EXAMINERS' REPORT

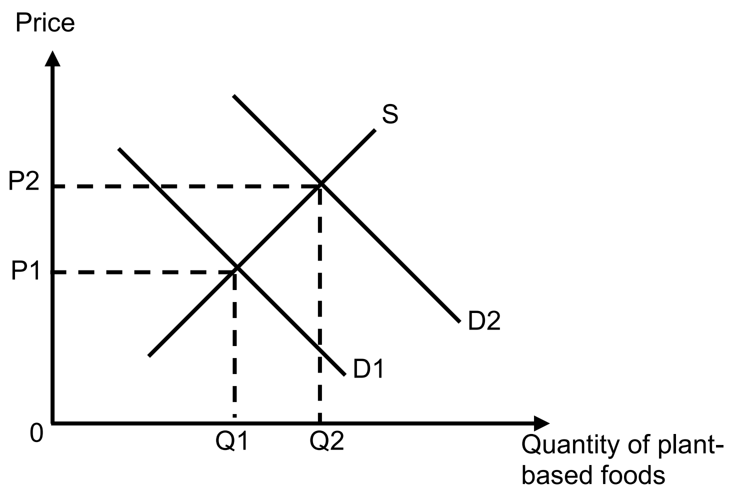
H2 Economics
Preliminary Examination 2025

Catholic Junior College
Economics Department
Examiners' Report for Preliminary Examination 2025

H2 Economics Case Study Question 1

<table>
<tr><td>(a)</td><td colspan="2">Using the information provided in Extract 1 and a diagram, explain how the shift in market conditions contributed to the trend in plant-based food sales revenue shown in Figure 1. [4]</td></tr>
<tr><td></td><td>According to Figure 1, plant-based foods sales revenue is rising/ increasing and projected to continue to rise/ increase. [1]

From Extract 1, "food-related consumer habits often come and go as fads, but plant-based alternatives are here to stay – and grow" indicates a change in taste and preferences in favour of plant-based foods. [1]
OR
From Extract 1, "population growth to 4.6 billion by 2030" can also be accepted as a demand factor. [1]

Demand rises and the demand curve shifts to the right from D1 to D2, assuming ceteris paribus. A shortage would occur at the original price, triggering an upward pressure on price, hence price will increase from P1 to P2 and increase in quantity from Q1 to Q2. Since retail sales revenue = P x Q, increase in both price and output will lead to an increase in retail sales revenue from P1Q1 to P2Q2. [1]
</td><td>Most students can recognise and state that sales revenue increased. When explaining TR change, there is a need to first explain how P and Q changed, to substantiate the claim of the change in the TR value.

While the question was already clear it required only ONE shift, some candidates identified several factors and explained simultaneous shifts of DDSS. Some students did not explicitly state the information from Extract 1.
Note that when quoting from the evidence, students should also practice the good habit of including the non-price determinant that has been affected. Some students did not link to a non-price determinant of demand, taste and preferences or population.

Price adjustment process was sometimes missing from the explanation. Good answers include the Price Adjustment Process (PAP) with clear outcomes on P and Q. Good answers also stated that TR=PxQ

Most students can draw the correct diagram with all the parts labelled. Answers that focus on BOTH demand and supply changing will be marked based on demand only. Answers that focus only on "increase in supply" will be marked based on relevant points only.

Candidates are reminded that when analysing the impact of demand shifts on TR or TE, there is no need to bring in PES.

Some students use a different tool of analysis: MC=MR</td></tr>
<tr><td></td><td colspan="2"></td></tr>
</table>

(b)	Extract 2 mentions 'more startups have joined frontrunners in launching or developing their own animal-free alternatives.' Explain how the cross elasticity of demand can be used to predict changes in the producer surplus of traditional meat producers due to more startups. [4]	
	Extract 2 states that there are more startups launching animal free alternatives. This suggests a greater number of producers, leading to an increase in the supply of plant-based "meat" products, leading to a fall in their price. [1] Plant-based "meat" products and traditional meat are close substitutes, with a positive cross price elasticity of demand (XED > 0). [1] value not needed, just positive. (students can choose to a specific XED value too) As the price of plant-based "meat" falls, the demand for traditional meat decreases. [1] The fall in demand for traditional meat causes both equilibrium price and quantity to decrease, reducing producer surplus for traditional meat producers due to lower prices. [1]	Poor answers explained total revenue instead of producer surplus. There is a need for candidates to sharpen their understanding on XED. The trigger for the change in demand is the price change of the related good, not the presence of a substitute. Definition of XED, when provided, often came with mistakes. Stating that the two goods are substitutes are not sufficient, there must be a decrease in price of plant-based "meat" products. Some candidates did not link the increased start ups to a supply increase and the subsequent price fall in the alternative food market. Students were sometimes confused when two markets were being included as part of the explanation, while the change occurred in animal free alternatives, focus should also be on the market in question, the traditional meat market. There were a handful of candidates who erroneously thought that TR and PS were the same thing and expressed them the same way in the DDSS diagram. Some students drew a demand and supply diagram of plant-based "meat" products which is not the focus of the question.
(c)	Using the concept of opportunity cost, explain how active government funding in novel food research can impact the Singapore economy. [2]	
	1m: Opportunity Cost Opportunity cost refers to the net benefit (or value) of the next best alternative foregone when a decision/choice is made. **1m: Impact on Singapore Economy** The opportunity cost must be clearly linked to one of the four macroeconomic aim/goals and/or standard of living. The opportunity cost of the "active government funding in novel food research" could have been spent in sector like education and forgoing benefits such as: - LRAS could have increase, promoting potential and actual growth - Reducing mismatch of skills and reducing structural unemployment	Some did not include the definition of opportunity cost. Opportunity cost can be defined on its own or inserted into the explanation. A handful of candidates missed out on some key words like 'net benefit' and 'next best alternative' in the definition Most candidates did not understand that 'impact the SG economy' necessitates an opportunity cost at the level of the economy, i.e. effect

<table>
<tr><td></td><td>- Fiscal policy and AD could have increase, promoting actual growth and reducing demand deficit unemployment.</td><td>on macroeconomic objectives of standard of living

Many students explain opportunity cost in terms of microeconomic perspective instead of macroeconomic perspective.
- The positive effect of healthcare or education forgone alone is insufficient.
- Stating standard of living improves or worsen is insufficient.

Any negative point of view (POV) is wrong.</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>(d)(i)</td><td colspan="2">Using the information provided, identify and explain the market structure of meatpacking industry in the USA. [2]</td></tr>
<tr><td></td><td>1m: Identify the market structure of meatpacking industry in the USA.

1m: Explain using information provided from (Extract 4) ‘The four meat packing giants control a staggering 80-85% of the beef industry’.

Answer:
The market structure is an oligopoly because there are 4 dominant firms ‘The four meat packing giants control a staggering 80-85% of the beef industry’.
or
The market structure is an oligopoly because the 4 firms concentration ratio is more than 0.8-0.85, 80% to 85%.</td><td>Most candidates were able to identify the oligopolistic market structure with the use of the concentration ratio provided in the case material.

Many students can identify that there are FOUR dominant firms.

Good answers explicit state the “4 firms concentration ratio”

Poor answers state
- A few dominant firms
Four firms (without dominant)</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>(d)(ii)</td><td colspan="2">Discuss the factors the government needs to consider when regulating prices in the meatpacking industry to manage the ills of market dominance. [8]</td></tr>
<tr><td></td><td><table>
<tr><td colspan="2">Introduction:
• Definitions of key concepts
• Overview of answers</td></tr>
<tr><td>Thesis: Factor 1
• Benefits
• Cost
• Constraints
• Unintended consequences</td><td>Thesis: Factor 2
• Benefits
• Cost
• Constraints
• Unintended consequences</td></tr>
<tr><td>Anti- Thesis:
• Evaluation of Factor 1</td><td>Anti- Thesis:
• Evaluation of Factor 2</td></tr>
<tr><td colspan="2">Conclusion (+ Summative Evaluation):
• Stand,
• Substantiation, Something Special</td></tr>
</table></td><td>Many students explained price ceiling which is not suitable for this question.

This part was not well done. Many candidates were unfamiliar with how to approach decision making questions.

Most students can explain the two factors (Thesis) but did not provide anti-thesis.

Many candidates failed to identify the ills of market dominance and thus did not manage to link the arguments to the ills of market dominance.

Many students brought in characteristics of oligopoly such as barriers to entry and even pricing strategies of firms which do not address the question.</td></tr>
</table>

	Introduction: Government regulates prices in the meatpacking industry to manage the ills of market dominance through either MC pricing or AC pricing.	Answers that focus on other sources of market failure are considered out of point (OOP).
	Thesis 1: Benefits Government regulation can force firms to price closer to MC, for example at P2 leading to allocative efficiency as P = MC at Q2, resources are better allocated to meet consumer demand. Assuming firms are earning super normal profits, AC pricing will also lead to a fall in price and quantity to a point where firms are earning normal profits. Benefits of lower prices and higher output larger consumer surplus. Lower prices also promote equity as necessities like meat are more affordable and the poor and low income can consume more. Benefits of AC pricing is that firms will make at least normal profits.	Many students can explain how regulating prices can lead to positive outcomes. XCD2: The explanation of AC/MC pricing was not well done. XCD2: Weaker candidates only provided descriptive answers that did not make use of tools of analysis in their explanation. These answers were not awarded higher than an L1 grade. XCD4 and 5: For the few that were familiar with AC/MC pricing, they also did not manage to identify the correct points on the firms' diagram, especially where P=MC. Some candidates erroneously used the natural monopoly diagram for this market.
	Antithesis 1: Evaluation of Factor 1 Imperfect information of the government inability to accurately set prices at MC. If the MC is deemed to be too high or too low, there will still be deadweight loss. Thus, the policy may not correct market failure.	Many students did not evaluate factor 1.
	Thesis 2: Costs One cost of government regulating monopoly prices is the loss of dynamic efficiency due to weakened incentives for innovation and cost reduction. Monopolies often earn supernormal profits, which provide the financial resources and motivation to invest in research and development (R&D) and adopt new technologies. These investments can lead to dynamic efficiency—improvements over time in production processes and products, which reduce average costs (AC) and marginal costs (MC), benefiting consumers through lower prices and better quality. When the government imposes price controls, it caps the monopoly's ability to earn these profits, reducing the expected returns from innovation. As a result, the monopoly may cut back on investments in R&D and efficiency improvements, leading to stagnation in productivity gains and higher long-term costs than would otherwise occur.	Many students explain the limitation of regulating prices. Good answers will link to efficiencies.

	Without these cost reductions, the firm's AC and MC remain higher at AC0 and MC0, preventing further price decreases. Consequently, consumer surplus gains from lower prices are limited to the short term. In the long run, consumers may face fewer choices, slower product improvements, and potentially higher prices if the monopoly cannot sustain cost efficiencies. Thus, while price regulation may increase consumer surplus initially by lowering prices, it risks harming dynamic efficiency and future consumer welfare by discouraging innovation and cost reduction.	
	Antithesis 2: Evaluation of Factor 2 Firms in oligopoly are likely to be earning supernormal profits, as long as price controls are not too significant, firms can continue to earn supernormal profits. As firms has no control over prices and need to reduce costs to maintain profits, they might be more willing to invest in R&D to reduce cost in order to earn more supernormal profits. Thus, the costs may not be significant.	Many students did not evaluate factor 2.
	Evaluation and conclusion (Weighing based on SITUATION): In conclusion, while both benefits and costs are crucial factors for the government to consider when regulating prices in the meatpacking industry, the benefits of regulation ultimately take precedence. The primary purpose of government intervention is to correct the market failure caused by monopoly power and ensure fairer outcomes for consumers and society. By enforcing prices closer to marginal cost or average cost, the government can significantly increase consumer surplus through lower prices and higher output, promoting both allocative efficiency and greater equity—especially important for essential goods like meat. Although there are legitimate concerns about the potential loss of dynamic efficiency and reduced incentives for innovation, these costs may be less significant in this industry. The dominant firms, having enjoyed supernormal profits over an extended period, are likely to retain incentives to innovate and reduce costs as long as price controls are not excessively restrictive. Furthermore, firms may be compelled to focus on cost reduction to maintain profitability under regulation, which can sustain productive efficiency. Given that the overarching goal is to protect consumers and prevent exploitation by powerful firms, the government must prioritize the benefits of price regulation while carefully managing the risks of reduced innovation. Therefore, the benefits of government price regulation—through enhanced consumer welfare and improved market outcomes—are the most important factor for policy	Evaluation will only be awarded if the context of the question is clear. There must be a clear link to meatpacking industry. Many students summaries earlier points but did not evaluate through comparison and judgement. XEv3: Did not address which was the most important factor of consideration, thus, many did not even get award evaluation marks.

	consideration in addressing the ills of market dominance in the meatpacking industry.	

Mark Scheme

Level	Knowledge, Application, Analysis and Evaluation	Marks
L2	A well-developed explanation that: • Presents clear and coherent economic analysis and arguments on how price regulation can address the problems arising from market dominance. • Explains both the benefits and costs the government must consider when implementing price regulation, including an assessment of the magnitude and significance of these benefits and costs. • Supports the analysis with relevant case evidence to substantiate the points made. • Includes an appropriate diagram to illustrate the economic concepts discussed. **Note:** Answers that explain only the benefits and costs without a discussion comparing or weighing these factors will be capped at 4 marks.	4 – 6
L1	An underdeveloped answer that: • Demonstrates basic knowledge but lacks depth in understanding, application, and analysis of how price regulations address the problems of market dominance; and/or • Provides a limited discussion, explaining benefits and costs with significant gaps or omissions; or • Shows inaccuracies or imprecise use of economic concepts, terminology, or explanations.	1 – 3
E	For an overall judgement that makes a reasoned stand on the discussion of the factors that the government needs to consider. E1- stand with some attempt of justification E2- stand with weighing with the use of criteria.	1 – 2

(e) Evaluate the extent to which the benefits of using subsidies and public education to correct market failure in the plant-based meat market outweigh the risks of government failure.[10]

Introduction: Definitions of key concepts Overview of answers	
Thesis: Benefits of using Subsidies	**Thesis:** Benefits of using public education
Anti- Thesis: Risks of government failure when using Subsidies	**Anti- Thesis:** Risks of government failure when using public education
Conclusion (+ Summative Evaluation): Stand, Substantiation, Something Special	

Most candidates did not address government failure in their answer, and gave generic policy limitations. This severely disadvantaged them.

Many candidates wrote extensively to explain the market failure at hand. This, however, is a question on policies not sources of market failure, thus, a brief introduction stating the problem will do. The focus should be on the policies.

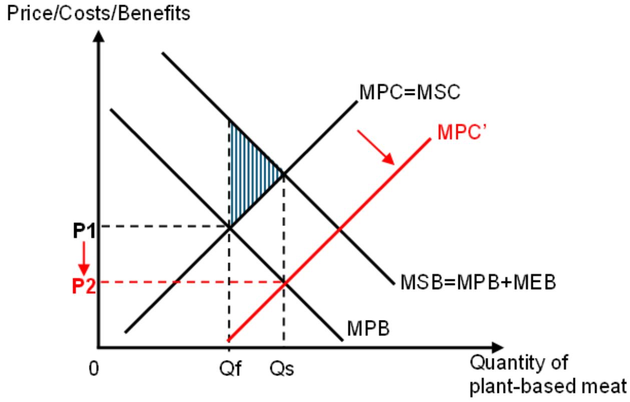
Generally, most students can explain the benefits of subsidies and public education.

Many students can explain government failure from subsidy but not public education.
Poor answers and evaluation did not focus on plant-based meat market.

Introduction:
Positive externality in the consumption of plant-based meat market. Government can use subsidies and public education to correct market failure in the plant-based meat market.
Government failure is when the magnitude of deadweight loss is larger after intervention.

Thesis 1: Benefits of using subsidies

The government can provide subsidies to plant-based meat producers. These subsidies effectively reduce the unit cost of production, causing the marginal private cost (MPC) curve to shift downward to MPC plus subsidy (MPC+Sub). Assuming the subsidy is set at the correct level—equal to the marginal external benefit (MEB) at the socially optimal quantity (Qs)—the new market equilibrium will occur where MPC+Sub equals the marginal private benefit (MPB). As a result, the market quantity will increase from the initial free-market quantity (Qf) to the socially optimal quantity (Qs), eliminating the deadweight loss and correcting the market failure.



CD2: Most students can explain how the subsidy decreases MPC.

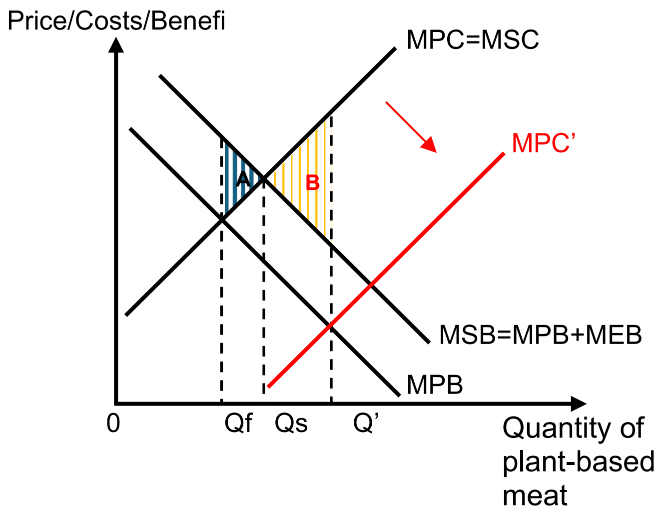
CD2: Good answers will state correct amount of subsidy is MEB at Qs.

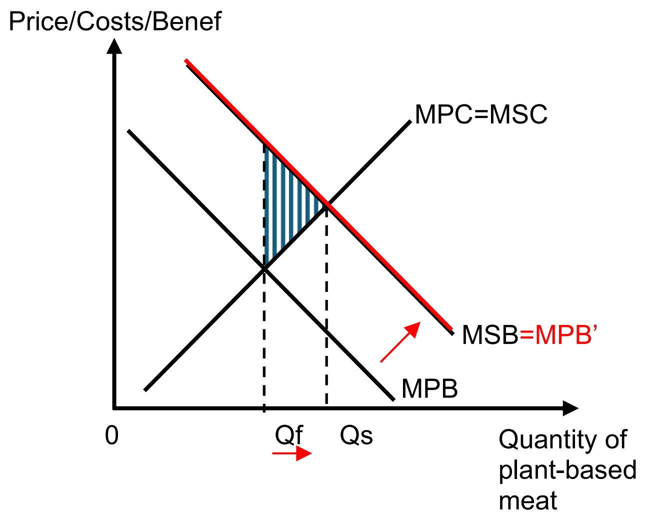
CD2: Good answers will clearly state or explain changes in quantity.

CD2: Some good answers will clearly state or explain changes in price and quantity.

