externalities in production resulted in market failure using the PDSAD acronym. However, some students did not explain the private and the social output level.		
	(+)/(-) Majority of the students were able to show application and understanding in their elaboration of MEC. However, weaker responses did not specify 3 rd parties or provided generic 3 rd parties like 'public', 'people' and 'others'. Students need to recognise that these generic 3 rd parties may include consumers of fossil fuels, hence are not considered as 3 rd parties.		
	(-) Some students showed weak understanding of the divergence in their explanation of negative externalities – due to presence of MEC, divergence between MSC and MPC ($MSC > MPC$), but instead, these students wrote divergence as $MSC > MSB$.		
	(-) A few students elaborated the wrong source of market failure – explained information failure instead.		
	(-) A few students drew erroneous diagram / wrong labelling of the diagram depicting negative externalities.		
e)	<p>Discuss whether the EU Emissions Trading System (ETS) is the best way to achieve efficiency and equity in the energy market.</p> <p>Introduction: As mentioned in part d), there is an overallocation of resources and hence government should implement policies to achieve efficiency in resource allocation.</p> <p>R1: EU ETS is the good way to achieve efficiency and equity in the energy market</p> <p>Government <u>caps</u> overall carbon emission at socially ideal level, Q^* and distributes pollution permits.</p> <p>Assuming the level of emissions allowed by the permit is lower than each firm's existing level of emission, firms either</p>	[10]	



<p>i) adopt cleaner and greener methods of operation to reduce their level of emission to meet the permitted level <u>OR</u></p> <p>ii) buy additional permits so that they can emit more than their original limit.</p> <p>Firms that can reduce their emissions relatively more cheaply will have an incentive to cut their emission and sell excess permits to firms that find it more expensive. Firms facing high costs in decreasing emissions will find it cheaper to purchase permits from low polluting firms. The costs of these permits will add to the costs of production and <u>raise the MPC of producers</u>. → ↑ price on carbon emissions. → ↓ Overproduction and <u>allocative inefficiency</u> until $MSB=MSC$.</p> <p>Prices of tradable permits might increase product prices as firms are likely to pass on higher cost of production (from additional permits) to consumers. Also, it reduces price competitiveness of the good especially in the international market. → may disproportionately affect lower-income households more through increased energy prices → increases <u>inequity</u> in energy market</p> <p>(+): Cap-and-trade provides certainty in outcome due to the predetermined amount of socially optimal level of pollution.</p> <p>EV: The ETS permits decreases each year (Extract 3) which allow reduction in pollution in the longer term.</p> <p>(+) Revenue from EU ETS go to countries budget (Extract 3) which allow government to spend on tackling negative externalities or other productive areas.</p> <p>(-) Difficulty in determining the right level of emissions cap and can be influenced by political pressures. If caps are too high, it would not be effective; if too low, there could be underproduction. Hence, inefficiency persists.</p> <p>(-) There's a risk that stringent emissions policies might cause companies to relocate to regions with less strict regulations. This could lead to job losses in the EU without reducing global emissions.</p> <p>R2: European Green Deal is a better way to achieve efficiency and equity in the market.</p> <p>i) Subsidies to support R&D in energy efficiency <u>OR</u></p> <p>ii) Subsidies to capacity building to promote R&D <u>OR</u></p> <p>iii) Reduction in barriers to entry to renewable energy</p> <p>Subsidies to capacity building to promote R&D → Lower unit cost of producing renewable energy / Reduction in barriers to entry to renewable energy → Increase in supply of renewable energy hence lower prices of renewable energy. The lower prices ration consumers in the market and</p>



ensure increase in consumption of renewable energy for the lower income group, ensuring more equal allocation of resources, hence lower inequity.



Since renewable energy are substitutes to coal since they are both sources of energy, producers will reduce consumption of coal. MPB will shift to the left such that the new private output is at Q^* .