XCD2: The mechanism of the policy was often done with gaps, poorer responses wrote descriptive responses (with no tool of analysis)

XCD2: There were confusions about whether subsidies shift the MPB or MPC curves. Candidates are advised to stick to the

		explanation of subsidies shifting MPC down. Subsidy increases MPB is discourage. XCD2: Poorer scripts also often gave incomplete answers, eg, omitting the part where subsidies = MEB at Qs, increasing output from Qf to Qs, hence gaps were apparent in the explanation. XCD4 and 5: Some errors in the diagrams include upward sloping MPB, deadweight loss wrongly shaded and MSB below MPB.
	Antithesis 1: Risks of government failure when using subsidies Imperfect information of the government, overestimated the MEB of plant-based meat at QS resulting in over subsidy causing MPC to decrease too much to MPC’ and market will consume at Q’ instead of Qs it will lead to government failure if the over subsidy is to a point where the deadweight loss after intervention (Area B) is larger than before intervention (Area A) 	Good answers will clearly state or explain changes in deadweight loss.
	Thesis 2: Benefits of using public education to correct market failure The government can implement a public education campaign to boost demand for plant-based meat, thereby increasing the marginal private benefit (MPB) of consumption. If the campaign is successful, the MPB will rise to match the marginal social benefit (MSB). This shift will lead to an increase in the market quantity from the initial free-market level (Qf) to the socially optimal quantity (Qs), eliminating the deadweight loss and addressing the market failure.	XCD2: Most students can explain how the public education increases MPB towards MSB. XCD2: There were confusions about public education solving market failure. Candidates should be clear of the market failure they are trying to address and craft their responses accordingly. It may address the externality or

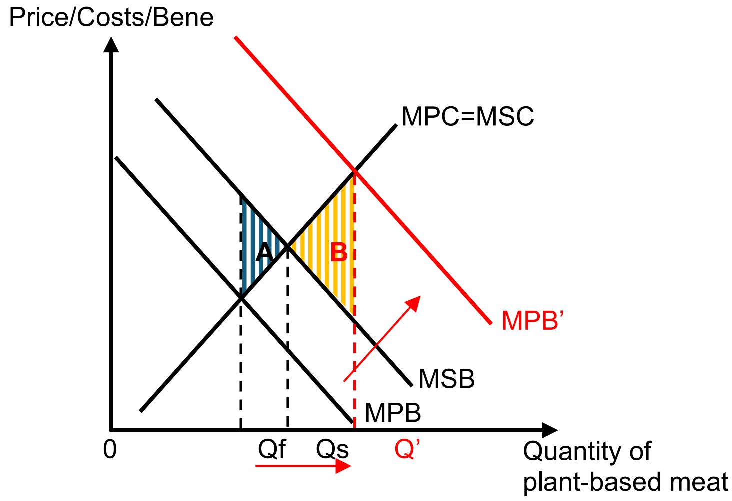


imperfect information, of which the responses are crafted differently.

XCD2: There is some confusion about externalities and imperfect information. While their diagrams look similar, the issues at hand are not the same. Candidates should review these concepts and spot the distinctions between both concepts.

Antithesis 2: Risks of government failure when using public education

Imperfect information of the government, overestimated the MEB at QS resulting in over public education causing MPB to increase too much to MPB’ and market will consume at Q’ instead of Qs □ it will lead to government failure if the over subsidy is to a point where the deadweight loss after intervention (Area B) is larger than before intervention (Area A)



XCD2: Good answers will clearly state or explain changes in deadweight loss.

Evaluation and conclusion (Weighing based on SITUATION):

In conclusion, the benefits of using subsidies and public education to correct market failure in the plant-based meat market outweigh the risks of government failure.
Even if there is over subsidy, chances of over subsidy to a level of government failure are low. Also, subsidy is flexible and can be easily reduced in the next period of time. Subsidy also promotes equity as the poor and low income will benefit from the policy.
In the real world, chances of over public education are low as it’s difficult to change consumers taste and preferences as most public education campaign for merit and demerit goods are unsuccessful by itself to resolve other problems.

XEV4 and 5 Evaluation will only be awarded if the context of the question is clear. There must be a clear link to government failure.

XEv3: Many did not write stands that directly answer the question but wrote generic EV statements like recommendations.

Mark Scheme

Level	Descriptor	Marks
L2	A balanced and well written two-sided response that explains both benefits and costs to the government on using policies of subsidies and regulation in relation to government failure. Answers weighed government intervention with government failure.	4 - 7
L1	Answers that are limited in scope and did not address the question completely. Mere listing of key terms and in complete explanation of policies without clear economic analysis to address the market failure with presence of positive externalities. A response that provides underdeveloped explanation of how the policies work.	1 – 3
Level	**Descriptors**	**Marks**
E3	Well-explained evaluative statements that show weighing of arguments with criteria. Arguments are coherent and well-elaborated upon.	3
E2	Explained evaluative statement with some weighing of arguments in the body paragraphs but lacking in elaboration or coherence.	2
E1	One evaluative statement that may be poorly substantiated or not supported by the arguments presented in the answer	1

H2 Case Study Question 2

<table>
<tr><td>(a)(i)</td><td colspan="2">Using Table 1, explain which country exhibits the best performance in terms of price stability.
[2]</td></tr>
<tr><td></td><td>

Identify the correct country [1]
Malaysia

Compare inflation rate across the 3 countries [1]
Inflation rate = Nominal interest rate – Real interest rate

<table>
<tr><th>Country</th><th>Nominal Interest Rate (%)</th><th>Real Interest Rate (%)</th><th>Inflation rate (%)</th></tr>
<tr><td>Singapore</td><td>3.7</td><td>-1.1</td><td>4.8</td></tr>
<tr><td>Vietnam</td><td>5.0</td><td>1.8</td><td>3.2</td></tr>
<tr><td>Malaysia</td><td>3.0</td><td>0.5</td><td>2.5</td></tr>
<tr><td>Indonesia</td><td>6.3</td><td>2.6</td><td>3.7</td></tr>
</table>

Price stability is achieved when inflation is low and stable. **Malysia has the lowest inflation rate amongst the countries** listed, reflecting best performance.

</td><td>Many lack awareness that Nominal interest rates - Real interest rates = inflation.

Best performance should be interpreted as lowest inflation rate.</td></tr>
<tr><td>(b)</td><td colspan="2">Explain one factor that will determine how strengthened exchange rates from short term capital inflows affect the aggregate demand of countries like Vietnam and Indonesia.
[2]</td></tr>
<tr><td></td><td>

1m: Identify any 1 factor + 1m: Explain how factor affects AD via changes in net exports

1. PED for exports [1]: When the exchange rate strengthens, the country's exports become more expensive in foreign currency terms. If the PED for exports is elastic (>1), foreign consumers are highly responsive to price changes. There will be a more than proportionate fall in quantity demanded with a given price increase, causing export revenue to fall. Assuming imports constant, net exports would shrink, leading to AD decreasing. The **more price elastic the demand, the larger the fall in net exports and thus aggregate demand [1]**.

2. PED for imports [1]: A stronger currency makes imports cheaper in domestic currency terms. If the PED for imports is elastic (>1), domestic consumers are highly responsive to price changes. There will be a more than proportionate increase in quantity demanded with a given price fall. Import expenditure may rise. Assume exports are constant, net exports fall, leading to AD decreasing. The more **price elastic the demand, the larger the rise in import spending, which worsens net exports and thus reduces aggregate demand [1].**

3. Marshall Lerner condition [1]: Whether AD rises or falls depends on whether MLC is met. If assume MLC, the appreciation should cause a fall in X-M, hence the AD falls.

3. Proportion of Net Exports in GDP [1]: Strengthening of the exchange rate tends to reduce net exports, and hence AD. If net exports form a large share of the economy, there will be a larger impact on AD. For **economies heavily reliant on exports (like Vietnam), the AD impact of currency appreciation is more significant. [1]**

4. Extent or Duration of Capital Inflows [1]: The strengthening of the exchange rate tends to reduce net exports, thereby decreasing aggregate demand (AD), as exports become more expensive and imports cheaper.

</td><td>Many identified the correct mechanism but was unable to identify a relevant factor that may affect the mechanism.

Many weak responses fail to recognise that appreciation affects both Px and Pm, thereby reduces the external component of AD through a fall in (X–M).

Some responses highlighted the proportion of net exports, which was accepted

Responses that looked at capital inflows are often erroneous, and these responses often</td></tr>
</table>

	Since the appreciation is driven by capital inflows attracted by high interest rates, the impact on AD depends on the extent and duration of these inflows. **If capital inflows are large and sustained, the exchange rate may remain strong for a prolonged period**, potentially causing a persistent decline in net exports and AD. The **longer and stronger the appreciation, the greater the downward pressure on net exports and thus on AD[1]**.	interpret the short-term capital inflows as FDI
(c)	With reference to Extract 6, explain **one** intended and **one** unintended consequence of the Malaysian government's policy to adjust minimum wages. [4]	
	1m for relevant intended consequence identified + 1m for analysis] Impact on economic growth • As noted in the extract, the Malaysian government adjusts minimum wages with regional differentiation to improve income distribution and reduce poverty. This policy raises the disposable income of lower-income workers. Since the lower-income earners have a higher marginal propensity to consume due to the unmet needs, hence they are more likely to spend larger fraction of an additional dollar on consumption. As a result, **consumption expenditure (C) rises, contributing to aggregate demand (AD), creating rounds of income and income induced consumption, stimulating economic growth.** Impact on GINI Since this policy **increases real earnings of the lower income, assuming the real income of higher-income groups remains constant, this reduces the Gini coefficient**, signalling a lower income inequality. Impact on SOL With higher earnings, these workers enjoy greater purchasing power, enabling them to afford more goods and services. This can lead to an improved material standard of living, as they are better able to meet their basic needs such as food, housing, and education. **1m for relevant unintended consequence + 1m for economic analysis** Impact on unemployment • Extract 2 notes that skills training is provided to mitigate "potential negative effects on employment," suggesting that some firms may find it more costly to hire at the higher wage floor with the workers having the same level of skills. At the imposed wage, the quantity of labour supplied may exceed the quantity demanded, creating greater excess labour and resulting in a larger surplus in the labour market, indicating higher unemployment rates. OR • Raising minimum wages may lead to **higher labour costs** for firms, especially in low-margin sectors such as manufacturing or services. If wage increases exceed productivity gains, firms may respond by shifting to automation and reduce derived demand for labour, increasing the unemployment rates. With the lack of skillsets to transit into alternative industries, occupational immobility will result in long term unemployment, creating structural unemployment particularly among low-skilled or rural workers. Impact on Inflation • An unintended consequence of adjusting minimum wages could be higher prices of goods and services. Businesses facing higher wage costs and thus higher cost of production may pass these	Weaker candidates latched onto details such as regional differentiation without developing the analysis, and many responses lacked clear economic reasoning to show how the policy achieves its aims. For unintended consequences, weaker responses often selected secondary or less relevant points, such as behavioural issues of low-income earners or additional positive effects, which did not directly address the requirement. Stronger responses recognise more significant unintended effects such as labour surplus indicating unemployment or higher business costs leading to lower

<table>
<tr><td></td><td>costs on to consumers by raising prices, leading to cost-push inflation, which affects all consumers, including the very workers the policy aims to help.

<u>Impact on Economic Growth</u>
Higher production costs for firms, especially in labour-intensive industries like manufacturing or food services. These increased costs may reduce firms' profitability and lead to lower investment, business closures, or relocation to countries with cheaper labour. Over time, this can contribute to negative actual economic growth, as the national output declines and unemployment rises, ultimately weakening Malaysia's overall economic performance.</td><td>national output, completed with tools of analysis.</td></tr>
<tr><td>(d)</td><td colspan="2">Using information from Extract 8, explain how Singapore's efforts to remain a competitive business hub is likely to affect its balance of trade. [4]</td></tr>
<tr><td></td><td>Singapore's commitment to remaining a competitive global business hub is likely to positively impact its balance of trade (X − M).

<u>1m: impact on QQT</u>
As mentioned in Extract 8, Singapore continues to support innovation and talent development to remain a competitive global business hub. This involves enhancing human capital through investments in digital skills and professional development. A more skilled workforce raises productivity, enabling firms to produce more output per worker at lower unit costs.
<u>Any 1 effect on X revenue [1]</u>
<u>Effect on Export Price Competitiveness</u>
Higher productivity reduces average costs, which can lower export prices. Assuming PED for exports > 1, a fall in export prices will result in a more than proportionate increase in quantity demanded for exports, thereby increasing export revenue.
OR
<u>Effect on Export Quality</u>
In addition to price, skilled workers also contribute to higher-quality or more differentiated products. This strengthens Singapore's non-price competitiveness, especially in high-value sectors like financial and professional services (as cited in Extract 8), boosting demand for its exports and therefore X.
<u>Any 1 effect on Import Expenditure [1]</u>
As domestic capabilities improve, especially in advanced or knowledge-intensive industries, local firms may begin producing goods that previously had to be imported. This helps reduce import expenditure in the long run.
or assume constant import expenditure
<u>Net Impact on Balance of Trade [1]</u>
Together, the rise in export revenue (X↑) and the fall in import expenditure (M↓) lead to an improvement in Singapore's trade balance (X – M).</td><td>Many candidates struggled to establish the correct starting point for this question.

Instead of focusing on how Singapore's policies to remain a competitive business hub influence the balance of trade, some diverted to describing general globalisation channels. This reflected weak comprehension of the question and often made responses appear irrelevant.

In analysing the balance of trade, many candidates addressed exports, disregarding the imports. This led to partial answers.</td></tr>
</table>

(e)	Evaluate whether a high debt-to-GDP ratio or an ageing population poses a bigger threat to the attainment of sustainable economic growth among ASEAN countries. [8]

Command	Discuss whether A balanced answer with clear explanation of both sides of the argument
Content	**Impact of High debt-to-GDP ratio on Sustainable Growth** Start Point(s) High debt-to-GDP ratio ➡ Tool of Analysis: Impact on ADAS, (sustained growth) impact on G (Sustainable) ➡ End Point(s) Sustainable Growth not achieved **Impact of aging population on Sustainable Growth** Start Point(s) Aging Population ➡ Tool of Analysis: Impact on ADAS, (sustained growth) impact on debt burden (Sustainable) ➡ End Point(s) Sustainable Growth not achieved
Context	Answer has to be anchored with examples in Malaysia context, as Malaysia faces both issues
Approach	**Intro: Key definitions and overview**
	Thesis: Explain how High debt-to-GDP ratio will adversely affect sustainable economic growth | **Anti-thesis 1:** Explain how aging population will adversely affect sustainable economic growth | -
	Conclusion: Evaluative conclusion

Many candidates did not begin with a definition of sustainable economic growth, which requires awareness of actual growth, potential growth, and intergenerational sustainability.

The focus of this question is fundamentally forward-looking. The AD and AS analysis must be tied to future outcomes. However, answers often reduced the question to short-run growth impacts or a singular fall potential output, without linking the analysis to how future generations may be affected.

Contextualisation to ASEAN was weak, with stronger answers referencing issues such as fiscal deficits or demographic transitions, but many answers remained generic.

Introduction:
Sustainable Growth refers to a rate of growth that can be maintained without creating other significant economic problems (such as depleted resources, environmental problems, large public debts to repay), particularly for future generations. Both high debt-to-GDP ratios and ageing populations present threats to this objective, but their impacts may differ in magnitude and persistence.

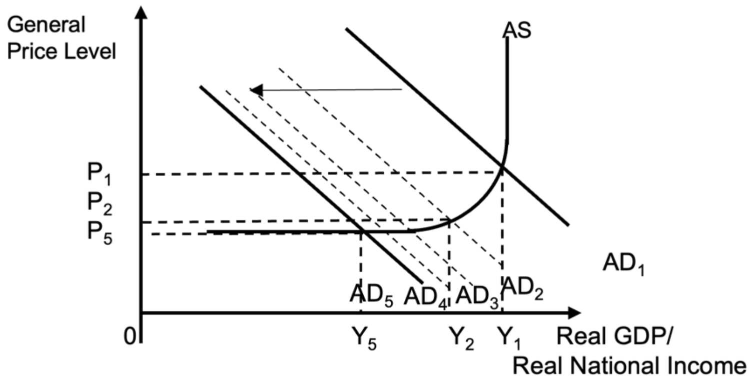
XA1: Definition of sustainable growth not seen in many scripts

<u>Thesis: High debt-to-GDP ratio as a major threat</u>
A high debt-to-GDP ratio can constrain a government's ability to pursue public investment and effectively respond to economic shocks, undermining sustainable economic growth. As highlighted in Extract 7, countries like **Indonesia and Malaysia** must carefully balance infrastructure spending with the need to maintain debt sustainability. When debt levels are elevated, markets may begin to question the government's fiscal credibility, leading to reduced confidence in the economy's long-term stability. This uncertainty can dampen firm expectations, causing the marginal efficiency of investment (MEI) to fall. Assuming interest rates remain constant, this leads to a leftward shift in investment demand, reducing aggregate demand (AD). The

XA1: Clear definition of debt to GDP, and fiscal unsustainability identified

XCD2: Most were able to predict the future AD, linking to AEG. Weaker scripts kept decline in autonomous I will then result in AD falling from AD1 to AD2. A fall in AD will result in a fall in Real National Income from Y1 to Y2. This will then lead to a fall in income induced consumption and thereafter, a further fall in AD. This triggers many successive rounds of decrease in national income and income induced consumption. At each round, the decrease in both gets smaller. The multiplier process will end when the decrease in national income is too small to generate further decreases in induced consumption. The autonomous fall in AD from AD1 to AD2 results in a multiplied decrease in RNY from Y1 to Y5 and resulting in **negative actual economic growth (AEG).**

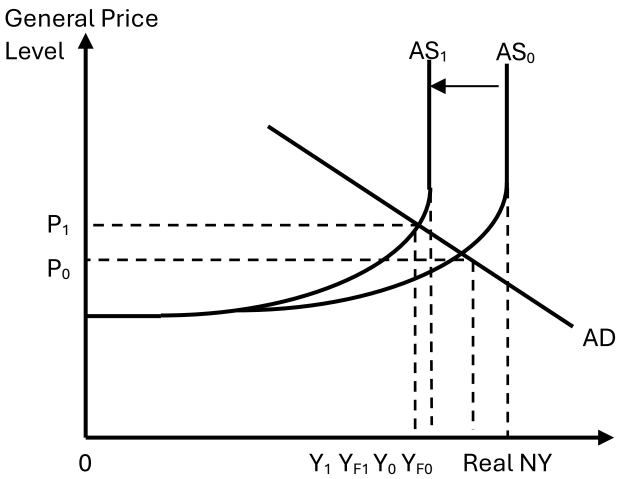
on focusing on short run effects.



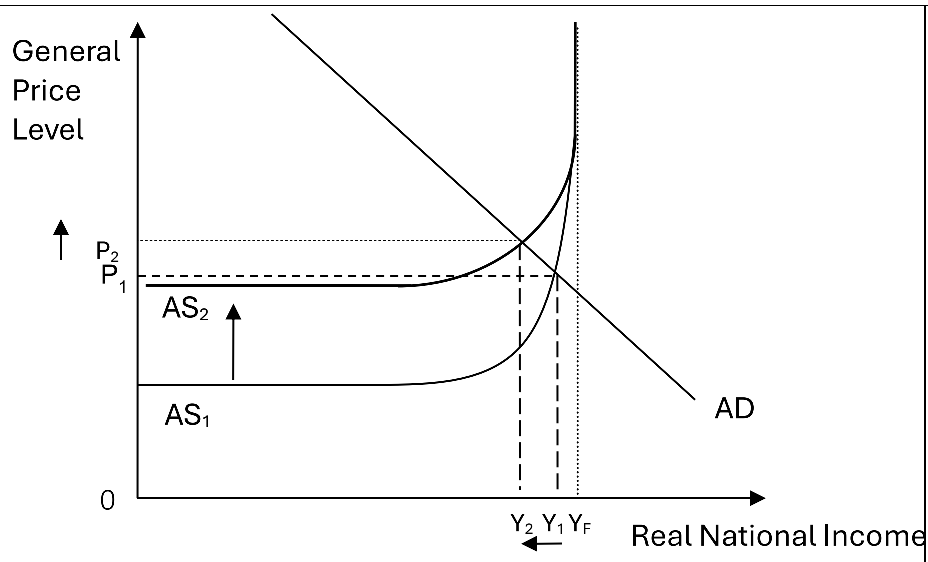
XCD4: Most scripts came with diagrams but may not always be aligned with analysis

In addition to dampening aggregate demand, a fall in investment also adversely affects the aggregate supply (AS) side of the economy, with **long-term implications for potential economic growth (PEG)**. Investment plays a crucial role in enhancing the quantity and quality of factors of production (QQT)—such as through capital accumulation, technological advancement, and improvements in human capital. When investment declines, due to reduced government spending or weak business confidence, the economy's capacity to upgrade its productive infrastructure and workforce capabilities is limited. Over time, this leads to a slower pace of capital deepening and innovation, resulting in a leftward shift of the long-run aggregate supply (LRAS) curve.

This is because a fall in the quality of resources will result in falling efficiency, which reduces the quantity of output per unit input. Thus, resulting in a reduction of a country's productive capacity. In addition, the fall in the quantity of resources will reduce the country's potential output. For example, when firms reduce spending on investment, such that the amount of capital created is not enough to replace those which have worn out, the country's stock of machinery and its productive capacity will be reduced.

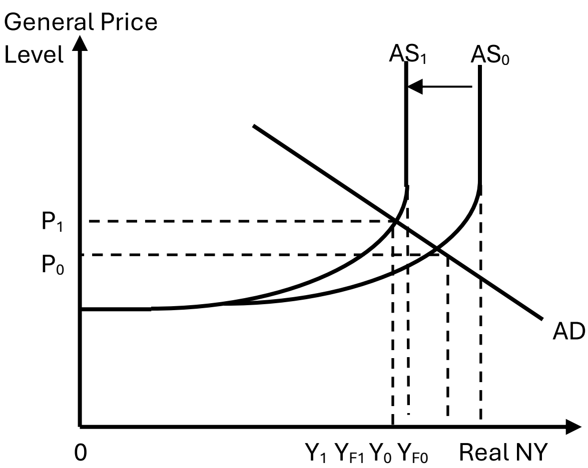


	With reference to the above diagram, the initial equilibrium level of national output is Y0. When aggregate supply decreases from AS0 to AS1, the economy will experience a fall in the level of real output from Ye to Y1. At the same time, the fall in LRAS also results in a fall in potential EG from YF0 to YF1. **Impact on future generation SOL (Sustainable EG)** A high debt-to-GDP ratio also raises concerns about **intergenerational equity and fiscal flexibility**, both of which threaten the sustainability of economic growth. As public debt accumulates, future generations may be burdened with the responsibility of repaying this debt, often through higher taxation. This reduces their disposable income and real standard of living, potentially crowding out private consumption and lowering long-run economic welfare. In addition, as the **government allocates a larger share of tax revenue to service debt repayments, fewer resources are available for productive spending in areas such as education, healthcare, or infrastructure**. This not only compromises long-term growth potential but also reduces the government's ability to respond effectively to future economic crises, as fiscal space becomes increasingly constrained. If public finances are tied up in meeting past obligations, the state's capacity to stabilise the economy during downturns or invest in long-run development is significantly weakened. This diminishes the resilience and adaptability of the economy, both of which are crucial for sustaining economic growth over time. **<u>Antithesis: Ageing population as a bigger threat</u>** However, an ageing population arguably poses a deeper structural threat to the attainment of sustainable economic growth. As noted in Extract 7, countries like **Singapore and Malaysia** are already experiencing a shrinking workforce and a rising elderly dependency ratio, trends which are set to intensify in the coming decades. In the long run, a decline in the working-age population leads to a fall in the economy's productive capacity, as there are fewer individuals available to participate in productive activity. As the ageing population continues to worsen into the future, it continually poses a significant threat to business costs. As the proportion of elderly people increases, the labour force shrinks, resulting in lower labour supply and productivity. As firms face rising unit labour costs and difficulties in hiring this leads to an upward shift in SRAS. This can lead to **cost-push inflation and slower output growth, undermining economic sustainability**.	XCD4: Most scripts came with diagrams but may not always be aligned with analysis XCD2: Some were able to predict the future AS impacts on the economy, linking it to PEG. Not many linked the AS shifts to concept of sustained growth through changes in RNY. XCD2: Many responses omitted the impact on future generations. The tool of analysis for future generation analysis should be, Real GDP per capita HDI, SOL XA1: Clear definition and effects of ageing population omitted in some responses. XCD2: Some were able to predict the future AEG impacts on the economy. A strong alternative response highlighted how the ageing population may lead to lower tax bases, affecting future fiscal space, causing AD and AEG to fall.



Moreover, a workforce that is increasingly composed of older workers may experience lower average productivity, particularly in industries that require physical labour or technological adaptability. The fall in the quality of resources will result in falling efficiency, which reduces the quantity of output per unit input. Thus, resulting in a reduction of a country's productive capacity. The fall in SRAS from AS1 to AS2 would cause a shortage at general price level P1. Consumers would be more willing to pay more to compete for the country's goods and services, causing upward pressure on general price level. This motivates firms to increase production and compete for the available unemployed factor inputs, causing upward pressure on costs of these factor inputs thereby increasing cost of production. This upward pressure on costs and general price level continues until the new equilibrium is reached at higher general price level P2. Hence a fall in SRAS results in a fall in Real National Income from Y1 to Y2 while general price level increases from P1 to P2.

This results in a leftward shift in the long-run aggregate supply (LRAS) curve, indicating a reduction in the economy's potential capacity. The situation is further exacerbated if the economy fails to upskill existing workers or adopt labour-saving technologies through automation.



	With reference to the above diagram, the initial equilibrium level of national output is Y0. When aggregate supply decreases from AS0 to AS1, the economy will experience a fall in the level of real output from Ye to Y1. At the same time, the fall in LRAS also results in a **fall in potential EG** from YF0 to YF1. **Impact on future generation fiscal sustainability (Sustainable EG)** In addition to reducing labour supply, an ageing population places significant pressure on public finances, further undermining the prospects for sustainable economic growth. As the proportion of elderly citizens increases, governments are required to **allocate a larger share of tax revenue towards age-related public services, such as pensions and healthcare**. These expenditures are often non-discretionary and tend to rise rapidly with demographic ageing. While such spending may be necessary for social protection, it does little to directly enhance long-run growth potential, unlike investments in infrastructure, education, or innovation. Over time, this **diverts resources away from productivity-enhancing areas, worsening the fiscal position and potentially contributing to rising public debt.** If left unchecked, this creates a feedback loop where more borrowing is needed to support ageing-related spending, further limiting the government's ability to invest in future-oriented growth drivers. This dynamic threatens the fiscal sustainability and long-term resilience of the economy, making it increasingly difficult to achieve sustainable economic growth.	XCD2: A number were able to predict the future AS impacts on the economy, linking it to PEG. Not many linked the AS shifts to concept of sustained growth through changes in RNY. XCD2: Many responses omitted the impact on future generations. The tool of analysis for future generation analysis should be, Real GDP per capita HDI, SOL
	Evaluative conclusion **[Stand]** While both a high debt-to-GDP ratio and an ageing population pose serious challenges to sustainable economic growth in ASEAN, ageing populations present a more deep-rooted and enduring threat. High debt levels constrain short-term fiscal space and raise borrowing costs, but these can often be managed through prudent fiscal policies. In contrast, ageing populations undermine the very foundations of long-term growth by shrinking the labour force, depressing productivity, and increasing the fiscal burden on healthcare and pension systems. **[Substantiation linked to STRAWS]** These demographic shifts are structural, long-term, and difficult to reverse, particularly in countries like Singapore and Malaysia where fertility rates are persistently low and the population is ageing rapidly. Therefore, ageing poses a more substantial and sustained constraint on growth. **[Something Special]** To address this, ASEAN policymakers must act early and decisively by implementing comprehensive demographic strategies, such as raising retirement ages, enhancing labour force participation (especially among women and older workers), strengthening healthcare and eldercare infrastructure, and incentivising family formation. Investing in human capital development and attracting foreign talent can also help supplement domestic labour shortages. This is especially important because demographic trends unfold slowly but have compounding effects over time. Delaying action will only narrow the policy window, making it harder and more expensive to sustain growth in the future. Furthermore, addressing ageing effectively allows governments to preserve long-term fiscal	XEV4 and 5 The evaluative conclusions looked more like a rehash of previous analysis without value adding perspectives. Weighing between the two problems is a must, with some relevant criteria to justify which problem is more significant to a particular ASEAN country. Many considered ASEAN as an entire entity, which is not accurate.

sustainability — which in turn ensures they can continue investing in infrastructure, innovation, and social inclusion, all of which are critical for sustainable economic development.

In summary, while managing debt remains necessary, addressing ageing is more urgent and impactful in safeguarding ASEAN's long-run growth potential, ensuring that development remains both sustainable and inclusive for future generations.

Mark scheme

Knowledge, Application, Analysis and Evaluation		
L2	Thorough knowledge and an analytic explanation of how high debt-to-GDP ratio and aging population can threaten sustainable growth If there is a well-elaborated two-sided answer but only addresses sustained EG, cap at 5 marks. (If T/AT addresses sustainable growth well but counterargument does not fully address sustainable growth, can cap at 5 marks as well) If there is a two-sided answer, but only addresses actual or potential growth, cap at 4 marks. One-sided answer, well elaborated, cap at 4 marks.	4 – 6
L1	Answer demonstrates some knowledge of how high debt-to-GDP ratio and aging population can threaten sustainable growth	1 – 3
E2	Critically evaluates the issues and taking perspective of ASEAN or Malaysia to arrive at a well-reasoned judgement.	2
E1	Evaluative statement(s) or judgements within the answer with some attempt of justification	1

(e) Discuss whether protectionist policies are the best approach for ASEAN countries to maintain economic stability amidst rising global economic volatility. [10]

Command	Discuss the extent
Content	**Protectionism to mitigate issues of global economic volatility** Start Point(s) Protectionism → Tool of Analysis Impact on ADAS → End Point(s) Achieve Macro Economic goals **Open trade policy to mitigate issues of global economic volatility** Start Point(s) open trade policy → Tool of Analysis Impact on ADAS → End Point(s) Achieve Macro Economic goals
Context	Any ASEAN country
Approach	**Intro: Key definitions and overview** **Thesis 1:** Explain how Protectionism will help to mitigate issues of global economic uncertainty and **Anti-Thesis 2:** Explain how Open Trade Policy will help to mitigate issues of global economic volatility and achieve Macro Economic Goals

Many candidates showed limited understanding of what it means to "maintain economic stability amidst rising volatility." Stability should be linked to offsetting adverse shocks and sustaining macro aims such as stable growth, employment, and prices. Instead, many responses stopped at describing protectionist policy mechanisms through AD–AS shifts without explaining how these lead to stability.

Several weaker responses often focus narrowly on reducing imports. Such answers lacked breadth and would not have addressed the question fully, without alternative policies such as fiscal stimulus, supply-side measures, or FTAs,

achieve Macro Economic Goals **Anti-thesis 1:** Limitations or challenges of protectionism	**Limitation of Anti-thesis 2 (Optional):** Limitations or challenges of maintaining an open trade policy in times of global economic volatility
Conclusion: Evaluative conclusion	

Introduction

In recent years, Southeast Asian economies have faced growing challenges stemming from increasing global economic volatility. Disruptions in global supply chains, falling export demand, and heightened geopolitical tensions have exposed the vulnerabilities of highly open and trade-reliant countries in the region. These shocks often lead to reduced foreign demand, lower investment confidence, rising imported inflation, and greater uncertainty in financial and labour markets. As a result, economic growth may slow, real incomes may fall, and business and consumer sentiment may weaken. Against this backdrop, the extent to which Southeast Asian economies should continue to pursue open trade policies warrants careful examination.

XA1: Need to unpack what economic volatility means and link it to some possible macro problems

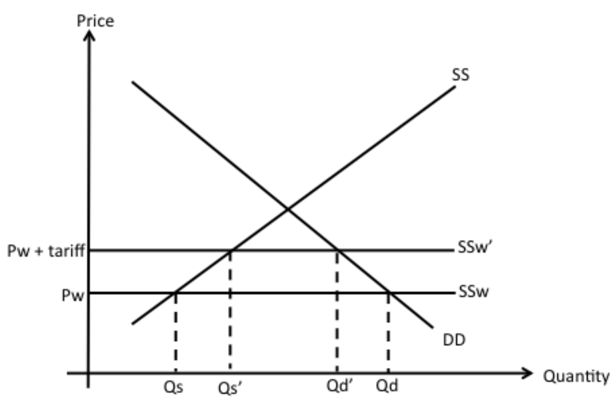
Thesis 1: Explain how Protectionism will help to mitigate issues of global economic uncertainty and achieve Macro Economic Goals

In times of global economic volatility, some Southeast Asian economies may turn to protectionist measures to shield themselves from external shocks. By imposing tariffs, or non-tariff barriers such as quotas, or export restrictions, governments can protect strategic domestic industries from sudden import surges or price swings, particularly in sectors like food, energy, or essential manufacturing. This will in turn ensure price stability within the domestic market.

XA1: Tariffs were the most common measure identified. Some responses identified export subsidy but without did not specify that the aim of protectionism is to shelter domestic firms.

A tariff is essentially a tax imposed on imports. This causes the prices of imports to increase from Pw to Pw + tariff, and the amount of imports consumed to fall from QsQd to Qs'Qd', as seen in the diagram below.

XCD2: Small number of candidates unable to draw diagram for tariffs

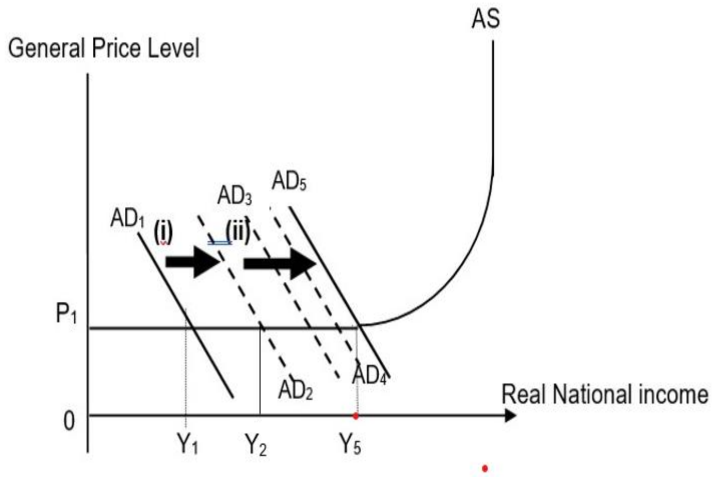


Assuming that the demand for imports is price elastic, then an increase in prices will lead to a more than proportionate fall in quantity demanded of imports, causing import expenditure to fall. Assuming export revenue remains the same, this increases X-M and leads to an improvement in the country's trade balance. Thus, AD shifts from AD1 to AD2.

XCD2: Link the effects of protectionist measure to the ADAS, either C rise or X-M fall were accepted, with a clear link to macro aim. Some responses did not use ADAS.

Assuming the economy is not at full capacity, firms will employ more factors of production to increase production of output, which increases RNY from Y1 to Y2. This causes an increase in national income, which will increase income induced consumption and result in a further increase in AD. This triggers successive rounds of increases in national income and income induced consumption. At each round, the increase in both gets smaller. The multiplier process will end when the increase in national income is too small to generate further increase in induced consumption. Thus, the autonomous increase in AD from AD1 to AD2 results in a multiplied increase in RNY from Y1 to Y5. Thereby achieving actual economic growth, offsetting the adverse economic growth during times of economic volatility. This helps to achieve economic stability.

XCD2: Clear link to economic stability was often omitted, should be included



OR

The increase in prices of imports due to the imposition of tariffs will cause consumers to switch to consuming domestic goods and services since domestic goods and services may seem relatively more price competitive, given that both imports and local goods are likely substitutes, with XED > 0. Protectionism may also help preserve local jobs during global downturns by reducing competition from cheaper foreign goods, raising the derived demand for labour by firms in the domestic industries, thus reducing unemployment. Thereby achieving rise in employment offsetting the adverse rise in demand deficient unemployment during times of economic volatility. This helps to achieve economic stability.

<u>Anti-thesis 1: Limitations or challenges of protectionism</u>

However, while protectionist policies may offer short-term relief, they risk:

- Encouraging inefficiency → deadweight losses on tariff diagram
- Raising consumer prices → reduction in consumer surplus on tariff diagram or if tariff is imposed on raw materials, the increased business costs may result in cost push inflation
- Retaliatory trade measures →worsen trade balance and undermines demand-led actual growth.

XCD2: Many did not clearly express negative effects of protectionist measure using tool of analysis

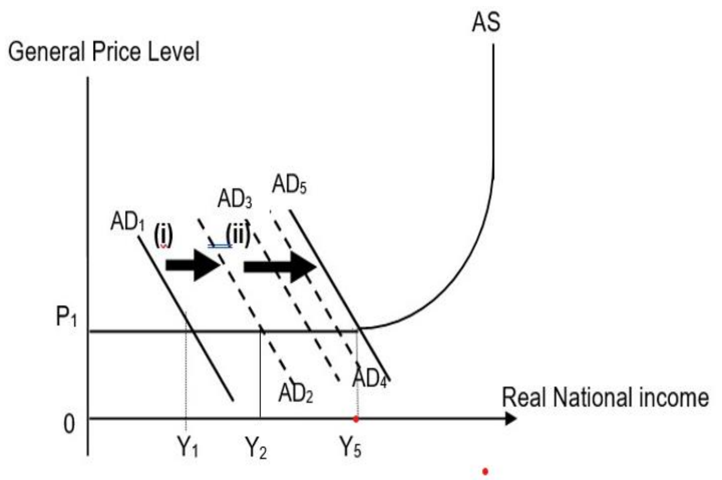
[any 1 of the above developed with a tool of analysis]

XA1: Identify a relevant alternative measure – either

Anti-thesis 2: Explain how Open Trade Policy will help to mitigate issues of global economic volatility and achieve Macro Economic Goals

An open trade policy can help mitigate several effects of global economic volatility, particularly for small and export-oriented economies in Southeast Asia such as Singapore. By remaining outward-oriented, countries can diversify their export markets and sources of imports, reducing overreliance on any single partner or region. This lowers the impact of country-specific shocks, such as the US-China trade tensions or regional geopolitical disruptions. Open trade also enables firms to tap into larger global demand, which can cushion against domestic slowdowns.

Moreover, integration into global value chains (GVCs) can attract investment in high-growth sectors like electronics, services, or green technology, supporting job creation and long-term productivity gains. For countries like Singapore, maintaining trade connectivity ensures continued relevance in global supply networks despite external turbulence.

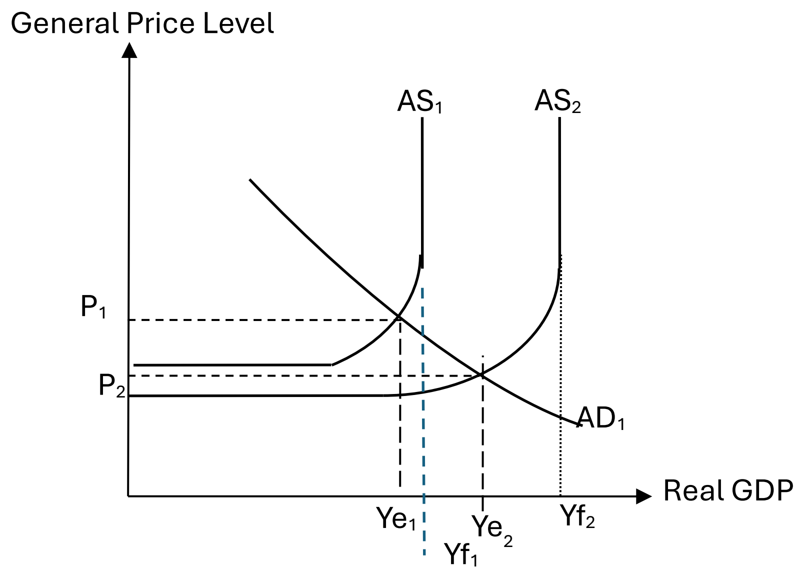


With the larger global demand for its exports as well as increase in investments, this will result in AD increasing, ceteris paribus. Thus, AD shifts from AD1 to AD2. Assuming the economy is not at full capacity, firms will employ more factors of production to increase production of output, which increases RNY from Y1 to Y2. This causes an increase in national income, which will increase income induced consumption and result in a further increase in AD. This triggers successive rounds of increases in national income and income induced consumption. At each round, the increase in both gets smaller. The multiplier process will end when the increase in national income is too small to generate further increase in induced consumption. Thus, the autonomous increase in AD from AD1 to AD2 results in a multiplied increase in RNY from Y1 to Y5. Thereby achieving actual economic growth and moving economy towards full employment through job creation as the derived demand for labour rises.

trade or fiscal or supply side policy. Some did not propose an alternative policy at all.

XCD2: Clear explanation of alternative measure with diagram was not always seen.

XCD2: Some responses did not explain the impacts of alternative measure clearly using the ADAS. The link to macro aim was sometimes omitted.