How well it works + EV/Criterion [unintended benefits & root cause of problem]:

1. Extract 4 "High implementation costs... Green Deal" → Subsidies on renewable energy is **costly**. → This may worsen the government budget position. EV: Since many European countries are facing budget deficit, it is likely that the benefit of reducing the budget deficit such as improve credit rating and attractiveness of FDI outweighs the gain in terms of external benefits of government's subsidies, then the use of the government's subsidies represents a possible misallocation of resources.
2. Extract 4 "requires significant investment in green technologies and infrastructure, which may make European companies less competitive globally." Firms incur higher costs with the use of green technology as compared to use of coal since the infrastructure is new. The higher cost of production will cause prices to increase and hence reduce the competitiveness of the firms which lower their profits. This reduce the incentive for firms to adopt green technology and continue to use coal production.

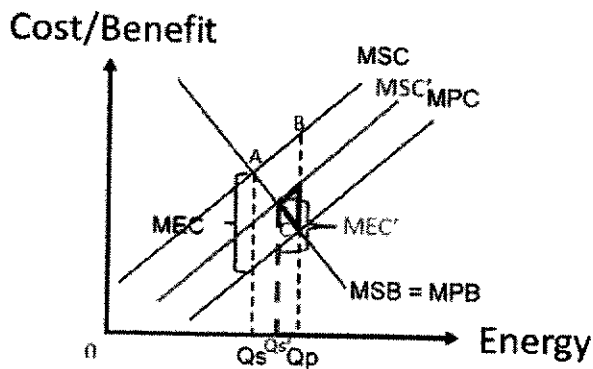


OR

With subsidies to support R&D in energy efficiency, firms lower unit cost of production in financing R&D/ capacity building. With greater R&D in energy efficiency → reduces MEC from carbon emissions arising from coal usage → corresponding carbon emissions no longer as pollutive and harmful to 3rd parties

As MEC decreases to MEC', MSC moves to MSC', which is nearer to MPC. The new socially optimal level of energy is at Qs', where MSC' = MSB, which is closer to the private level Qp → less overproduction → Less divergence between MSC & MSB @ Qp → less allocatively inefficient

The DWL falls from ABC to shaded area, as the negative externalities from carbon emissions are reduced → policy measure addresses negative externalities arising from carbon emissions



Furthermore, subsidies to support R&D will also lower cost of production in turn, lower prices of energy. The lower prices ration consumers in the market and ensure increase in consumption of renewable energy for the lower income group, ensuring more equal allocation of resources, hence lower inequity.

Overall judgement:

[C:Time, Re]In the short run, the ETS is effective in ensuring that firms produce at the socially optimal level as it works through the market. [C Constraints, Root Cause, Re]:Given that many EU countries are facing budget deficits, ETS works well as it do not require funding and firms can tap on the earnings on ETS. However, reducing usage of coal is not the key to tackle market failure since negative externalities are generated. Instead, government should look at alternative energy sources that are cleaner such as the renewable energy. Hence, there needs to be subsidies to encourage such R&D activities in the long term.

Given the global nature of climate change, collaboration among EU countries is vital to pool expertise, share resources, and increase the chances of



successful innovation, addressing the limitation of R&D. By prioritizing R&D in renewable energy alongside the ETS, governments can address both the immediate need to reduce emissions and the long-term goal of achieving a sustainable, low-carbon economy.

Mark Scheme

Knowledge, Understanding, Interpretation, Application and Analysis

Level	Descriptors	Marks
L2	<p>A balanced response that contains well-explained economic reasoning and analysis on EU ETS and an alternative policy that may implement in order to achieve economic outcomes in the question (i.e. efficiency and equity in the energy market).</p> <p>NOTE: While alternative policies are accepted, answers should consider the European Green Deal as suggested in case material.</p>	4-7
L1	<p>Mere listing of key terms and unexplained assertions, e.g. application of economic policy without linking it to economic outcomes in the question (i.e. efficiency and equity in the energy market).</p> <p>Answers may also demonstrate incorrect or no use of economic analysis (i.e. benefit & costs analysis).</p>	1-3