Singapore has actively diversified its trade relations via initiatives such as RCEP, CPTPP, and DEAs to safeguard against global shocks (Extract 4). The ability to diversify its imports sources may result in a lower in cost of production as firms are able to source of cheaper alternatives for various factors of productions. Thus, causing SRAS to increase (shift down) while the increase in investments will cause a rightward shift in LRAS. With the increase the aggregate supply, the open trade policy therefore results in actual economic growth from Ye1 to Ye2 and potential economic growth from Yf1 to Yf2, resulting in sustained economic growth.

XCD2: Clear link to economic stability was often omitted, should be included

Hence, open trade policy supports growth, by diversifying import and export, as well as attracting a steady flow of investments, smoothing out fluctuations in national output due to economic volatility, achieving economic stability.

Any other benefits of open trade are acceptable

- Reduce imported inflation such as supply bottlenecks or geopolitical price shocks in any one external country, mitigating imported inflation.
- Reduce trade imbalances through diversification

However, while openness provides access to alternatives and adaptability, it cannot fully shield economies from global downturns or inflationary pressures. For example, ASEAN economies heavily reliant on exports may suffer output gaps when external demand contracts, and highly open capital accounts can trigger volatile capital flows highlighting the need to pair openness with internal resilience.

Evaluative conclusion

XEV4 and 5
Some evaluative conclusions looked more like a rehash of previous analysis without value adding perspectives.

[Stand]
In conclusion, while global economic volatility presents real and growing challenges, Southeast Asian economies should continue to pursue an open trade policy, albeit in a more calibrated and resilient manner.

Weighing between two approaches is a must, with some relevant criteria to justify which policy is more

[Substantiation linked to STRAWS]
Open trade has historically underpinned the region's economic dynamism—driving growth, attracting investment, and fostering innovation, particularly in small, externally-oriented economies like

	Singapore. By remaining open, these economies can continue to participate in global value chains, diversify economic ties, and buffer against localised shocks. However, open trade is not without its vulnerabilities. As such, countries must complement openness with strategic safeguards—such as domestic capability building and regional cooperation—to navigate external uncertainties effectively. **[Something Special]** Ultimately, the ability to remain open while adapting to a more fragmented global environment will determine not just economic survival, but long-term relevance. As the global trade landscape shifts from efficiency to resilience, the question is not whether to stay open, but how to stay open smartly—with agility, strategic intent, and a future-ready vision.	important to a particular country. Again, many considered ASEAN as an entire entity, which is not accurate.

Mark Scheme

	Knowledge, Application, Analysis and Evaluation	
L2	Thorough knowledge and an analytic explanation of how open trade policy and/or protectionism is able to achieve an ASEAN country's Macro Economic Goals in light of various macroeconomic challenges. If answer did not explicitly address 'amidst rising global economic volatility' cap at 6 marks. If no alternative policy provided, cap at 5 marks One sided answer cap at 4 marks. Limitation of alternative policy purely optional.	4 – 7
L1	Answer demonstrates some knowledge of how open trade policy or protectionism is able to achieve an ASEAN country's Macro Economic Goals	1 – 3
E3	Well-justified evaluative statement(s) with good attempt to weigh various arguments in the body paragraphs with criteria; substantiation is coherent and considers the context of ASEAN.	3
E2	Evaluative statement(s) with an attempt to weigh various arguments in the body paragraphs but may be lacking in coherence and elaboration. Arguments may be theoretical and not totally aligned with the ASEAN context.	2
E1	One evaluative statement that may be poorly substantiated or not supported by the arguments presented in the answer	1

H2 Economics Paper 2 Essay Questions

1 In early 2023, despite road safety campaigns, Singapore experienced more traffic accidents and insurance claims alongside increased congestion. Risky driving raises claim costs and endangers others, while insurers struggle to monitor habits, especially when coverage incentivizes risky behaviour.

Source: Adapted from Channel NewsAsia, *18 September 2023*

(a) Explain **two** ways the aforementioned factors could result in allocative inefficiency related to vehicle usage. [10]

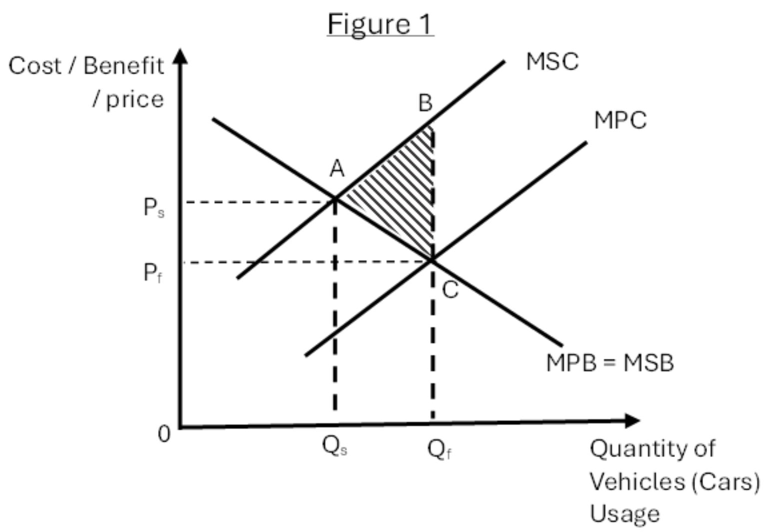
(b) Discuss how government intervention could address the market failures due to vehicle usage and consider the likelihood that these interventions will successfully restore market efficiency. [15]

Part 1a

Command	Explain- give a detailed account	Candidates were able to identify the requirements of the question well.
Content	**Start Point**: Negative externalities; Asymmetric information → **Tool of Analysis**: MF Framework → **End Point**: Market Failure	Most students can identify its negative externalities and explain it well.
Context	Vehicle (Car) Usage Market Vehicle (Car) Insurance market	
Approach	R1: Explaining how negative consumption externalities result in market failure in the vehicle (car) usage market/ car insurance market R2: Explaining how asymmetric information (moral hazard) results in market failure in the vehicle (car) insurance market	Most students can identify moral hazards but unable to explain it well. Many students mixed up moral hazard and adverse selection.

Suggested Answer

Part	Description	Examiner's Comments
Introduction	Market failure occurs when the free market fails to bring about an efficient allocation of resources. This can arise from ignoring the presence of negative externalities as well as asymmetric information. This essay will explain market failure in the context of vehicle usage market and car insurance market.	Most students were able to identify negative externalities as MF but not asymmetric info
Body – R1	<u>R1 – Negative consumption externalities in the vehicle usage market will lead to allocative inefficiency.</u> Negative externalities are spill-over costs borne by third parties who are not directly involved in the consumption or production of the good itself without compensation.	Most students were able to explain overconsumption of vehicle usage generates negative externalities

<table>
<tr><td></td><td>

In a free-market economy driven by self-interest, consumers will consume at Qf (Fig.1) where MPB=MPC and their net private benefit is maximised. In this example, private costs borne by the consumers will include monetary costs of buying and using the vehicle and opportunity cost (net benefit of the next best alternative forgone, i.e. better education if money is spent on school fees). Private benefit accrued to the consumer is the comfort and privacy of being in a vehicle. Assuming there are no external benefits in the consumption of vehicles (MEB = 0), MSB=MPB.

Consumers do not consider the external costs on 3rd parties, such as traffic congestions increasing the likelihood of accidents with pedestrians. The marginal external cost generated from the consumption of vehicles is shown by the divergence between MSC and MPC in Figure 1 above, where MSC (MPC + MEC) is higher than MPC at all levels of consumption. The socially efficient equilibrium where society's welfare is maximised is at Qs where MSB = MSC.

Therefore, with over-consumption by the amount QsQf, the total social cost incurred at output QsQf is represented by the bigger trapezium QsABQf. The total social benefit at output QsQf is represented by the small trapezium at QsACQf. Thus, we can see that by overconsumption at Qf, the consumers incur more social costs than social benefits. Therefore, a net welfare loss represented by triangle ABC has resulted, as shown in Figure 1. At any output between Qf and Qs there is a potential net welfare gain for society should less of these units be consumed. The loss of this potential net welfare gain is given by the shaded area in the diagram. Hence there is inefficient allocation of resources resulting in market failure.</td><td>XCD4 Some students did not label the deadweight loss correctly. The horizontal axis was erroneously labelled as 'quantity of risky driving'

XCD2 incomplete 7 steps in the explanation. Some students left out the eg of external costs and the deadweight loss</td></tr>
<tr><td>Body – R2</td><td><u>R2 – Asymmetric information in the form of moral hazard in the vehicle insurance market will lead to allocative inefficiency.</u>

In general, moral hazard is a tendency for people to change their behaviour and act less responsibly or take higher risks when they are protected from the consequences, particularly</td><td>XA1 Some students identified the asymmetric info as adverse selection</td></tr>
</table>

	when they can withhold information in a transaction. This gives them both the ability and incentive to shift costs to the other party. Moral hazard in the vehicle insurance market arises when drivers, knowing that their vehicle damage or accident-related expenses are covered by their insurance provider, become less cautious and engage in riskier driving behaviours. The problem lies in the insurer's inability to observe or control the insured party's actions after the policy is purchased, making it difficult to assess and manage the true level of risk. For example, once a driver purchases comprehensive vehicle insurance, which covers damage to both their own and others' vehicles, they might drive recklessly — speeding, parking carelessly, or neglecting maintenance — because they know any accident-related expenses will not fall directly on them. A driver with a history of minor accidents or reckless habits may feel less pressure to improve their driving if they are confident that any resulting costs will be absorbed by the insurer. Due to moral hazard, such **increased risk-taking behaviour** can lead to **more claims** being filed, raising the insurer's costs. The issue is worsened when the driver has more information about their own risk levels and behaviour than the insurer does after the policy is active — creating an **information asymmetry**. If the insurance company has no reliable way to monitor or limit the policyholder's actions after the policy is sold, this can result in **overclaims** and exploitation of the system. Over time, this increases **social costs** and contributes to **overconsumption of insurance resources** (claims and payouts), leading to **deadweight loss, inefficient allocation of resources and market failure** in the vehicle insurance sector.	XCD2 Students who correctly identified the asymmetric info in the form of moral hazard were unable to explain accurately. XC1 Some students explained moral hazard using the wrong context. Instead of making reference to the Vehicle insurance market, some students referred to the vehicle/car market.
Conclusion	Hence the above represents an explanation of the relevant sources of market failure provided in the pre-amble.	

Mark Scheme

Level		Descriptor	Marks
L3	A+A A+C+K A+C	Response addresses the question fully and contains excellent analytical explanations of R1 - negative externalities in consumption and R2 – asymmetric information in the form of moral hazard. Explains using relevant economic concepts, theories and principles in a precise, logical and reasoned manner. Response was well-contextualised.	**8 – 10**
L2	A+K C+C+K C+C A+0 C+K+K	Response contains cursory explanations of R1- negative externalities in consumption and R2 – asymmetric information in the form of moral hazard. Response may not fully address question requirements (rehearsed answers). Response is not well-contextualised.	**5 – 7**
L1	C+0 K+K	Response shows some knowledge but does not indicate that the meaning of the question has been properly grasped, thus, answer may be mostly irrelevant. There may be some basic errors in theory and may contain a few valid points made incidentally.	**1– 4**

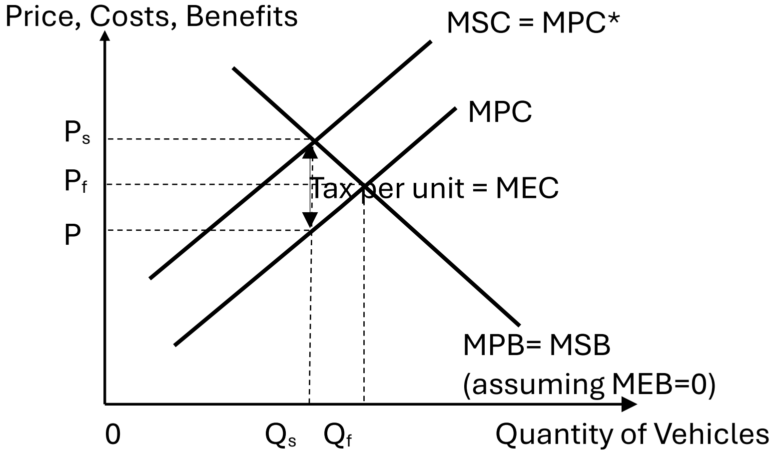
Part 1b

Command	Discuss- An answer with multiple perspectives and a well-reasoned conclusion required	Most students can explain a relevant policy for negative externalities Many students explained an irrelevant policy for moral hazards, such as screening, subsidy or taxes.
Content	Government intervention to correct negative externalities and asymmetric information → MF Framework → Correction of Market Failure	
Context	Vehicle (Car) Usage Market Car Insurance market	
Approach	R1: Explain how one policy (eg, tax) can correct MF due to negative externalities E1: Limitation of the policy (eg, tax) in R1 R2: Explain how co-payment can correct MF due to moral hazard E2: Limitation of co-payment R3 (optional): Regulation to address the problem of asymmetric information	

Suggested Answer

<table>
<tr><th>Part</th><th>Description</th><th>Examiner's Comments</th></tr>
<tr><td>Introductio n</td><td>The government can use taxes to deal with negative externalities in the vehicle usage market and co-payment schemes to deal with moral hazard in the vehicle insurance market.
The effectiveness of these policy options will depend on whether the policies can change consumer behaviour such that consumption reaches the socially optimal level of consumption. This essay aims to discuss if the government measures can effectively deal with the information failures in both markets.</td><td></td></tr>
<tr><td>Body – R1</td><td><u>R1 – Taxes can address the market failure associated with the vehicle usage market</u>

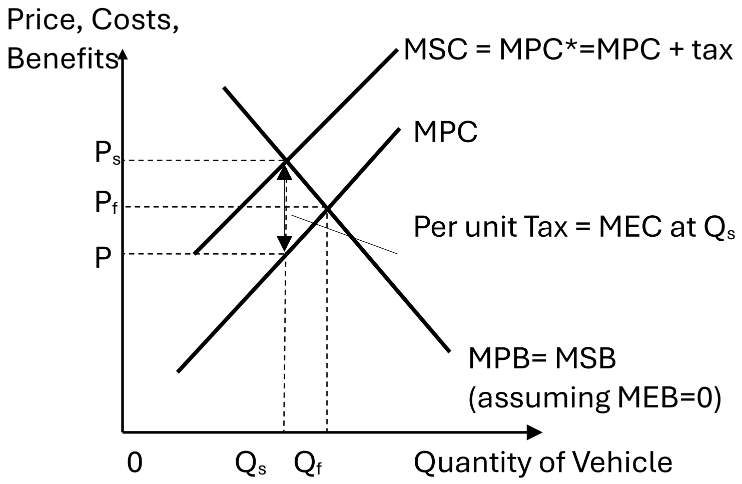
An indirect tax levied to reduce the extent of over-consumption of vehicles. It forces the consumer or firm to internalise the external cost by imposing a tax equal to the marginal external costs incurred at Qs.

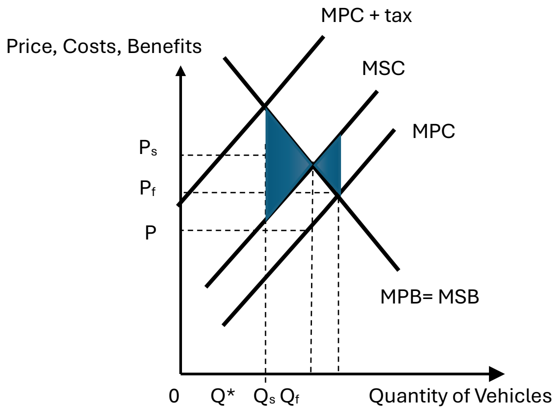
<u>Figure 2</u>


</td><td>XA1 some students wrongly identified the tax as a direct tax.

XCD4 some inaccuracies in identifying where the tax per unit should be.

XCD5 inaccurate referencing observed in the answer</td></tr>
</table>

	With reference to the diagram above, the initial equilibrium quantity of vehicles consumed in the free market is at Qf where MPC=MPB. A tax on vehicles such as the ERP equal to the marginal external cost at Qs (PsP per unit) imposed by the government on the producer who will then transfer the tax to the consumer by increasing the price, thereby making the consumers internalise the negative externality in their decision making. Figure 3  From figure 3, this causes the consumer's MPC increase, shifting the MPC curve up to MPC*. The market equilibrium quantity then moves from Q_f to social efficient level Qs where the MPC*=MPB, to maximise their net benefit. As such, the overconsumption of vehicles is removed and the market consumes at the socially optimal level Qs where MSC=MSB, hence eliminating the deadweight loss. As a result of the tax, there will be an increase in price, reducing the quantity demanded, hence reducing the equilibrium quantity towards Qs. This eliminates the deadweight loss and allocative efficiency is achieved in the market.	XCD5 inaccurate referencing observed in the answer XCD2 some students did not link the explanation to the overconsumption of vehicle usage
Body – E1	However, the high tax is unlikely to be equal to MEC at Qs as it is impossible to accurately determine MEC. It is difficult to quantify the damage done to third parties that results from car usage hence it is impossible to accurately calculate monetary value of the external cost of vehicle usage. In this aspect, the government likely suffers from imperfect information, which may cause them to under- or over-tax. Too little tax would mean that social efficient level Qs is not achieved, hence deadweight loss persists, and over-consumption continues. On the other hand, as seen in diagram 4 below, too high tax will cause consumption Qf to drop to Q* i.e. below social efficient level Qs, resulting in under-consumption and generating a deadweight loss that could be larger than without intervention.	XEV2 most students did not link back to the market for vehicle usage but simply said over taxation leads to bigger deadweight loss and under taxation cannot eliminate deadweight loss.