Evaluation

Level	Descriptors	Marks
E3	<p>One explained evaluative statement + One recommendation.</p> <p>3rd EV mark can only be given when recommendation is supported using earlier evaluation.</p>	3
E2	<p>One explained evaluative statement OR Two weakly supported evaluative statements.</p> <p>Comparison of strengths and/or limitation of the two policies considered well explained.</p>	2



E1	One evaluative statement that may be poorly substantiated or not supported by the arguments presented in the answer.	1	
Markers' Report			
Skills			Aha moment!
Strengths (+): What are the required skills that were well-demonstrated?			
Areas for improvement (-): What are the skills that were lacking/ not well-demonstrated?			
(+)	Majority of the students were able to give a balanced response by providing 2 policies.		
(-)	Some did not consider the EU context and the case material and gave a largely theoretical response. Better scripts were able to recognise the high prices of oil due to Ukraine war and constraints of EU government when addressing questions.		
(+/-)	Majority of the students were stronger to link the policies to the impact on efficiency than equity in the energy market.		
Content			Aha moment!
Strengths (+): What are some concepts that were well-explained with clear linkages made?			
Areas for improvement (-): What are some concept gaps / conceptual errors?			
(+/-)	Most students were able to recognise tradeable pollution permits will reduce carbon emissions however some did not link back to the energy market. Some students explain the impact of the policies on firms instead on the energy market itself.		
(-)	Students were not very clear of the workings of tradeable pollution permits. For instance, they explained that the purchase of tradeable pollution permits will worsen the pollution levels without recognising that since government control the amount of pollution level to be at the socially ideal output level, the overall pollution level should reduce.		
(-)	Some students are less precise in explaining linkages to how policies tackle allocation inefficiency in the market and gave an assertive explanation on how the policies work.		
(-)	Students explained how there is inequity in terms of permits allocated instead of the energy market.		



	(+/-)	While most students included the strengths and limitations of the policies, students are weaker at explaining the strengths and limitations of tradeable permits.		
	(+)	Most students are able to recognise that they can look at the impact of renewable and non renewable energy in the question.		

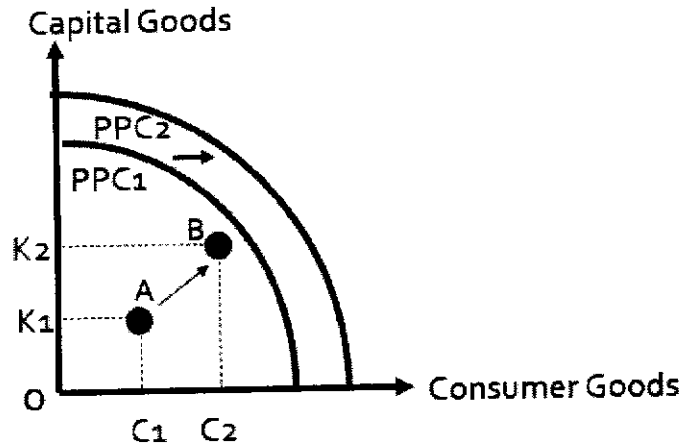


Question 2: Is ASEAN winning the globalisation game?

Suggested Answers

<p>(a)</p>	<p>'Higher levels of education will generate greater FDI inflows.' (Extract 1)</p> <p>(i) Explain how information in Figure 2 and Table 1 supports the above statement. [2]</p> <p>(ii) Explain why higher levels of education will generate greater FDI inflows. [2]</p>																							
	<p>(i) <i>Reference from data given: Figure 2 shows that SG has the highest FDI inflows, followed by Vietnam then Thailand. Table 1 shows that adult literacy rates was highest for SG and lowest for Thailand.</i></p> <p>Thus, it can be inferred that SG with the highest education level experiences the highest FDI inflows while Thailand with the lowest education level experiences lowest FDI inflows. As such, the information in Figure 2 and Table 1 supports above statement.</p> <table border="1" data-bbox="331 981 1353 1272"> <tr> <th colspan="2">Markers' Report</th> <th rowspan="2">Aha moment!</th> </tr> <tr> <th colspan="2">Skills</th> </tr> <tr> <td colspan="2">Strengths (+): What are the required skills that were well-demonstrated?</td> <td rowspan="2"></td> </tr> <tr> <td colspan="2">Areas for improvement (-): What are the skills that were lacking/ not well-demonstrated?</td> </tr> <tr> <td>(+)</td> <td>Excellent answers. Almost all students got full marks for this.</td> <td></td> </tr> </table> <p>(ii) Higher levels of education can lead to a more skilled workforce with higher labour productivity which can lower unit costs of production and increase profitability of investments. As a result, foreign investors are more likely to be willing to invest.</p> <table border="1" data-bbox="331 1518 1353 1854"> <tr> <th colspan="2">Content</th> <th rowspan="2">Aha moment!</th> </tr> <tr> <th colspan="2">Strengths (+): What are some concepts that were well-explained with clear linkages made?</th> </tr> <tr> <th colspan="2">Areas for improvement (-): What are some concept gaps / conceptual errors?</th> <td rowspan="2"></td> </tr> <tr> <td>(-)</td> <td>Students who did not score was due to their inability to link higher education levels to improvement in labour productivity or their inability to point to lower costs or higher profits for incoming foreign firms</td> </tr> </table>	Markers' Report		Aha moment!	Skills		Strengths (+): What are the required skills that were well-demonstrated?			Areas for improvement (-): What are the skills that were lacking/ not well-demonstrated?		(+)	Excellent answers. Almost all students got full marks for this.		Content		Aha moment!	Strengths (+): What are some concepts that were well-explained with clear linkages made?		Areas for improvement (-): What are some concept gaps / conceptual errors?			(-)	Students who did not score was due to their inability to link higher education levels to improvement in labour productivity or their inability to point to lower costs or higher profits for incoming foreign firms
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<p>(b)</p>	<p>Using a production possibility curve diagram, explain how FDI inflows can affect a country's current employment and future output. [5]</p>																							

Diagram showing movement of point nearer to PPC & outward shift of PPC (1m)



Current employment:

Foreign Direct Investment (FDI) inflows can lead to greater creation of capital goods, which increases the derived demand for labour and other key factors of production. Assuming the economy is operating inside the Production Possibility Curve PPC1 at point A whereby there are unemployed resources, this would result in an increase in the employment of idle resources and the economy can move closer to a point on the PPC e.g. Point B.

Future output:

FDI inflows lead to capital accumulation, which increases the capital stock in the economy, ceteris paribus. This increase in capital stock will increase the productive capacity of the economy, resulting in an outward shift of the Production Possibility Curve (PPC) from PPC1 to PPC2, indicating a potential increase in future output.

Content		Aha moment!
Strengths (+): What are some concepts that were well-explained with clear linkages made? Areas for improvement (-): What are some concept gaps / conceptual errors?		
(-)	Some students were unable to produce the diagram.	
(-)	Some students build in AD/AS analysis which was not required	
(-)	While many students were able to explain how current employment could be affected, there were unable to link it to the PPC or how it would look like on the PPC diagram.	

(c) Explain one way in which the Regional Comprehensive Economic Partnership (RCEP) can affect the multiplier size of a participating country. [3]

The RCEP eliminates tariffs which allows for relatively cheaper imports in the domestic market whereby MPM may increase as households spend a larger

proportion of their additional income on imports instead of domestic goods. For a given increase in income, a larger proportion of the income is withdrawn from the circular flow, and a smaller proportion of the additional income is passed on in the inner flow to generate further streams of spending, income and output. Since $k = 1/MPW$ which includes MPM, multiplier size is smaller.