	 Figure 4	XCD4 some students attempted to draw the diagram but failed to do so accurately with inaccurate deadweight loss areas identified in the diagram
Body – R2	<u>R2 – Co-payment can address the market failure associated with the vehicle insurance market</u> In the case of **market failure involving moral hazard**, it is sometimes possible to reduce the insured party's risk-taking behaviour through mechanisms such as **co-payments or deductibles.** In vehicle insurance, this typically means that the policyholder is required to **bear a portion of the repair or claim costs** out of pocket. For instance, in Singapore, drivers often have to **pay an excess or deductible** when they make a claim under their motor insurance policy. Additionally, higher premiums or reduced coverage may apply if they request luxury repair services or make frequent claims. These measures are designed to promote **personal responsibility** and discourage the overuse of insurance for minor or avoidable incidents. **Co-payment mechanisms** create a **cost-sharing arrangement** that better aligns the incentives of drivers (policyholders) with those of the insurers. When individuals know they must cover part of the cost of any claim, they have a **direct financial stake** in their driving behaviour and in the decision to file a claim. This encourages them to **weigh the costs and benefits** more carefully before engaging in risky actions or reporting minor damage. By implementing co-payment or deductibles, the **price sensitivity** of drivers increases. They become more aware of the financial consequences associated with accidents or damage and are more likely to adopt safer, more cautious driving habits. This reduces **moral hazard** by discouraging behaviours that unnecessarily increase the likelihood or frequency of claims, ultimately helping to **control insurance costs**. Thus, there will not be overconsumption of insurance resources, deadweight loss eliminated, and market failure is resolved. Furthermore, co-payment leverages **loss aversion** where individuals tend to avoid losses more strongly than they seek gains. Because drivers want to avoid paying deductibles or incurring penalties, they are **less likely to engage in risky behaviour.** As a result, insurers face **lower risk exposure,** fewer	XCD2 students who were able to identify co -payment as a measure to correct the market failure of moral hazard did not clearly link it back to the vehicle insurance market.

	claims are made, and there is less **overconsumption of insurance resources.** This leads to a reduction in **deadweight loss** and a more **efficient allocation of resources** in the vehicle insurance market.	
Body – E2	Currently, co-payment or deductible amounts in vehicle insurance often make up only a small portion of the total cost of repairs. In addition, policyholders can purchase **riders** that further reduce or eliminate their out-of-pocket expenses. In Singapore, some high-end vehicle insurance plans allowed drivers to use riders to fully cover their deductibles. As a result, they bore **no financial responsibility** in the event of an accident, even when at fault. This lack of personal costs reduces the incentive for safe driving and therefore **fails to mitigate the issue of moral hazard**. When drivers are shielded from financial consequences, they are more likely to engage in **riskier behaviour**, knowing any losses will be borne by the insurer.	XEV2 most students were not able elaborate on the limitations of co-payments in the vehicle insurance market
R3 (Optional)	Regulation helps reduce moral hazard in the vehicle insurance market by altering incentives and enforcing safer behaviour. For instance, traffic laws and penalties for reckless driving increase the cost of risky behaviour, even for insured drivers. This reduces the likelihood that drivers will act carelessly after purchasing insurance, helping to align private incentives with social efficiency.	
Conclusion	Taxation policies in the car market and co-payment mechanisms in motor insurance are likely to be effective in addressing the respective market failures of **negative externalities** and **moral hazard.** The use of tax policy such as the ERP has proven effective as a strong financial disincentive. The higher **private cost of driving** encourages consumers to reduce car usage or switch to more sustainable alternatives, putting the concept of loss aversion to good use. Furthermore, in the motor insurance market, **legislation of** a **mandatory minimum co-payment of 5%** ensures that drivers continue to bear a portion of the claim cost, which serves as a **deterrent against reckless behaviour**. The effect is **unlikely to be negligible**, as financial responsibility still plays a role in influencing behaviour. To enhance policy effectiveness, both taxation and co-payment mechanisms should be periodically reviewed and adjusted. In the car usage market, tax rates should be assessed regularly to ensure they remain sufficient to curb excessive vehicle use. In the insurance market, the co-payment amount should be adjusted based on trends in claim behaviour. If evidence suggests that risk-taking is increasing, co-payment requirements should be raised to strengthen deterrence and reduce moral hazard, ensuring a more efficient allocation of resources.	XEV3 most students were not able to write an accurate summative evaluation due to incorrect analysis in the answer XEV4 most students did not write a well-substantiated evaluation

Mark Scheme

Knowledge, Understanding, Interpretation, Application and Analysis			
Level	**Analysis Level**	**Descriptors**	**Marks**
L3	A+A A+C+K A+C	Response addresses the question fully and contains excellent analytical explanations of how government intervention to increase competition will improve consumers' and societal outcomes using relevant economic concepts, theories and principles in a precise, logical and reasoned manner. Response also contains appropriate examples to show application to current situations.	8-10
L2	A+K C+C+K C+C A+0 C+K+K	Response may contain cursory explanations of how government intervention to increase competition will improve consumers' and societal outcomes with ability to identify facts, some ability at diagrams but theory may be incompletely explained. Response may not fully address question requirements. Examples used may be inappropriate or there may be no examples used.	5-7
L1	C+0 K+K	Response shows some knowledge but does not indicate that the meaning of the question has been properly grasped, thus, answer may be mostly irrelevant. There may be some basic errors in theory and may contain a few valid points made incidentally.	1-4

Evaluation

Level	Descriptors	Marks
E3	Response contains well-explained evaluative judgments for **two** requirements and a well-justified summative conclusion	5
E2	Response contains a well-explained evaluative judgment for at least 1 requirement; the other requirement may not be well evaluated. Response may not have a summative conclusion.	3-4
E1	Response contains evaluative judgments that is unexplained or not supported by the arguments presented in the answer. Judgment may not be linked to the context of the question. OR A well-explained evaluative judgment linked to one requirement.	1-2

2 Weather plays a crucial role in rice farming worldwide, influencing both the quantity and quality of crops. Its impact on rice prices, though, differs across countries, with some facing greater price volatility than others due to a range of market factors.

(a) Explain why adverse weather can cause shortages that small price increases cannot resolve and why its impact on rice prices varies across countries. [10]

(b) Assess whether price controls are likely to be the most appropriate policy to mitigate the impact of price fluctuations on consumer affordability. [15]

Part 2a

Command	Explain how, why: Give a detailed account including reasons or causes.	Candidates were able to identify the requirements of the question well.
Content	Adverse weather conditions → DDSS Framework → Cause a shortage which may be difficult to clear even if price increases Price Fluctuations vs mild price changes	Adverse weather was well linked to fall in supply leading to a shortage of rice. However, some candidates failed to explain why shortage persist with small price increment.
Context	Rice market Different countries	
Approach	Requirement 1: Explain why adverse weather can cause shortages that small price increases cannot resolve. - Supply falls, creating a shortage - PED<1, resulting in the need for a large price change to clear the shortage - Alternative PES<1 Requirement 2: Explain why rice price fluctuations vary across countries. - Require price adjustment process and explaining different PED values across countries	For the impact of price varying across countries, candidates were able to explain a relevant determinant of PED, such as the degree of necessity differing across countries. The best answers provided clear comparison of price changes for the different countries.

Part 2(a)	Description	Success Criteria
Introduction	In the free market, the market price and quantity of rice is determined via the interaction between the demand and supply of rice.	Overview
Body – R1	**Requirement 1: Explain why adverse weather can cause shortages that small price increases cannot resolve.** Adverse weather conditions such as droughts or floods is a supply shock, and producers will be less willing and able to produce rice, this causes a decrease in supply from S1 to S2 as shown in Figure 1. At the original equilibrium price P1, there will be a shortage as quantity demanded Q1 is more than quantity supplied Qs1.	A1/2: Clear topic sentence XCD2: Some answers failed to include full PAP.

Consumers who could not get all they want at the P1 would be willing to pay more to compete with other consumers, and this exerts an upward pressure on the price.

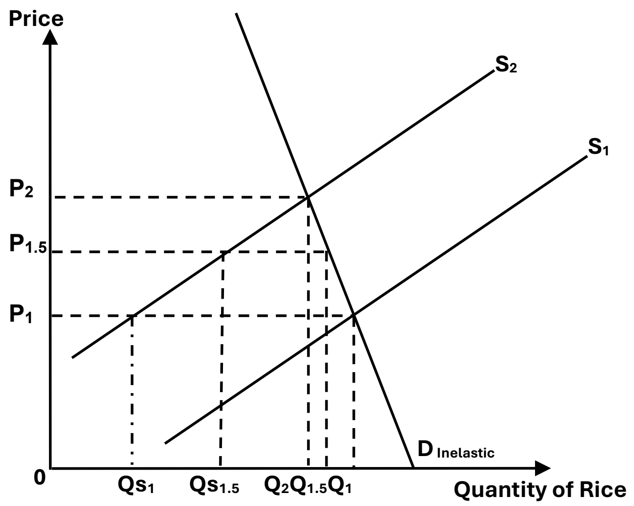
As price increases, producers would increase the quantity supplied and consumers would decrease the quantity demanded. according to the Laws of Supply and Demand respectively.

Prices will increase and the adjustment process continues until where demand (D) equals to the new supply (S1) at the new market equilibrium where the shortage is eliminated at P2 and Q2.

One reason adverse weather can cause a persistent shortage despite price rises could be due to price elasticity of demand (PED) being price inelastic. Assuming PED is inelastic, the increase in price, for example until P1.5 will lead to a less than proportionate decrease in quantity demanded and a shortage of Qs1.5 to Q1.5 remains. Therefore, it will take a larger increase and longer time for the price to increase until equilibrium.

XCD2: Persistent shortage not well explained using PED. Some candidates were able to explain PES is inelastic but failed to clearly explain how shortage will persist.

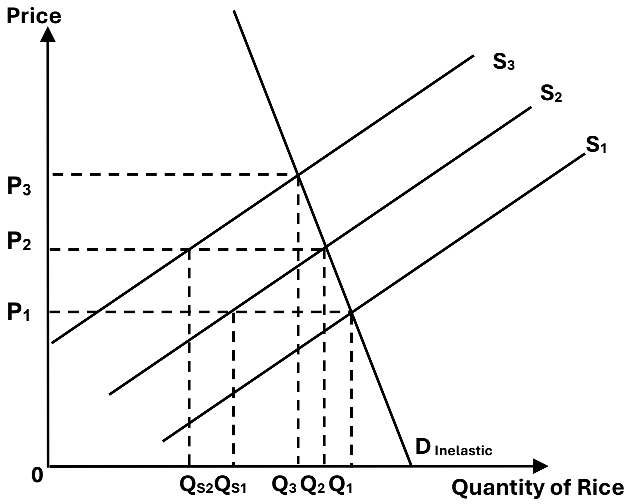
Figure 1

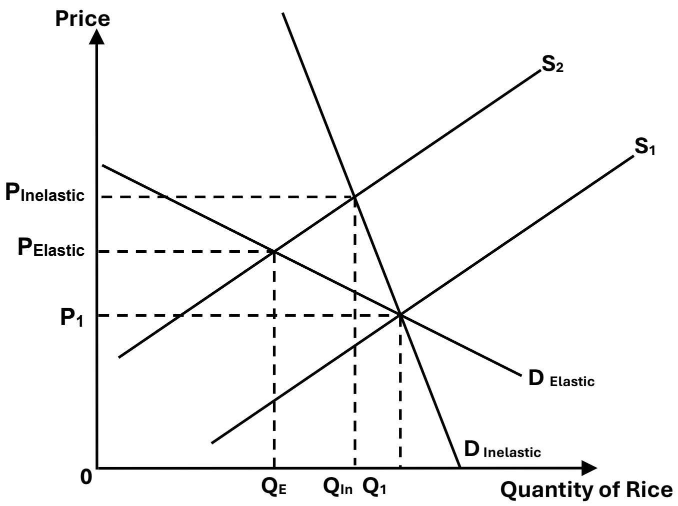


XCD4/5: Diagram show a fall in supply but was not used to explain how the shortage may persist with a small price increment.

[Alternative Answer]
Another reason could be due to continuous decrease in supply due to adverse weather. Assuming supply decrease to S_2 and the market reaches the new equilibrium at P2Q2. Any further decrease in supply from S2 to S3 as shown in Figure 2 will lead to further persistent shortage Q_{S2} to Q_2 which will take additional time and adjustments to clear.

XCD2: Some candidates were able to explain fall in supply but unable to explain that this can be continuous leading to a persistent shortage.

	Figure 2 	
Body – R2	**Requirement 2: Explain why rice price fluctuations vary across countries.** Rice price fluctuations vary across countries due to different Price elasticity of demand (PED) values across countries. PED measures the degree of responsiveness of quantity demanded of a good to a change in its price, ceteris paribus. Different countries might have different PED value as rice might be a necessity with lesser substitutes in some countries for example in Asia while a non-necessity with many substitutes in some countries for example in Europe. When supply decreases from S_1 to S_2 due to adverse weather conditions, it will lead to a shortage and upward pressure on price, as shown in Figure 3. If the demand of rice is **price elastic, |PED|>1**, for example $D_{Elastic}$, a rise in equilibrium price from P_1 to $P_{Elastic}$ results in a more than proportionate fall in equilibrium quantity from Q_0 to Q_E. Thus, there will be a smaller increase in equilibrium price from P_0 to $P_{Elastic.}$ If the demand of rice is **price inelastic, 0<|PED|<1**, for example $D_{Inelastic}$ the same decrease in supply from S_1 to S_2, a rise in equilibrium price from P_0 to $P_{inelastic}$ results in a less than proportionate decrease in equilibrium quantity from Q_1 to $Q_{inelastic}$. Thus, there will be a larger or sharper increase in equilibrium price from P_1 to $P_{Inelastic}$. Figure 3	A1/2: Clear topic sentence XC1: Some candidates used generic examples or gave partial examples. XCD2: Some candidates mixed up the determinants of PED, leading to flawed explanation. XCD2: For some answers, comparison across the different countries were not clear, lacking in development. XCD5: Reference to diagram was at times missing. Impact of prices not well explained with

		reference to the diagram drawn.
Conclusion	Therefore, adverse weather can cause a persistent shortage despite price rises due to persistent decrease in supply and rice price fluctuations vary across countries due to different PED.	

Mark Scheme

Level		**Descriptor**	**Marks**
L3	A+A A+C+K A+C	Response addresses the question fully and contains excellent analytical explanations of R1 – why shortages exist and cannot be cleared by price changes and R2 – why price differences across countries are there. Explains using relevant economic concepts, theories and principles in a precise, logical and reasoned manner. Response was well-contextualised.	**8 – 10**
L2	A+K C+C+K C+C A+0 C+K+K	Response contains cursory explanations of R1 – why shortages exist and cannot be cleared by price changes and R2 – why are there price differences across countries. Response may not fully address question requirements (rehearsed answers). Response is not well-contextualised.	**5 – 7**
L1	C+0 K+K	Response shows some knowledge but does not indicate that the meaning of the question has been properly grasped, thus, answer may be mostly irrelevant. There may be some basic errors in theory and may contain a few valid points made incidentally.	**1– 4**

2 Weather plays a crucial role in rice farming worldwide, influencing both the quantity and quality of crops. Its impact on rice prices, though, differs across countries, with some facing greater price volatility than others due to a range of market factors.

(b) Assess whether price controls are likely to be the most appropriate policy to mitigate the impact of price fluctuations on consumer affordability. [15]

Part 2b

<table>
<tr><td>Command</td><td>Assess whether - make an informed judgement about the relative importance of different factors, or determine the value of different arguments.</td><td rowspan="4">Candidates were generally able to explain use of price ceiling to ensure consumer affordability. A small number of candidates wrongly explained price floor instead.

An alternative policy often explained was that of an indirect subsidy. Some candidates though, failed to link this to a rise in supply, wrongly attributing this to a change in demand instead.

Evaluation was often about the emergence of black market, with the black market price set above equilibrium price, this was sometimes unclear in some answers. For subsidies, the need to tap into government funds was often mentioned though the link to this being unsustainable was at times omitted.</td></tr>
<tr><td>Content</td><td>Price controls

Other policies: eg subsidies, policies to affect PED
→ DDSS Framework → Mitigate the impact of price fluctuations</td></tr>
<tr><td>Context</td><td>Rice market</td></tr>
<tr><td>Approach</td><td>Introduction

Requirement 1 (R1): Explain how price ceiling can mitigate the impact of price fluctuations

Evaluation of R1 (EV1): Limitation of price ceiling

Requirement 2 (R2): Explain how another policy can mitigate the impact of price fluctuations
- Subsidy (preferred)
- Introducing or source for substitutes / suppliers
- Invest in R&D

Evaluation of R2 (EV2): Limitation of the ‘other’ policy

Conclusion and Evaluation</td></tr>
</table>

Suggested Answer

Part 2(b)	**Description**	**Success Criteria**
Introduction	Governments can use price controls in terms of price ceiling and subsidy to mitigate the impact of price fluctuations on consumer affordability by decreasing prices.	Overview
Body – R1	**Requirement 1 (R1): Explain how price ceiling can mitigate the impact of price fluctuations** Governments can use price controls in terms of price ceiling and subsidy to mitigate the impact of price fluctuations on consumer affordability. Price ceiling is the highest legal price producers can sell their goods and services. An effective price ceiling (Pc) must set below current equilibrium price (P0) as shown in Figure 1.	A1/2: Clear topic sentence

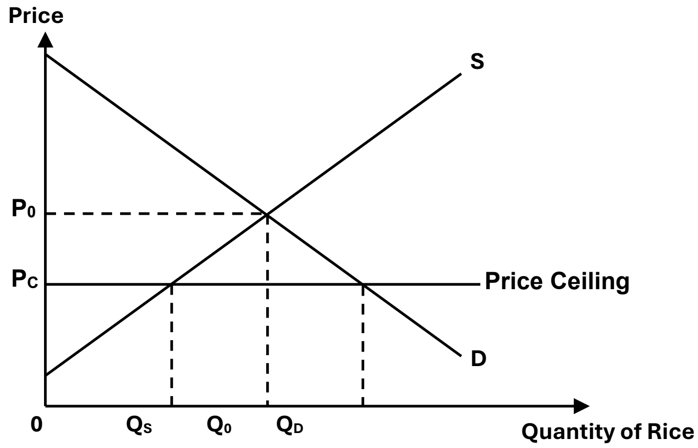
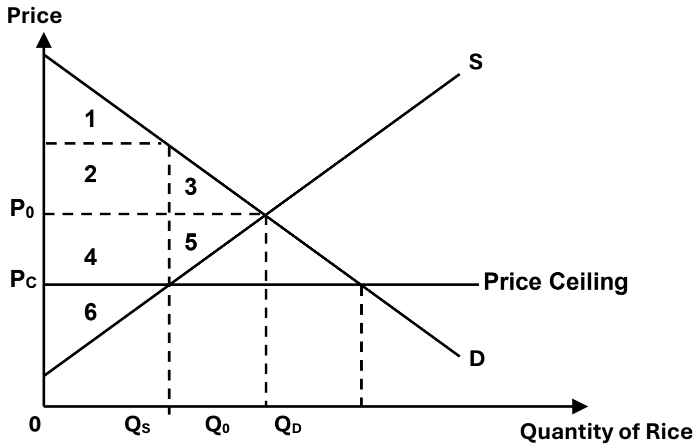
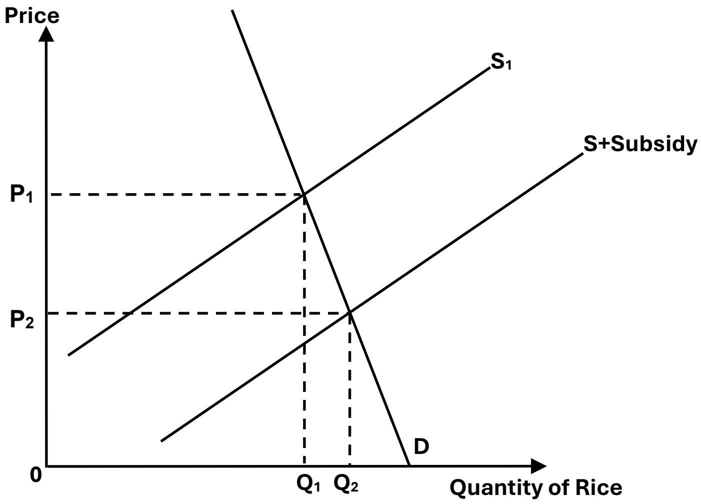
	After the price ceiling Pc is imposed, market price will decrease from P0 to Pc and market quantity will decrease from Q0 to Qs. Figure 1  Price ceiling results in an increase in quantity demanded from Q0 to QD and a decrease in quantity supplied from Q0 to QS and results in a shortage in the market as QD is greater than QS. In the free market economy, price will rise due to the shortage. However, with the price ceiling, the consumers and producers cannot trade above Pc, hence, the shortage cannot be cleared.	XCD2: Definition of price ceiling sometimes incomplete or missing. XCD5: While a relevant diagram was drawn, candidates sometimes did not clearly explain how price will fall and increase consumer affordability.
Body – E1	**Evaluation of R1 (EV1): Limitation of price ceiling** One limitation of a price ceiling is that it will result in a market failure. Without the price ceiling, allocative efficiency is achieved with the total economic welfare in the market being the sum of Areas 1 + 2 + 3 + 4+ 5 + 6 as shown in Figure 2, which is the sum of consumer and producer surplus. However, after the price ceiling, there is a gain in consumer surplus from Areas 1 + 2 + 3 to Areas 1 + 2 +4. There is a fall in producer surplus from Areas 4 + 5 + 6 to Area 6. Thus, there is a deadweight loss of Areas 3 + 5.	XEV2: Analysis of welfare loss is often incomplete, lacking in sufficient development

	Figure 2  OR: One limitation of a price ceiling is that it will result in a black market. The shortage may cause a black market to surface, as rice might be necessity, a black market will most likely exist. In the black market, sellers will illegally sell the goods (rice) at a price higher than P0. In this case, consumer surplus may fall to even lesser than without intervention. Also, governments are unable to control and check the quality of rice in the black market which will endanger the society. One limitation of a price ceiling is that it will negatively / adversely affect the producers. Price ceiling will lead to the fall in producer surplus from Area 4+5+6 to Area 6, producers' total revenue will decrease from P0Q0 to PcQs.	XEV2: Black market is a common evaluation though analysis is considered complete when there is mention of black market price set higher than Pe. XEV2: Link to producer revenue falling sometimes not clear or missing.
Body – R2	**Requirement 2 (R2): Explain how subsidy can mitigate the impact of price fluctuations** Governments can provide a subsidy to firms to mitigate the impact of price fluctuations on consumer affordability. A subsidy given to firms is an indirect payment to firms, usually in the form of a cash payment from the government. Indirect subsidies are granted indirectly to the suppliers of goods and services who will then share it with the consumers. Indirect subsidies reduce the cost of production since it is first granted to the producers. Thus, this causes a rise in supply by the amount of the subsidy. The vertical distance between the supply curve is the magnitude of the per-unit subsidy. When an indirect subsidy is imposed, the cost of production decreases and supply will increase from S1 to S+Subsidy, as shown in Figure 3. The imposition of the subsidy causes a surplus at the original price level, P1, and this causes a downward pressure on price. Quantity demanded rises and quantity supplied falls according to the law of demand and supply respectively.	A1/2 – Clear topic sentence XCD2: The term, 'indirect' sometimes omitted in answers. XCD2: PAP sometimes missing.