Markers' Report		
Skills Strengths (+): What are the required skills that were well-demonstrated? Areas for improvement (-): What are the skills that were lacking/ not well-demonstrated?		Aha moment!
(+)	Most students knew to unpack the trigger about participating in RCEP.	
(-)	Many students did not provide a brief explanation of how the inner flow might be affected as a result of the participation in RCEP. Without such an explanation, their answer to change in k size became assertive whereby they relied solely on the formula to assert the change.	
Content Strengths (+): What are some concepts that were well-explained with clear linkages made? Areas for improvement (-): What are some concept gaps / conceptual errors?		Aha moment!
(+)	Majority of the students were able to provide the formula for calculating k size as $1/MPW$ or $1/1-MPC_d$.	
(-)	Some students were not sure what the MPW constituted, with some including MPC as part of MPW.	
(-)	Some students misinterpreted the size of k as extent of multiplier effect or extent of change in NI. Hence, answers erroneously included links to change in injections in the form of X or FDI, or increase in availability of spare capacity as a result of increase in investments.	
(d)	With reference to Table 1, discuss whether it can be said that Thailand has a higher standard of living than Vietnam in 2022. [8]	
<p>Introduction: Standard of living (SOL) comprises of 2 aspects – material and non-material. To compare the SOL of both countries holistically, a variety of indicators have to be used.</p> <p>Development 1: SOL is higher for Thailand than Vietnam</p> <p>GDP per capita (USD) was higher in 2022 for Thailand. Definition of GDP + Explain that per capita data would have accounted for population size differences between Vietnam and Thailand.</p>		



Inference: This suggests that an average citizen in Thailand has a higher purchasing power than an average citizen in Vietnam, hence they are able to consume more normal goods. Consumption of goods and services is higher for the average citizen in Thailand and thus Thailand can be said to enjoy a higher material SOL than Vietnam.

In addition, Thailand's life expectancy was higher than Vietnam's.

Inference: As non-material SOL are influenced by socio-economic and environmental factors, a higher life expectancy could indicate access to better quality healthcare and sanitation, as well as lesser pollution of the environment. Thus, quality of life is higher in Thailand and non-material SOL is higher.

Development 2: SOL may be higher for Vietnam than Thailand

That said, non-material SOL can be affected by other factors such as literacy rates. **Table 1 shows that adult literacy rates is higher in Vietnam compared to Thailand.**

Inference: This could mean more knowledge on healthcare and hygiene practices, allowing for better quality of life as well as better career prospects for the average adult in Vietnam, which could reduce their stress over financial concerns. Hence non-material SOL may be higher for Vietnam.

In addition, Table 1 shows that percentage of people living below poverty line is higher in Thailand. It can be inferred that the income distribution may be more unequal in Thailand than Vietnam.

Inference: For those living below the poverty line, it could mean very limited ability to consume goods and services, indicating very low material SOL. The more unequal the distribution of income, the larger the proportion of national income being enjoyed by the higher incomes. It is more likely that the average citizen has a much lower income than what is reflected of a GDP per capita data and GDP per capita figures may be an overstated reflection of the average Thai's purchasing power. Hence, it cannot be said for sure that Thailand's material SOL is higher than Vietnam's.

Overall Conclusion:

Criterion – Availability and reliability of information

Opinion – Overall, it cannot be said that Thailand's SOL is indeed higher than Vietnam's in 2022.

Reasoning – More information is needed to ensure a fair comparison of the SOL across countries. For instance, GDP per capita is a rough estimate for material SOL and does not account for differences in the cost of living across the 2 countries. For a more accurate estimate of material SOL, GDP per capita adjusted for purchasing power parity should be provided. In addition, non-material SOL is hard to compare given the multiple factors that can influence quality of life. Even with life expectancy and literacy rates, information on stress levels, crime rates and pollution may allow for a more accurate comparison of non-material SOL.



Mark Scheme		
Level	Knowledge, Application/Understanding, and Analysis	Marks
L2	<p>A well-developed explanation that has</p> <ul style="list-style-type: none"> • good scope and balance – explain material + non-material SOL & balanced analysis • good rigour • good application to context through consistent use of Table 1 	4 – 6
L1	<p>For an underdeveloped answer that lacks</p> <ul style="list-style-type: none"> • scope and balance – only explains material / non-material SOL OR one-sided analysis • rigour and/or • application to Table 1 	1 – 3
Level	Evaluation	Marks
E	<ul style="list-style-type: none"> • For a well-substantiated judgment that recognise the limitations of given indicators, in particular the lack of GDP per capita adjusted for purchasing power parity to compare material SOL across countries. 	1 – 2

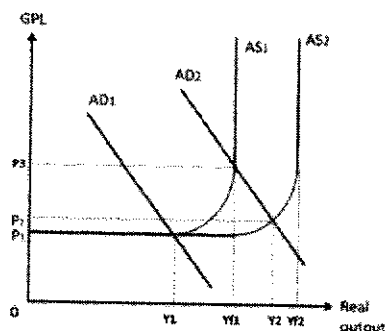
Markers' Report		
Skills		Aha moment!
<p>Strengths (+): What are the required skills that were well-demonstrated? Areas for improvement (-): What are the skills that were lacking/ not well-demonstrated?</p>		
(+)	Majority of the students demonstrated the ability to make relevant inferences from the indicators provided in Table 1.	
(+)	Majority of the students knew to provide a balanced answer by considering instances where Thailand seemed to have higher SOL than Vietnam and vice versa.	
(-)	Some students did not make full use of the indicators given and chose to focus on some indicators that were not as significant compared to the rest.	
Content		Aha moment!
<p>Strengths (+): What are some concepts that were well-explained with clear linkages made? Areas for improvement (-): What are some concept gaps / conceptual errors?</p>		
(+)	Majority could give decent explanation of how the GDP per capita data could reflect the material SOL of the country.	



	(+)/ (-)	Students knew to identify limitations of the indicators given in the Table but were not able to provide the key indicator (GDP per capita adjusted for PPP) required for comparison of SOL across countries.		
	(-)	While majority knew to use literacy rates and life expectancy for non-material SOL comparisons, answers were largely assertive and did not clearly explain how the indicators were reflective of the quality of life.		
	(-)	Many students tried to use the data on percentage of population below poverty line but were not able to correctly link it to its impact on material SOL.		
	(-)	Many students suggested the use of HDI despite the Table already providing info on literacy rates and life expectancy. These two non-material SOL indicators are the ones included in the computation of HDI, hence students will need to put forth a very strong justification for why the HDI is still needed.		
	(-)	Many students also mentioned about using Gini coefficient though a similar data (% of population below poverty line) was given in Table 1. Students who proposed this will need to put forth a very strong justification for why the Gini coefficient is still needed.		
	(f) Discuss whether the benefits will outweigh the costs for ASEAN economies by increasing intra-ASEAN economic cooperation, rather than economic cooperation with countries beyond ASEAN. [10]			
	<p>Introduction: Economic cooperation, both intra-ASEAN and beyond ASEAN, could lead to increased trade, capital, labour and tech flows. Both can bring about benefits and costs to the ASEAN economies, but the extent of these impacts will differ.</p> <p>Development 1: Impacts of intra-ASEAN economic cooperation <i>Extract 7 mentions that intra-ASEAN connectivity is needed to attract more FDIs into the region.</i> <i>Increased free trade → increases export revenue for participating countries → AD increases.</i> <i>Greater intra-ASEAN connectivity → increases FDIs → AD and LRAS increases.</i></p> <p>(+) Sustained growth can be achieved for ASEAN economies. Intra-ASEAN economic cooperation opens opportunities to expand trade between countries, giving these countries access to enlarged global markets. Demand for their exports rises, increasing export revenue. Intra-ASEAN economic cooperation also increases capital flows across countries as firms are more able to invest in foreign countries that offer low-cost conditions. Volume of foreign direct investment (FDI) increases for these countries. With the increase in net export revenue and FDI, AD increases from AD1 to AD2. Real output increases by a multiplied amount from Y1 to Yf1 and there is actual growth.</p>			



In addition, the inflow of capital and labour from FDI brings along with them skills and knowledge. This allows for an increase in the quantity and quality of an economy's resources, increasing the productive capacity of the economy. AS increases from AS1 to AS2, and there is potential growth. Full employment output increases from Y_{f1} to Y_{f2} .