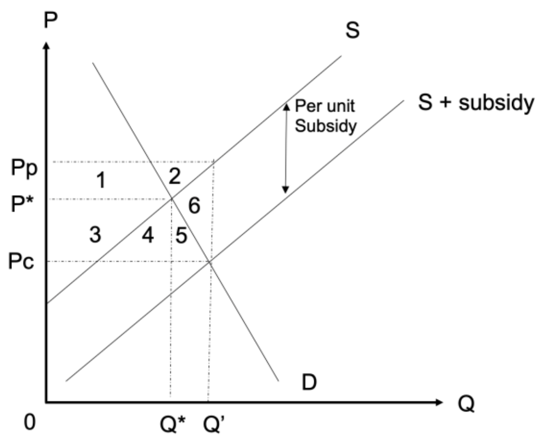
<table>
<tr>
<td></td>
<td>This results in the market equilibrating at P2 and Q2, where equilibrium quantity is now higher, and the price is lower.

Figure 3

</td>
<td></td>
</tr>
<tr>
<td>Body – E2</td>
<td>Evaluation of R2 (EV2): Limitation of subsidy

One limitation of a subsidy is that it will result in a market failure.

As shown in Figure 4, consumer surplus rises by Area 3+4+5. Producer surplus rises by Area 1+2. The government total subsidy given equals to Area 1+2+3+4+5+6.

The overall net welfare loss to society is the difference between the gain in consumer and producer surplus and the government expenditure which is Area 6. Therefore, there is a net welfare loss or deadweight loss of Areas 6 resulting in a market failure.

Figure 4


Another limitation of a subsidy is that it will strain the government's budget. The increase in government spending on rice subsidy might lead to a budget deficit and fiscal debt which has to be repaid by future generation in terms of higher taxes or lower government spending.

Another limitation of a subsidy is that it the government spending on subsidy will incur an opportunity cost. The amount</td>
<td>XEV2: Clear explanation on DWL is sometimes missing or incomplete.

XEV2: Negative impact on future generations rarely mentioned even when the strain on government's budget is used as a limitation of a subsidy.</td>
</tr>
</table>

	of money spent on subsiding rice producers could have been spent in other areas such as healthcare or education which might reap more long-term benefits for the economy.	
Conclusion and Evaluation	In conclusion, price controls in terms of price ceiling are NOT the most appropriate policy to mitigate the impact of price fluctuations on consumer affordability, while price might have decreases, but the decrease in market quantity and black market defeats the purpose of making rice more affordable. Subsidy is most appropriate policy to mitigate the impact of price fluctuations on consumer affordability as it benefits both consumers and producers, especially the poor and lower income, which promotes equity.	XEV4/5: Many left this blank or gave a very superficial substantiation, rehashing what was already mentioned.

Mark Scheme

Knowledge, Understanding, Interpretation, Application and Analysis			
Level	**Analysis Level**	**Descriptors**	**Marks**
L3	A+A A+C+K A+C	Response addresses the question fully and contains excellent analytical explanations of how government intervention to decreases price and increase affordability, using relevant economic concepts, theories and principles in a precise, logical and reasoned manner. Response also contains appropriate examples to show application to current situations.	8-10
L2	A+K C+C+K C+C A+0 C+K+K	Response may contain cursory explanations of how government intervention to decreases price and increase affordability, some ability at diagrams but theory may be incompletely explained. Response may not fully address question requirements. Examples used may be inappropriate or there may be no examples used.	5-7
L1	C+0 K+K	Response shows some knowledge but does not indicate that the meaning of the question has been properly grasped, thus, answer may be mostly irrelevant. There may be some basic errors in theory and may contain a few valid points made incidentally.	1-4

Evaluation

Level	Descriptors	Marks
E3	Response contains well-explained evaluative judgments for **two** requirements and a well-justified summative conclusion	5
E2	Response contains a well-explained evaluative judgment for at least 1 requirement; the other requirement may not be well evaluated. Response may not have a summative conclusion.	3-4
E1	Response contains evaluative judgments that is unexplained or not supported by the arguments presented in the answer. Judgment may not be linked to the context of the question. OR A well-explained evaluative judgment linked to one requirement.	1-2

3 Global brands like Haidilao and Jollibee have aggressively expanded into Singapore. Their strong finances, branding, and efficient operations have attracted large customer bases away from local eateries. This foreign competition is making it harder for smaller local firms, such as Astons Specialities, to survive in an already saturated market.

(a) Explain how increased competition from global brands benefits consumers but may cause some local eateries to exit the market. [10]

(b) Discuss whether exploiting cognitive biases or adopting price discrimination is a more effective strategy for local eateries to survive global competition. [15]

Part a

Question Interpretation

Command	Explain how- make clear a process	Most candidates were at least able to identify the requirements of the question. There were a variety of ways to explain how consumers benefited- firms being more dynamic efficient in view of competition, AR falling due to market share falling and also due to the use of predatory pricing. There were however occasional slips as students failed to make connection to consumer surplus. For the shutdown condition, there were some misconceptions that firms shut down because of subnormal profits. Many candidates also did not explain the shutdown condition fully, and how shutting down when P<AVC minimizes loses. Candidates are also reminded to state the time period when it comes to explaining shut down condition.
Content	Increased competition → MS Framework (Firm's diagram) → Benefits consumers (higher consumer surplus) Firms exit the market (P<AVC, shut down condition)	
Context	Local eateries- Singapore eatery market	
Approach	R1: Increased competition led to fall in AR, PED>1, thus fall in price, this may lead to a rise in consumer surplus. R2: Explaining competition reducing AR till AR<AC, thus, some eateries leave the market.(LR)	

Suggested Answer

Part 3a	Description	Success Criteria
Introduction	The preamble suggests that local eateries such as Astons Specialities face increased competition from foreign food chains such as the Chinese eatery chain Haidilao and Filipino fast food chain Jollibee. As the number of firms increases in the eatery industry due to more global brands, consumers may benefit from such increased competition while some local eateries may exit the market.	A1/2 Clear topic sentence
Body – R1	<u>R1: Increased competition benefits consumers</u> Increased competition increases the number of firms in the Singapore eatery market. The demand for food at a firm such as Astons Specialities will fall as the rise in number of eateries leads to increased availability of close substitutes in terms of food options at	XCD2- Failure to link more competition to falling market share and AR falling.

<table>
<tr>
<td></td>
<td>the various eateries. This leads to the demand for food at Aston's Specialities becoming more price elastic as illustrated in Fig 1 below. When AR falls from AR0 to AR1, MR also falls from MR0 to MR1. Given that the firm maximises profit by equating MC to MR, the firm's profit maximising price falls from P0 to P1 and profit maximising output falls from Q0 to Q1.

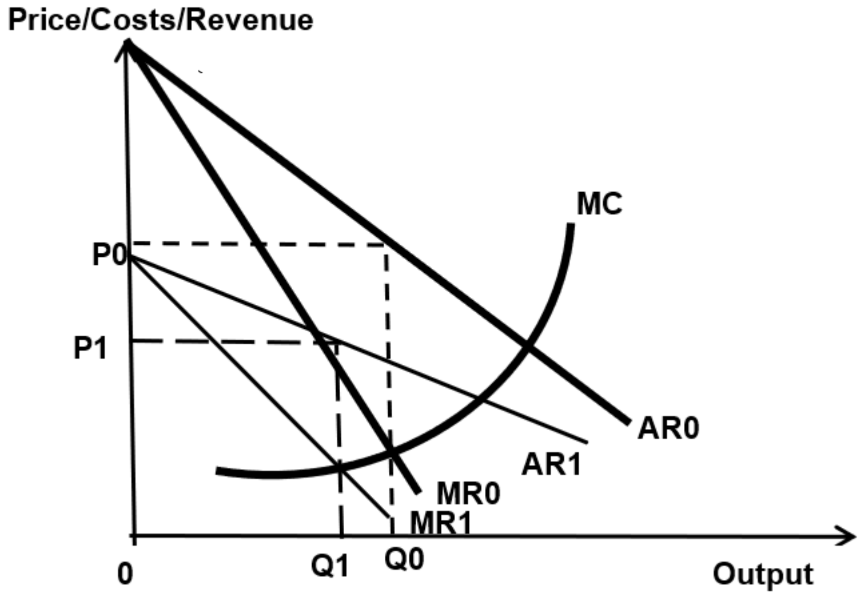


Fig 1

With the fall in food prices at the eatery and greater market quantity given an increase in market supply as a result of the increased competition, consumers benefit in terms of a greater consumer surplus. Consumers would also benefit from enjoying a greater variety of food options which will increase their satisfaction/utility.

In addition, with the increased competition from global brands in the market, it is likely that eateries are more willing to innovate which may ultimately translate to greater number of choices at lower prices for consumers.</td>
<td>XCD5- Candidates often missed analysing the shift in equilibrium points with reference to the diagram.

X CD4/5 – Occasional errors in drawing of diagram and labelling of equilibrium points

XCD2 Failure to link to consumer surplus as an outcome.</td>
</tr>
<tr>
<td>Body – R2</td>
<td><u>R2 : Increased competition causes some firms to exit market</u>
With increased competition, there will be a fall in AR due to lower market share of each firm. Thus, the local eateries may shut down in the short run if its average revenue falls till an extent where it is less than its average variable costs. (AR < AVC).

In the short run, a firm incurs both fixed and variable costs. Fixed costs are incurred regardless of the level of output produced by a firm, whereby the fixed costs remained unchanged regardless changes to output level. Even if a firm produces no output, it will still incur fixed costs. For instance, the rental for the eatery would be the fixed cost. Variable costs are incurred based on the level of production, whereby the variable cost rises as output increases. For example, the wages of the eatery waiter and cashier.

If the firm's AR have fallen below its AVC, then the profit motivated eatery will not survive. If the local eatery chooses to shut down, there will not be any variable costs incurred, but only fixed costs. However, if the local eatery chooses to continue operating the eatery, it will continue to incur both fixed costs and part of the variable costs not</td>
<td>XCD2: The shut down condition was often not mentioned at the start of the paragraph with the corresponding time frame.

XCD2: Some failed to link the increased competition to AR falling.

XCD4: Note that a diagram is not required when explaining shut down condition.</td>
</tr>
</table>

	covered by revenue. The firm cannot survive and has to shutdown (no production) to minimise loss. OR In the long run, however, the eatery must make at least normal profits. In the long run, the local eatery such as Ashtons Specialities may decide to close down and exit the industry if they make losses i.e. AR < AC. This is because in the long run, there are no fixed costs as all factors are variable. A firm will exit the industry if AR < AC, when subnormal profits are made.	XCD2 This part was often unexplained. Candidates should explain cost that the firm incurs when it shuts down vs when it continues operations and how it is optimal to shut down when P<AVC in the SR, and P<AC in the LR. XCD2 It is conceptually flawed to explain that firms shut down due to subnormal profit. Such responses will be awarded a K grade.
Conclusion	Hence, increased competition from global brands benefits consumers but may lead some local eateries to exit the market.	

Mark Scheme

Level		**Descriptor**	**Marks**
L3	A+A A+C+K A+C	Response addresses the question fully and contains excellent analytical explanations of R1 – increased competition benefit consumers and R2 – increased competition causes exit of local firms. Explains using relevant economic concepts, theories and principles in a precise, logical and reasoned manner. Response was well-contextualised.	**8 – 10**
L2	A+K C+C+K C+C A+0 C+K+K	Response contains cursory explanations of increased competition benefit consumers and R2 – increased competition causes exit of local firms. Response may not fully address question requirements (rehearsed answers). Response is not well-contextualised.	**5 – 7**
L1	C+0 K+K	Response shows some knowledge but does not indicate that the meaning of the question has been properly grasped, thus, answer may be mostly irrelevant. There may be some basic errors in theory and may contain a few valid points made incidentally.	**1 – 4**

Part b

Question Interpretation

<table>
<tr><td>Command</td><td>Discuss- An answer with multiple perspectives and a well-reasoned conclusion required</td><td rowspan="4">While candidates could describe cognitive biases, a good number failed to link it to how it can increase AR and subsequently profits. Other candidates matched cognitive biases to strategies erroneously, or did not explain how the cognitive bias was exploited to increase profits. Some listed many cognitive biases, when they only needed to list one and analyse how it helped the firm survive the competition and increase profits.

For price discrimination, most candidates grasped the key idea of how it worked but diagrammatic analysis was frequently missing. There were also some mix ups that price discrimination was synonymous with discount pricing. Candidates are advised to clarify their understanding on price discrimination and explain it using DDSS diagrams.</td></tr>
<tr><td>Content</td><td>Exploiting cognitive biases
Price discrimination
→
MS Framework (Firm's diagram)
→
Survive competiiton (Increase AR to maintain or increase profits or firm will not meet shut down condition.)</td></tr>
<tr><td>Context</td><td>Local eateries- Singapore eatery market</td></tr>
<tr><td>Approach</td><td>R1: Exploiting cognitive biases through non-price competition is effective to increase profits/survive competition

E1: Exploiting cognitive biases through non-price competition is NOT effective to increase profits/survive competition

R2: Price discrimination is effective to increase profits/survive competition

E2: Price discrimination is NOT effective to increase profits/survive competition</td></tr>
</table>

Suggested Answer

<table>
<tr><th>Part 3b</th><th>Description</th><th>Success Criteria</th></tr>
<tr><td>Introduction</td><td>Local eateries could exploit cognitive biases or adopt price discrimination to survive global competition and achieve the objective of profit maximisation.</td><td>A2 – Clear topic sentence</td></tr>
<tr><td>Body – R1</td><td><u>R1: Exploiting cognitive biases through non-price competition is effective to increase profits/survive competition</u>

Salience bias refers to the tendency for people to focus on information that is more prominent and over other less prominent but equally relevant pieces of information. A local eatery like Astons Specialities could advertise on social media or digital posters at MRT stations to highlight their special menu. Some consumers may be enticed to eat at Astons even though the difference in the quality of steak between Astons and another eatery like Jack's place may be minimal.

OR</td><td>A2 – Clear topic sentence

XCD2: Many candidates should explain the bias but did not explain how the strategies used was based on the exploitation of cognitive biases.</td></tr>
</table>

Sunk cost fallacy arises when a person's decision is affected by fixed rather than marginal costs. Thus, an economic agent will have a greater tendency to continue an endeavour once an investment in money, effort or time has been made.

Local eateries such as Astons may also survive the global competition through eateries' loyalty programs as such strategies involve some past sunk cost to induce consumers to patronise the eateries. Astons may try to get its customers to sign up and pay to become a member of its loyalty program as this may cause its customers to be more inclined to patronise its eatery as they may feel compelled to spread out the cost of the membership fee. Basically, loyalty programs and membership campaigns induce further and repeated consumption because consumers are psychologically affected by their sunk costs.

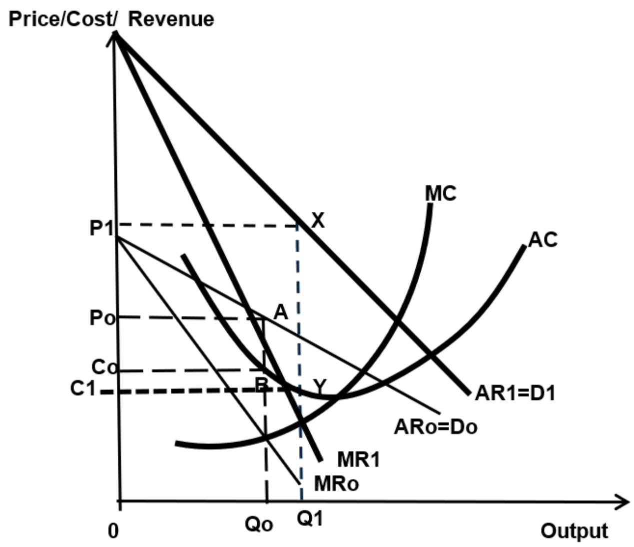
XC1: Many candidates gave multiple examples of cognitive biases, but one could suffice.

OR

Loss aversion refers to the tendency for people to prefer avoiding a loss over making an equivalent or greater gain. Local eateries such as Astons can take advantage of loss aversion through having a free or discounted meal after say the 5th meal at the eatery. Customers will be enticed to keep patronising the eatery in order not to lose out on the free or discounted meal on the 5th visit with a certain meal value. This generates more demand.

By exploiting the above-mentioned cognitive biases successfully, local eateries such as Astons would be able to increase the demand for their food items as tastes and preferences move in favour of Astons Specialities and AR.

XED is also lower as even if other eateries reduce price, Astons is now less vulnerable to suffer a fall in its demand and thus, the extent of a fall in demand is much lower.



As a result of exploiting cognitive biases, their market share may increase as they attract more consumers, AR will increase from AR0 to AR1, MR will also increase from MR0 to MR1. Profit maximizing output will increase from Q0 to Q1 where MC=MR1. As shown in Fig 1, profits increase from area PoABCo to P1XYC1, this it helps them to survive the competition.

XCD4/5 – The graphical analysis was often not well done.

Body – E1	<u>E1: Exploiting cognitive biases through non-price competition is NOT effective to increase profits/survive competition</u> However, a loyalty program which is generic and not customised would be easier to forget and limiting the effectiveness of capitalising on loss aversion to influence consumers' behaviour. Similarly, offering the same free coffee or dessert as every other eatery might not excite customers and local eatery such as Astons would not be successfully nudged to patronise its eatery repeatedly just to have a free coffee or dessert. Thus, AR increase may be very small, and this strategy may not be effective to increase profits. Furthermore, there could additional costs incurred by local eateries such as Astons if they engage in advertising (salience bias) to nudge consumers to patronise its eatery; and profits may in fact be reduced as there may be large TC increase, which may overwhelm any TR increase brought by an increase in AR, and threaten their survival given the global competition.	XEV2 – While candidates could describe the ineffectiveness of exploiting cognitive biases, they did not fully explain the implications on AR, AC/MC and thus the effectiveness on increasing profits.
Body – R2	<u>R2: Price discrimination is effective to increase profits/survive competition</u> Price discrimination occurs when a producer sells the same commodity to different buyers at different prices, for reasons not associated with differences in cost. Monopolistic competitive firms such as local eateries can conduct price discrimination due to their ability to enjoy some market power (condition of price discrimination) given their location and specialty menus. Eateries can differentiate its menus by including some unique food items for instance. The local eatery such as Astons is thus, a price setter. Other that market power, local eateries can segment the market (fulfilling the second condition of price discrimination) by classifying their customers into separate, identifiable groups. For instance, customers could be classified based on their age into students, elderly and working adults. Students and elderly can be verified through their respective concession passes issued to them to enjoy discounted meals. The students or elderly do react differently to price changes suggesting varying degrees of price elasticity of demand fulfilling the third condition of price discrimination. The group of consumers (for example, working adults) whose demand is relatively price inelastic can be charged a higher price compared to the group whose demand is relatively price elastic. For price discrimination to be successful, it must not be possible for buyers to resell good at a higher price in another market. For instance, students who paid a discounted price for students' meal must be made impossible to resell a discounted student's meal to a working adult. Lunch time promotional prices at the eateries and student/elderly vs usual prices are examples of third-degree price discrimination which refers to a situation where consumers are grouped into two or more independent markets and a separate price is charged in each market.	XCD2 Conditions for price discrimination were often not stated. XCD2 Determinant of PED was often missed out. Candidates should have written about the proportion of income spent as the PED determinant. XCD2 Some candidates only explained impact on PED<1 or >1 market, they should have explained both. XCD2 Terminology issue: It is not the good that is price elastic, but the demand of the good.

Under third-degree price discrimination, consumers are segmented into different groups with different price elasticity of demand. The group with a more price elastic demand for the eatery meals will be charged a lower price, while consumers in the group with a more price inelastic demand will be charged a higher price. The lower price charged in the group with the more price elastic demand will lead to a more than proportionate increase in quantity demanded, leading to an increase in total revenue received overall. As seen from the Figure below, the TR gain (Area B) > TR loss (Area A). Thus, reducing the price in this market results in a rise in TR. For example, the demand for meals at local eateries by students is relatively more price elastic as it takes up a large proportion of their income (weekly allowance). Therefore, by charging students a lower price for a meal, eateries will see a more than proportionate increase in quantity demanded for meals among students, which increases total revenue, assuming TC constant, profits will rise. This way, local eateries may survive global competition.

X CD4/5 – Well drawn and well referenced diagram and reference was often missing.

XCD2: There were some misconceptions that discount pricing is the same as price discrimination. There has got to be different prices charged for different submarkets.

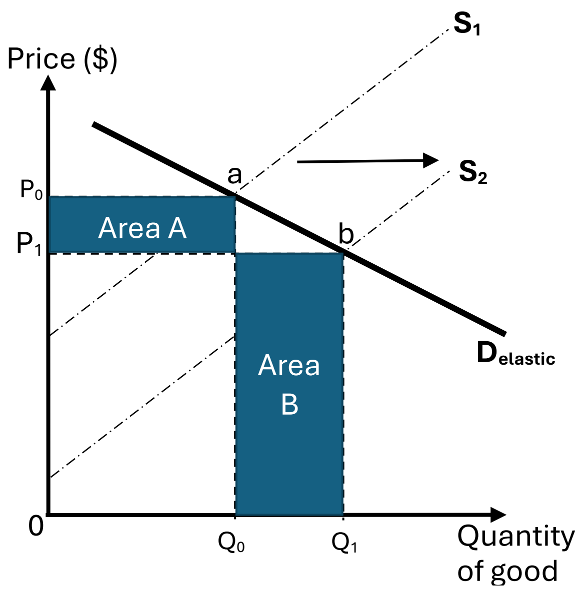
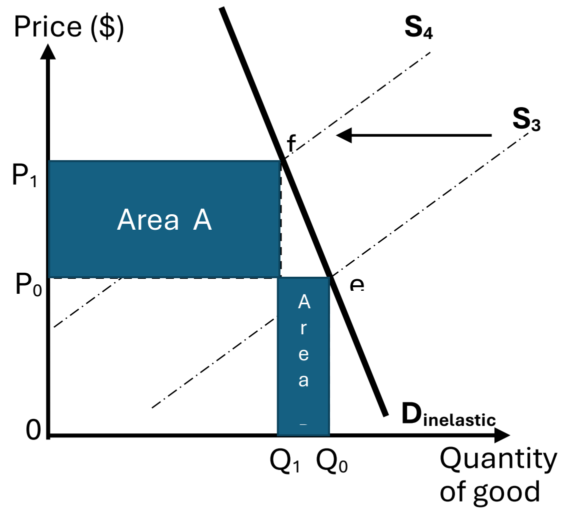


Fig 1 lower price in the market where PED>1

CD4/5 – Well drawn and well referenced diagram

The higher price charged for adult patrons at eateries who have a relatively more price inelastic demand will lead to a less than proportionate fall in quantity demanded for meals at eateries, again leading to an increase in total revenue received by the local eateries overall. As seen from the Figure below, the TR gain (Area A) > TR loss (Area B). Thus, increasing the price in this market results in a rise in TR.

	 Fig 2 higher price in the market where PED<1 This ensures that the eatery such as Astons can capture consumers from both markets by charging them different prices, as compared to charging all consumers a single price. Charging consumers a single price may cause consumers with the more price elastic demand to drop out of the market completely, resulting in a lower revenue received. Hence third-degree price discrimination allows the local eateries to earn a higher revenue as compared to charging a single price for all consumers. Assuming constant costs, a rise in total revenue would lead to an increase in profits, which could be an effective strategy for local eateries to survive global competition. In addition, price discrimination is in the interest of consumers if it enables eateries to cater to another segment of the market, which may be left out if the firm were to charge a single higher price for all units of output. For instance, if eateries charge a single price for the items in the menu, some students and elderly may not be able to afford to pay for the meals at these eateries. Consumers like the students or elderly dining at local eateries will enjoy a greater consumer surplus and their consumer welfare increases as they now have access to the eateries' meals where third-degree price discrimination is practised.	X CD2 Explain how third-degree price discrimination increases revenue and linkages to profits often not done. Candidates are advised to revise the analysis for the conduct of price discrimination.
Body – E2	E2: Price discrimination is NOT effective to increase profits/survive competition If an eatery tries to charge higher prices to inelastic demand segments of customers while other eateries offer lower prices on their menus, those customers might switch to the other eateries. The competitive pressure makes it harder to maintain higher prices for some groups without losing market share. In the face of competition, eateries may need to spend more on marketing, loyalty programs, and data collection to identify and segment consumers effectively. These extra costs can offset the additional revenue gained from price discrimination. Moreover, consumers whose demand is relatively price inelastic would be negatively affected by price discrimination as they have to pay higher price, reducing consumer surplus.	XEV2 – Some candidates stated difficulties for firms to do PD but did not explain the implications XEV2: Some candidates blindly used EV points like the firm may not have market power, when it's clear that market power exists in this context.

		XEV2: Others failed to link to revenue and cost changes. XEV1: Some candidates wrongly stated that smaller firms cannot do price discrimination because they have no market power. MC firms do have limited market power, but it does not mean they are price takers and cannot do price discrimination.
Conclusion	**Stand** In conclusion, exploiting cognitive biases is a more effective strategy than adopting price discrimination for local eateries to survive global competition. **Substantiation – Situation of STRAWS** The ceteris paribus assumption may not hold in the real world and thus eateries may not see a more than increase in quantity demanded for the meals at local eateries among students or elderly when the prices are lowered. Given that non-price competition strategies may be more feasible in the long run, it may be more effective to nudge consumers through the recognition and understanding of salience bias, sunk cost fallacy and loss aversion. **Recommendation** Notwithstanding the above, it is essential for local eateries to align their strategies to survive global competition with customer expectations, their behaviour, and even emotional connection to the eateries, and not just offer discounts. More importantly, when it comes to eateries, it is unlikely that bad service, poor quality food and unhygienic environment would be ignored simply by a loyalty program or even a free meal,	Most candidates did not get their summative conclusion graded due to poor in-text evaluations. XEV4- Few used the tool 'assumptions' to justify their points.

Mark Scheme

Knowledge, Understanding, Interpretation, Application and Analysis			
Level	**Analysis Level**	**Descriptors**	**Marks**
L3	A+A A+C+K A+C	Response addresses the question fully and contains excellent analytical explanations of R1- cognitive biases or R2 -adopting price discrimination is a more effective strategy for local eateries to survive global competition. using relevant economic concepts, theories and principles in a precise, logical and reasoned manner. Response also contains appropriate examples to show application to current situations.	8-10
L2	A+K C+C+K C+C A+0 C+K+K	Response may contain cursory explanations of R1- cognitive biases or R2 adopting price discrimination is a more effective strategy for local eateries to survive global competition. with ability to identify facts, some ability at diagrams but theory may be incompletely explained. Response may not fully address question requirements. Examples used may be inappropriate or there may be no examples used.	5-7
L1	C+0 K+K	Response shows some knowledge but does not indicate that the meaning of the question has been properly grasped, thus, answer may be mostly irrelevant. There may be some basic errors in theory and may contain a few valid points made incidentally.	1-4

Evaluation

Level	**Descriptors**	**Marks**
E3	Response contains well-explained evaluative judgments for **two** requirements and a well-justified summative conclusion	5
E2	Response contains a well-explained evaluative judgment for at least 1 requirement; the other requirement may not be well evaluated. Response may not have a summative conclusion.	3-4
E1	Response contains evaluative judgments that is unexplained or not supported by the arguments presented in the answer. Judgment may not be linked to the context of the question. OR A well-explained evaluative judgment linked to one requirement.	1-2

4 The world is currently experiencing a perfect storm of inflation, slowing growth, and international tensions. For Singapore, a small and open economy, stagflation is a significant concern. It is thus essential to prepare for tougher times ahead while maintaining flexible and responsive policies.

Adapted from: National Day Rally Speech 2023

(a) Explain why Singapore chooses to tighten its monetary policy to fight inflation by appreciating its currency rather than by raising interest rates. [10]

(b) Discuss whether the government should prioritise reducing inflation rate over inclusive economic growth. [15]

Part a

Question Interpretation

Command	Explain why- to elaborate on the causes of the issue at hand.	Most candidates were at least able to identify the requirements of the question. Candidates were able to explain how and why Singapore uses exchange rate to curb Dd-Pull or Cost-Push inflation to varying degree of accuracy. For Open economy trilemma, many only explained without using an economic framework to analyse. Some only provided reason without any explanation of mechanism on why it would not work.
Content	• Why appreciation of Currency Start Point(s) Appreciation of Currency → Tool of Analysis AD/AS Framework → End Point(s) Solving Dd-pull inflation OR Cost-push inflation • Why not raising interest rates (open economy trilemma) Start Point(s) Raising interest rates → Tool of Analysis DD/SS Framework OR LP/MS Framework → End Point(s) Interest rate returning back to original thus inflation not solved	
Context	Singapore	
Approach	R1: Why and how appreciation of currency fights inflation in Singapore R2: Why raising interest rate will not be effective in fighting inflation in Singapore, given Singapore's exchange rate policy. (Open Economy Trilemma)	

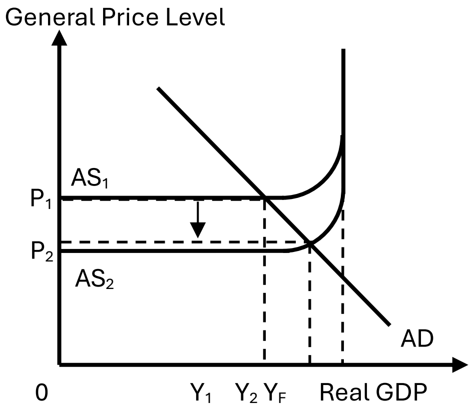
Suggested Answer

Part 4a	**Description**	**Success Criteria**
Introduction	Inflation refers to a sustained increase in the general price level of an economy over a given period of time. Singapore chooses to appreciate its currency to fight inflation instead of raising her interest rate due to her small and open economy which is highly dependent on trade and open to capital flows.	A1/2 Clear topic sentence
Body – R1	**R1: Singapore chooses to adopt gradual and modest appreciation of its currency to fight demand-pull and cost-push inflation.** As a small economy, Singapore lacks natural resources and needs to import raw materials, intermediate inputs for production as well as basic necessities such as food. As such, the economy is more susceptible to imported cost-push inflation than other economies.	

As a result, MAS adopts exchange rate centred monetary policy to keep imported inflation at bay to achieve price stability.

XCD2- Failure to link analysis to AD/AS framework as well as the price adjustment process (given qn is on inflation)

MAS of Singapore uses exchange rate as the main tool for monetary policy targeting a managed float of the SGD against a trade-weighted basket of currencies. During inflation, MAS adopted a gradual and modest appreciation of SGD. This causes prices of imported inputs to become cheaper in domestic currency. This leads to a fall in unit Cost of production which increases SRAS. This leads to a surplus at the original GPL, P1, causing a downwards pressure for prices to fall. GPL falls to a lower level from P1 to P2 when the surplus is eliminated.



XCD5- Candidates often missed analysing the shift in equilibrium point for GPL with reference to the diagram.

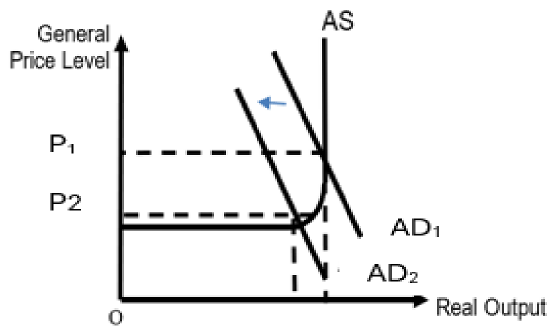
X CD4/5 – Occasional errors in drawing of diagram and labelling of equilibrium points

Alternatively

Appreciation of SGD also causes prices of exports to become more expensive in foreign currency and imports become cheaper in local currency. Assuming Marshall-Lerner condition holds, i.e. price elasticity of demand for exports and imports is greater than one, net exports will fall. For example, if the price elasticity of demand for exports is greater than one, this leads to a more than proportionate fall in quantity demanded resulting in a fall in export revenue. Also, assuming demand for imports is price elastic, this leads to a more than proportionate increase in quantity demanded leading to a rise in import expenditure. Thus, net exports fall. This leads to a fall in AD.

XCD3- Failure to complete the analysis using PED for both X and M or MLC

Figure 1: Demand-pull inflation

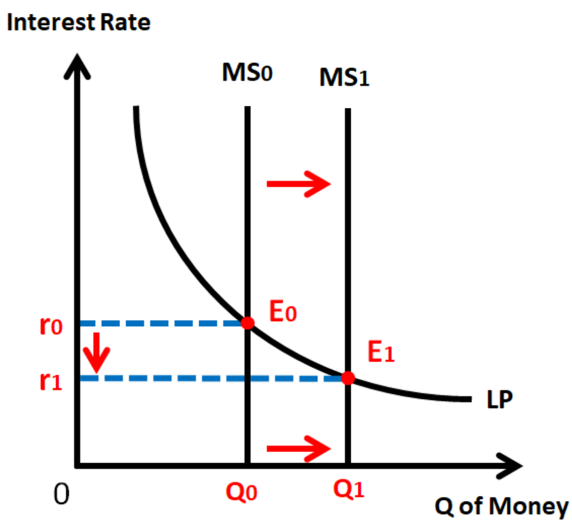


XCD5- Candidates often missed analysing the shift in equilibrium point for GPL with reference to the diagram.

X CD4/5 – Occasional errors in drawing of diagram and labelling of equilibrium points

Referring to Figure 1, the fall in AD is shown by AD curve shifting leftwards from AD1 to AD2. This creates a surplus of goods at the initial GPL (P1), exerting a downward pressure on price and output. The reverse multiplier process amplifies the initial decrease in AD due to a fall in induced consumption throughout the economy. With the decrease in production, this results in less competition for scarce resources, reducing factor prices. Firms would therefore be

XCD2- Failure to link analysis to AD/AS framework as well as the price adjustment

	willing to sell additional units at a lower price (as shown by a movement down along the AS curve). Thus, the economy re-equilibrates at lower GPL, P2. Hence, Singapore chooses to tighten its monetary policy to fight inflation by appreciating its currency.	process (given qn is on inflation)
Body – R2	**R2: Singapore does not use a rise in interest rate to reduce inflation due to open economy trilemma.** In the context of Singapore with free capital mobility due to her reliance on FDI, and a managed float to combat imported inflation due to her scarcity of resources as a small open economy., the choice to manage exchange rate means that MAS will not be able to have control over interest rate. This is the open economy trilemma faced by an economy. Assuming MAS increases interest rates to combat demand pull inflation, it means that domestic interest rates will now become higher than world interest rates, hot money inflows will take place as speculators seek higher interest returns. This increases the demand for Singapore currency in the foreign exchange market, leading to an appreciation. To stabilize the exchange rate and prevent it from appreciating above the upper limit of the exchange rate policy band, MAS has to sell Singapore currency in the foreign exchange. This increases money supply in the banks, from MS_0 to MS_1. This results in a fall in interest rate. Hence, this negates the initial rise in interest rate causing the interest rate policy to be ineffective. Hence, the open economy trilemma resulted in Singapore choosing exchange rate over interest rate cantered monetary policy.  	XCD2: Some were unable to link to hot money inflow XCD2: Some did not complete the analysis by explaining the impact of having a managed float exchange rate policy on domestic money supply XCD4: Note that a diagram is not required when explaining increase in money supply . Candidates are also to replace it with a typical Dd/Ss diagram to illustrate the fall in i/r
Conclusion	Hence, Singapore chooses to tighten its monetary policy to fight inflation by appreciating its currency rather than by raising interest rates.	

Mark Scheme

Knowledge, Understanding, Interpretation, Application and Analysis			
Level	**Analysis Level**	**Descriptors**	**Marks**
L3	A+A A+C+K A+C	Response addresses the question fully and contains excellent analytical explanations of (R1) and (R2) using relevant economic concepts, theories and principles in a precise, logical and reasoned manner. Response also contains appropriate examples to show application to current situations.	8-10
L2	A+K C+C+K C+C A+0 C+K+K	Response may contain cursory explanations of (R1) and (R2) with ability to identify facts, some ability at diagrams but theory may be incompletely explained. Response may not fully address question requirements. Examples used may be inappropriate or there may be no examples used.	5-7
L1	C+0 K+K	Response shows some knowledge but does not indicate that the meaning of the question has been properly grasped, thus, answer may be mostly irrelevant. There may be some basic errors in theory and may contain a few valid points made incidentally.	1-4

Part b

(b) Discuss whether the government should prioritise reducing inflation rate over inclusive economic growth. [15]

Question Interpretation

<table>
<tr><td>Command</td><td>Discuss- An answer with multiple perspectives and a well-reasoned conclusion required</td><td rowspan="4">Many candidates mistook this as a policy question and discussed on how low inflation rate and inclusive economic growth was achieved

Many candidates had difficulty establishing the benefit(s) to C,P,G due to the attainment of a more inclusive growth

Evaluation of argument was much to be desired as opposed to limitations of policies</td></tr>
<tr><td>Content</td><td>Start Point(s)
Not reducing inflation rate
→
Tool of Analysis
AD/AS Framework
Macro indicators
→
End Point(s)
Adverse effects on Consumers , Producers or govenment/society</td></tr>
<tr><td>Context</td><td>Singapore</td></tr>
<tr><td>Approach</td><td>R1: Government may choose to prioritize reducing inflation due to the adverse effects of high inflation

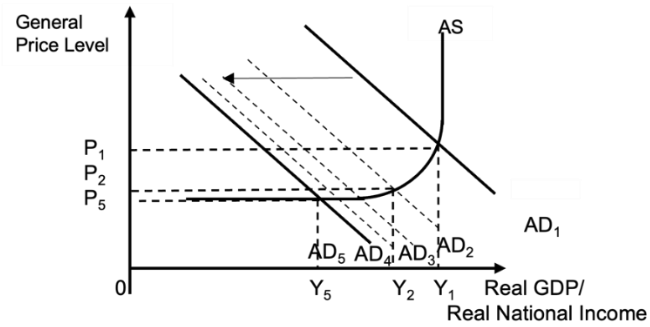
E1: Extent of adverse effects due to high inflation due to nature of economy

R2: The achievement of inclusive growth is also important to the government

E2: Extent of benefit(s) due to inclusive growth may be limited</td></tr>
</table>

Suggested Answer

Part 4b	**Description**	**Success Criteria**
Introduction	A government would like to achieve both the macro aims of reducing inflation and having inclusive economic growth. However, policies to achieve one aim may sometimes result in the trade-off of the other aim. Thus, a decision is needed on which aim should be prioritized. While both aims bring many benefits to the economy, depending on the magnitude and current economic condition, the government may prioritize one aim more than the other.	A2 – Clear topic sentence
Body – R1	**R1: Government may choose to prioritize reducing inflation due to the adverse effects of high inflation** A country may choose to prioritize reducing inflation due to the adverse effects that high inflation can bring. If a country's inflation rate is relatively higher than its trading partners, her X will become more expensive compared to those from its trading partners. If demand for X is price elastic due to availability of substitutes, this will cause a more than proportionate decrease in quantity demanded causing X earnings to fall. At the same time, prices of imports become relatively cheaper than home-produced goods. People switch to domestic goods and import expenditure increases. This causes a decrease in net exports resulting in a worsening of trade balance. This is very detrimental to trade dependent countries such as Singapore as trade takes up 66% of her GDP. Also, if there is high and unpredictable inflation, this results in a more pessimistic economic outlook. Firms will struggle to	A2 – Clear topic sentence XCD2: Many candidates should explain how PED will affect the impact on X and M

	accurately forecast future revenue and costs resulting in them being less confident to take risks due to the higher uncertainties. This leads to a fall in level of investment, With a fall in (X-M) and I, being components of AD, this will cause AD to fall from AD_1 to AD_5. If economy is near full employment level, at the intermediate stage of AS, real national income will fall by a multiple through the multiplier process. This occurs as when AD falls, this leads to a decrease in real national income leading to induced consumption falling and hence further rounds of decreases in national income. This leads to a multiple decrease in real national income from Y_1 to Y_5 resulting in fall in actual growth. With a rise in inventories, production falls and firms will employ less factors of production causing derived demand for labour to fall. This leads to a rise in demand-deficient unemployment too.  High inflation also causes the real value of wages and savings to be eroded, and this adversely affects household especially the lower-income group. This causes their living standard to be adversely affected. As rising prices can also trigger public discontent which brings economic instability, it is hence important that inflation is reduced in a country.	XCD2: Many candidates should explain the multiplier process and its impact on RNY XCD4/5 – The graphical analysis was often not well done.
Body – E1	The extent in adverse consequences of inflation can be very detrimental to a small and open economy such as Singapore. Reducing inflation would help her to remain globally competitive and attract foreign direct investment. This is important as she is highly dependent on trade flows and capital flows to achieve economic growth. The benefits of reducing inflation would also be large since Singapore imports almost all of its food, energy, raw material and goods and thus keeping inflation low ensures affordability for households.	XEV2 – most candidates provided effectiveness of policies which were not relevant to the question
Body – R2	**R2: The achievement of inclusive growth is also important to the government** Inclusive growth occurs when growth is broad-based across economic sectors and creates productive employment opportunities for most people in the economy. When such growth occurs, there is sustained economic growth and income inequality is reduced or not worsened. The achievement of inclusive growth is important as it can lead to improvement in the standard of living. Standard of living (SOL) refers to the well-being of an average person in the country. It comprises of material and non-material SOL. Greater sustained growth leads to an increase in national income (NY). Assuming that population and inflation is unchanged, real GDP per capita will increase. This will then lead to greater purchasing power for an average citizen, allowing more goods and services to be available for consumption and hence leading to a higher material standard of living.	XA1 Many candidates are unable to select a relevant point to the question, instead focusing on policies to achieve inclusive growth XCD1&2 Many candidates were not able to establish on benefits of attaining inclusive growth with

<table>
<tr>
<td></td>
<td>With higher income level, households would also be able to spend more on education and healthcare services. This increases the quality of life and Human Development Index (HDI) which increases non-material SOL.