With actual and potential growth, a country can thus achieve sustained growth over time, where real output further increases with lower GPL or stable prices.

(-) Rising costs of production within the region → cost-push inflation and loss of export competitiveness for ASEAN goods.

However, there are costs to intra-ASEAN economic cooperation. The unit cost of production may increase because many ASEAN countries are currently reliant on China for factor inputs, suggesting that China may have a comparative advantage in producing those inputs. Switching to trading partners within the ASEAN region could conflict with the theory of comparative advantage and result in a loss of welfare gains, as ASEAN countries may not produce these inputs at relatively lower opportunity costs.

Development 2: Impacts of economic cooperation beyond ASEAN

Extract 6 mentions that RCEP is the world's largest trade agreement and with tariff elimination for about 92% of goods traded.

(+) Possibly *much higher* actual growth and potential growth.

There is a much more significant increase in exports when focusing on broader trade agreements, such as the Regional Comprehensive Economic Partnership (RCEP), compared to focusing solely on intra-ASEAN trade. This leads to a larger increase in aggregate demand (AD).

RCEP also facilitates greater connectivity between ASEAN economies and other countries, enhancing the region's attractiveness as a destination for Foreign Direct Investment (FDI). With tariff removal and preferential market access under RCEP, multinational corporations (MNCs) may choose to relocate their firms and factories to the ASEAN region to take advantage of these benefits, resulting in an increase in investment (I), which further boosts AD and increases the long-run aggregate supply (LRAS). As shown in Figure 1, FDI inflows from outside ASEAN are much higher than intra-ASEAN flows, indicating there is much more to gain in terms of increased investment.



(-) Instability to ASEAN economies due to vulnerability to external shocks beyond the ASEAN region.

Extract 7 mentioned that China is looking inward and that major economies outside ASEAN are focusing on localising their production. Additionally, reliance on other countries, such as China, can make economic growth very volatile. For example, when there are supply disruptions in China, such as during COVID-19 lockdowns, the unit cost of production rises. The dependence on imported inputs from China can lead to sharp increases in unit costs for ASEAN economies, causing a decrease in short-run aggregate supply (SRAS). If these disruptions are sustained, it could lead to cost-push inflation.

Conclusion – Overall EV:

Criterion - Depends on the nature of economy

Opinion – For small and developed economy like SG, there is more to gain to cooperate beyond ASEAN, but for relatively larger and developing economies like Vietnam, there is a lot to gain from intra-ASEAN connectivity.

Reasoning - For small and developed economy like SG, there is more to gain to cooperate beyond ASEAN as it is part of higher value chain and specialises in higher value-added inputs that are in demand in countries like China and US. While ASEAN economies also provide a large consumer market, the rising middle-income population in ASEAN will only provide a more significant substitute for Singapore's current trading markets in the future (i.e. 2030). On the other hand, countries like Vietnam have low costs environment that makes it attractive to low-valued manufacturing firms. However, to cater to the firms' need for resilient supply chains, it will need to decouple itself away from countries like China and seek suppliers of inputs within ASEAN region. This would help make it more attractive for foreign investors to choose these ASEAN economies over China.

Mark Scheme

Level	Knowledge, Application/Understanding, and Analysis	Marks
L2	<ul style="list-style-type: none"> Thorough knowledge and an excellent ability to explain benefits and costs of economic cooperation – INTRA ASEAN and beyond ASEAN for ASEAN economies Answer should provide clear reference to case material and incorporate the usage of AD-AS analysis <p>For low L2:</p> <ul style="list-style-type: none"> One-sided answer that is well-developed. One that considers the costs and benefits of either forms of economic cooperation or where the form of economic cooperation is not distinguished. OR One-sided answer that is well-developed. One that considers the costs or benefits of economic cooperation for both intra and beyond ASEAN. OR 	4 – 7



	<ul style="list-style-type: none"> Two-sided answer that demonstrates sufficient knowledge of the two forms of economic cooperation and their related costs and benefits. 	
L1	<ul style="list-style-type: none"> Answer shows some knowledge of the benefits and costs of question requirements Meaning of question not properly grasped (benefits and costs without reference to ASEAN economies) Basic errors of theory Inadequately explained <p>For 1-2m:</p> <ul style="list-style-type: none"> A few valid points Response is mostly irrelevant or inaccurate 	1 – 3
Level	Evaluation	Marks
E2	Synthesises economic arguments to arrive at well-reasoned judgements on whether ASEAN economies, on balance benefit more from intra-ASEAN or beyond ASEAN economic cooperation.	2 – 3
E1	Unsupported evaluative judgment.	1

Markers' Report	
Skills Strengths (+): What are the required skills that were well-demonstrated? Areas for improvement (-): What are the skills that were lacking/ not well-demonstrated?	Aha moment!
(+) Majority of the students understood that they have 2 main parts / requirements to address.	
(-) This question is not well attempted, with many students misinterpreting the question requirement which looks at the benefits and cost of economic cooperation in general instead of looking at intra and beyond ASEAN co-operation specifically.	
(-) Candidates either quoted case materials excessively or none at all. There were a number of candidates who provided theoretical impacts of trade without making reference to the benefits and costs mentioned in the case material.	
(-) Lack of use of AD/AS analysis in students' response to strengthen their economic reasoning and clarity.	
Content Strengths (+): What are some concepts that were well-explained with clear linkages made? Areas for improvement (-): What are some concept gaps / conceptual errors?	Aha moment!
(+)	



	(-)	<p>Cost-Push Inflation Explanation: While cost-push inflation was mentioned, the connection between rising costs of production and the resulting loss of export competitiveness could be elaborated more thoroughly. The link between higher input costs and a decrease in SRAS wasn't fully explained, weakening the overall argument.</p>		
	(-)	<p>External Shocks and Vulnerability: The mention of reliance on external economies like China creating vulnerability to external shocks was accurate but lacked a deeper discussion on how this dependence could lead to supply chain disruptions and volatility in economic growth for ASEAN countries.</p>		
	(-)	<p>A significant portion of the students mistakenly identified the RCEP (Regional Comprehensive Economic Partnership) and China as part of intra-ASEAN cooperation, which indicates a conceptual error.</p> <p>RCEP is a <i>broader trade agreement</i> that includes not just ASEAN member states but also external partners such as China, Japan, South Korea, Australia, and New Zealand. It is aimed at fostering trade relations <i>beyond ASEAN</i>, not just within the region.</p> <p>Students seemed to combine RCEP with <i>intra-ASEAN cooperation</i>, which refers to economic agreements and trade initiatives <i>specifically within the ASEAN bloc</i>.</p> <p><i>Intra-ASEAN cooperation</i> focuses on strengthening trade, capital, labour, and investment flows <i>between ASEAN countries</i>. It is distinct from ASEAN's external trade relationships, such as those formed through RCEP.</p> <p><i>China</i> is not an ASEAN member but a major trading partner. Collaborating with China through RCEP or bilateral agreements falls under <i>inter-regional cooperation</i>, not intra-ASEAN cooperation.</p>		
	(-)	<p>For evaluation, many students concluded that intra-ASEAN cooperation is uniformly beneficial for all ASEAN countries. For countries like Singapore, cooperation beyond ASEAN—such as through global trade agreements—may be more advantageous due to their focus on high-value exports and the need for diverse supply chains. Singapore benefits more from engaging with larger, more advanced markets outside ASEAN, making a broader approach to economic cooperation potentially more beneficial.</p> <p>When writing evaluation, students should have evaluated both sides of the argument, recognising that while intra-ASEAN cooperation is important, for countries like Singapore, broader cooperation beyond</p>		



		ASEAN may offer more strategic and economic benefits. This would demonstrate a stronger and more critical understanding of how different economies have varying priorities in trade agreements.		
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