Inclusive growth also enables the government to collect a larger amount of direct tax such as corporate tax as firms' profits increase. A larger amount of direct tax such as personal income tax is also collected when growth is inclusive and there is more employment and households earn more. Also, when growth is inclusive, the government would spend less on retraining the unemployed and equipping them with the right skills to stay employed. Thus, there is less government expenditure (G). The fall in G and rise in tax revenue result in more funds and this can be further channelled to help the low-income families and low wage earners. These funds can supplement their income and hence increase their standard of living. An example is the COMCARE social assistance schemes in Singapore.

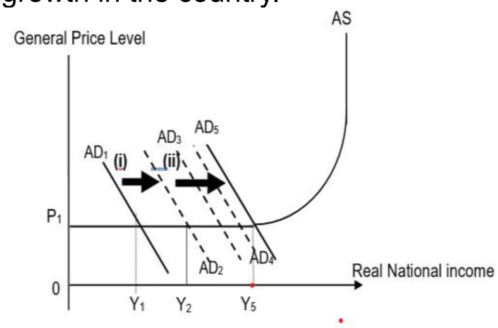
Inclusive growth can also drive further economic growth by stimulating higher levels of consumption, particularly among the low-income households. Government may also issue transfer payments to the poor who has a higher MPC to achieve inclusive growth. This leads to an increase in consumption which increases AD and cause a rightward shift of AD from AD_1 to AD_2. Through the multiplier process, this leads to further economic growth from Y_1 to Y_5. Thus, sustained and inclusive growth generates further growth in the country.


Figure 1: Changes in Aggregate Demand</td>
<td>the use of relevant economic framework

C1: Some candidates are able to provide examples of policies to attain inclusive growth

XCD2 Few candidates are able to explain impact of MPC on C and hence AD just by redistributing income and its impact on macro-economic goals

X CD4/5 – Well drawn but reference was often missing.</td>
</tr>
<tr>
<td>Body – E2</td>
<td>However, real GDP per capita is an average value and it does not consider the distribution of income. This means that the increase in income can be due to the few rich becoming richer while the majority of the people has become poorer or may not experience any increase in income. Hence to measure SOL more accurately, Gini coefficient which measures income inequality should be included.
Also, real GDP increases fail to consider the quality of the physical environment. If production increases lead to rising negative externalities such as rising pollution in the country, this could lead to a worsening of NMSOL. For example, people living in Hanoi may be experiencing a rise in real GDP per capita, but Hanoi is one of the most polluted cities in the world. Quality of life may not improve and NMSOL may hence not be rising.</td>
<td>XEV2 – most candidates provided effectiveness of policies which were not relevant to the question</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Stand: Whether the government should prioritise reducing inflation rate over inclusive economic growth depends on the severity of the problem and current economic condition.

Substantiation: If inflation is very high and prolonged in a country, then reducing inflation should be prioritized to reduce the adverse effects and bring about economic stability. Moreover,</td>
<td>Most candidates did not get their summative</td>
</tr>
</table>

	reducing inflation and achieving price stability will help Singapore achieve sustainable economic growth as it maintains confidence in the economy which encourages investment. On the other hand, inclusive growth can be the priority when it is important to prioritize the building of social cohesion by having more people employed and promoting equitable access to resources to reduce the risk of social unrest and this helps to foster long-term economic stability. **Recommend**: To reduce inflation and promote inclusive growth can however be achieved simultaneously in a country when the government uses a mixture of policy measures to target both aims such as the use of supply-side policies to reduce inflation and promote growth at the same time.	conclusion graded due to poor in-text evaluations.

Mark Scheme

Knowledge, Understanding, Interpretation, Application and Analysis			
Level	**Analysis Level**	**Descriptors**	**Marks**
L3	A+A A+C+K A+C	Response addresses the question fully and contains excellent analytical explanations of (R1) and (R2) using relevant economic concepts, theories and principles in a precise, logical and reasoned manner. Response also contains appropriate examples to show application to current situations.	8-10
L2	A+K C+C+K C+C A+0 C+K+K	Response may contain cursory explanations of (R1) and (R2) with ability to identify facts, some ability at diagrams but theory may be incompletely explained. Response may not fully address question requirements. Examples used may be inappropriate or there may be no examples used.	5-7
L1	C+0 K+K	Response shows some knowledge but does not indicate that the meaning of the question has been properly grasped, thus, answer may be mostly irrelevant. There may be some basic errors in theory and may contain a few valid points made incidentally.	1-4

Evaluation

Level	Descriptors	Marks
E3	Response contains well-explained evaluative judgments for **two** requirements and a well-justified summative conclusion	5
E2	Response contains a well-explained evaluative judgment for at least 1 requirement; the other requirement may not be well evaluated. Response may not have a summative conclusion.	3-4
E1	Response contains evaluative judgments that is unexplained or not supported by the arguments presented in the answer. Judgment may not be linked to the context of the question. OR A well-explained evaluative judgment linked to one requirement.	1-2

5. Grave global challenges are emerging with geopolitical conflicts and escalating trade wars between the US and China. Additionally, Singapore faces the challenge of reshaping jobs amid AI and digital transformation.

(a) Explain **one** domestic and **one** external cause of unemployment in Singapore. [10]

(b) Evaluate the extent to which raising exports is the most appropriate approach to reduce unemployment in an increasingly uncertain world. [15]

Part a

Question Interpretation

Question Interpretation Table		
Command	**Explain how**	Overall, most students are able to explain the 2 different types of causes of unemployment and linking it to a domestic or external factor.
Content	Trade war External factor AI and digital transformation Domestic Factor → AD/AS → Demand Deficient unemployment Structural unemployment	
Context	**Singapore**	
Approach	**Intro: Key definitions and overview** **R1:** How trade war causes demand-deficient unemployment in Singapore **R2:** How AI and digital transformation cause structural unemployment **Conclusion: One-liner conclusion**	

Suggested Answer

Intro	Unemployment rate is measured by the percentage of labour force that is unemployed. Unemployment occurs when people who are willing and able to work and are actively looking for jobs cannot find one. There are mainly 2 key types of unemployment: demand-deficient and structural unemployment. The former occurs when there is deficiency in AD or a rise in cost of production. The latter occurs due to a mismatch of skills by the unemployed and those required by employers.	Most students did not define unemp, structural unemp and demand-deficient unemp.
R1	**How trade war between US and China causes demand-deficient unemployment in Singapore** One external factor that causes demand-deficient unemployment in Singapore is due to the trade war between US and China. When the latter occurs, this may take the form of US imposing tariffs on imports from China. For example, when a tariff of 30% is imposed on goods imported into US from China say on semi-conductors, this increases the domestic prices of such imports. This leads to an increase in price for US consumers causing the demand for such imports to fall. Hence import expenditure fall for US. This will result in a fall in demand for exports from China. As Singapore exports intermediate goods to China for their production, this will also cause exports from Singapore to fall leading to a fall in net exports and subsequently a fall in AD. In addition, with higher tariffs imposed on China, this can reduce its exports and slow down the economic growth of China via the reverse multiplier effect. As the national	xCD1 Many students explained that trade war leads to a fall in exports in Singapore but did not use economic analysis to explain why this occurs. XCD2 Some students merely mentioned that trade war leads to a pessimistic outlook and link this to a fall in demand for C and I only. It is important to explain the impact of trade wars on net exports too.

<table>
<tr><td></td><td>income of China falls, this will reduce their demand for imports since import is a function of national income. Singapore will thus experience a further fall in exports.

Moreover, with the heightened trade war, the global economic outlook can turn pessimistic, and this can lead to a fall in investment in Singapore as expected rate of return will fall. Hence investment by firms decreases. This can lead to an investment (I).

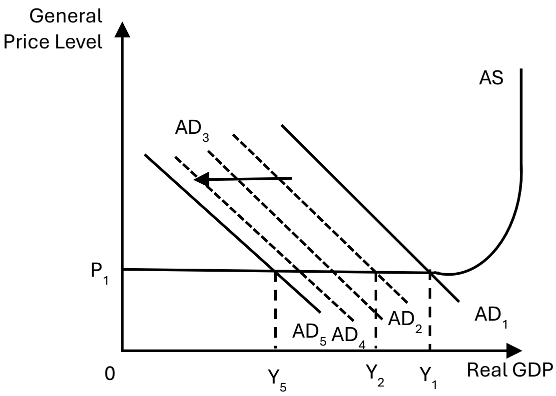
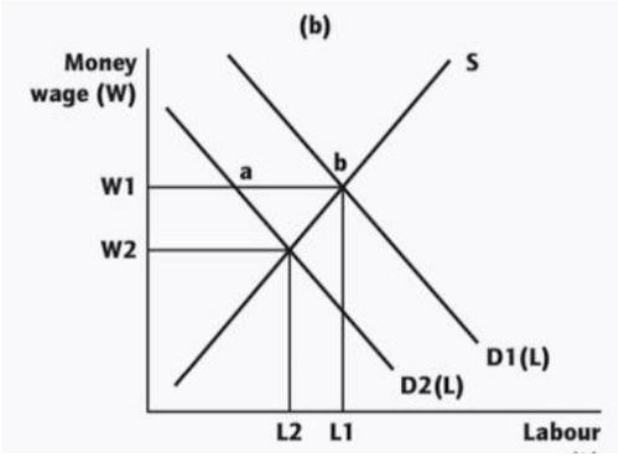


Figure 1

With a fall in C, I and (X-M), this leads to a fall in AD and through the reverse multiplier effect causes a multiple fall in real national income in Singapore. As shown in Fig 1, with an initial fall in AD from AD_1 to AD_2, real national income falls from Y_1 to Y_2. Assuming the economy is below full capacity, this results in firms decreasing output and employing less factors of production. This causes a decrease in national income which reduces induced consumption. This triggers successive rounds of decrease in national income and induced consumption. In each round, the decrease in both gets smaller. The process will come to an end when the decrease in national income is too small to reduce induced consumption further. Thus, the initial decrease in AD results in a multiplied decrease in real national income from Y_1 to Y_5 in Figure 1. Due to the decrease in AD, there is an unplanned rise in inventory. Firms respond by reducing output and hence the derived demand for all factors of production including labour decreases. This leads to demand-deficient unemployment in Singapore.</td><td></td></tr>
<tr><td>R2</td><td>How new technology such as AI and digital transformation cause structural unemployment

With the emergence of new technology such as AI and digital transformation, workers can be displaced or retrenched as machines are taking over some of the jobs. This leads to a fall in demand for low-skilled workers.</td><td>xCD4 Most students did not include the diagram on the demand and supply of low-skilled workers to explain structural unemployment.

XCD2 Students did not explain clearly how technology leads to a displacement of workers or retrenchment which contributed to the rise in unemployment. An example would be appropriate.</td></tr>
</table>

	 As shown in the diagram above, there is a fall in demand for workers from D1 to D2, leading to a surplus of workers at the initial wage rate W1 as Qs is more than Qd. These unemployed workers lack the relevant skills to find employment in other industries resulting in a mismatch of skills between the unemployed and the skills demanded by other employers. For example, low-skilled factory workers are retrenched when firms adopt automation in the operation lines. However those retrenched do not have the skills to work in jobs required in the high-tech sectors. As a result, occupational immobility occurs as workers cannot move to other industries giving rise to structural unemployment.	XCD2 A detailed explanation of how the mismatch of skills between that of unemployed and those required by employers is missing in some of the scripts. Ie retrenched workers cannot move on to other jobs due to lack of relevant skills required.
Conc	Thus trade wars and emerging tech such as AI and digital transformation can lead to both demand-deficient and structural unemployment.	

Mark Scheme

Knowledge, Understanding, Interpretation, Application and Analysis			
Level	**Analysis Level**	**Descriptors**	**Marks**
L3	A+A A+C+K A+C	Response addresses the question fully and contains excellent analytical explanations of (R1) and (R2) using relevant economic concepts, theories and principles in a precise, logical and reasoned manner. Response also contains appropriate examples to show application to current situations.	8-10
L2	A+K C+C+K C+C A+0 C+K+K	Response may contain cursory explanations of (R1) and (R2) with ability to identify facts, some ability at diagrams but theory may be incompletely explained. Response may not fully address question requirements. Examples used may be inappropriate or there may be no examples used.	5-7
L1	C+0 K+K	Response shows some knowledge but does not indicate that the meaning of the question has been properly grasped, thus, answer may be mostly irrelevant. There may be some basic errors in theory and may contain a few valid points made incidentally.	1-4

Part b

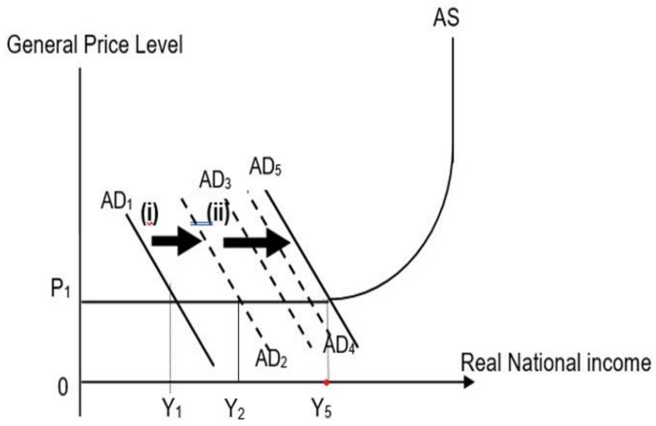
Question Interpretation

Question Interpretation Table		
Command	Discuss	Overall rather well done. A number of students did not explain the policy to raise exports for R1.
Content	Raising exports / Other policies → AD/AS analysis → Address unemployment problems	
Context	A country such as Singapore	
Approach	Intro: Key definitions and overview	

R1	R2	R3
R1: Raising exports through policies such as FTA or depreciation of ER is used to reduce demand-deficient unemployment	R2: Other policies such as supply-side policy on education and training is used to reduce structural unemployment in Singapore.	R3: A third policy (either DD side or another SS side policy)
E1: Limitation of policy to promote exports	E2: Limitation of supply-side policy	
Conclusion: Stand, Substantiation, Something Special		

Suggested Answer

Intro	In the face of the different types of unemployment, the government can use policies to raise exports to reduce such unemployment. However, such measures have its limitations in addressing structural unemployment and other policies are need to address it.	
R1	Raising exports can reduce demand-deficient unemployment by increasing AD in an uncertain world. In Singapore's highly open economy, raising exports contributes significantly to aggregate demand (AD), since net exports (X−M) are a component of AD. One way to raise exports is through Free Trade Agreements (FTAs), which reduce tariffs and non-tariff barriers, making Singaporean goods and services more price competitive in foreign markets. For instance, under the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), Singapore exporters gain preferential access to large markets such as Japan and Australia. When such tariff reductions cause export prices to fall, and assuming the price elasticity of demand for exports (PEDx) is greater than 1, there will be a more than proportionate increase in the quantity of exports demanded. This leads to higher export revenue, boosting AD.	XCD2 Many scripts miss out the explanation on how to increase exports through relevant policies such as FTAs or depreciation of ER. XCD2 Some students did not highlight the type of unemployment addressed.

	 Assuming the economy is not at full employment level, with an increase in AD from AD_1 to AD_2, firms will employ more factors of production to increase production of output, which increases RNY from Y1 to Y2. This causes an increase in national income, which will increase income induced consumption and result in a further increase in AD. This triggers successive rounds of increases in national income and income induced consumption. At each round, the increase in both gets smaller. The multiplier process will end when the increase in national income is too small to generate further increase in induced consumption. This leads to a multiplied increase in RNY from Y1 to Y5. Therefore, actual economic Growth is achieved. **Link to a fall in Demand-deficient Unemployment:** As the AD rises, it gives rise to an unplanned fall in inventory and firms will increase the level of production. This will increase their demand for factors of production and increase the derived demand for labour. Export sectors such as electronics, chemicals, and precision engineering and related industries stand to benefit from this surge in demand. Therefore, demand-deficient unemployment falls when exports is raised. (Other ways to increase exports such as through the depreciation of ER is acceptable)	
E1	• The extent to which a country such as Singapore can increase exports through FTAs depends on many factors. With the reduction in tariffs among countries in RCEP, trade will now be based on the true opportunity cost in production in respective countries. This in turn depends on the cost-effectiveness in production in Singapore relative to other member countries. In the event that another member country can produce the same good at a lower opportunity cost than Singapore, the improvement in trade competitiveness may be limited. • In actual practice, the terms of the agreement depends on the bargaining power of countries involved. Competitors can also negotiate with our trading partners and clinch a better deal such as greater tariff cuts and preferential customs treatment that can decrease costs, thereby eroding our competitive advantage. Or This approach may be less effective in the face of increasingly uncertain world. Geopolitical tensions and rising trend of protectionism can undermine global trade flows and investor	XEV2 Many students merely state and briefly explain the factor without elaboration. For effectiveness, should focus how the factor limits the extent of change in AD. XEV Must consider the inappropriateness of policy as evaluation rather than the appropriateness of policy.

	confidence. Singapore's external demand (due to weakening net exports and foreign direct investments) continues to contract, potentially leading to a contraction in the AD and contraction in the RNY. In such climate, firms would refrain from increasing derived demand for labour. Hence the unemployment problem may still persist.	
R2	As the promotion of exports is not able to reduce structural unemployment, another policy is needed to reduce structural unemployment. One such policy is the use of supply-side policies by the government to provide subsidies for education and training. For example, in Singapore, the SkillsFuture Credit Scheme provides up to $1000 credit to eligible Singaporeans to attend approved courses. This aims to support training which increases the skills of workers. This helps workers to have the skills to operate the more advanced machines or the use of AI in the area of work making them become more employable. This reduces occupational immobility as now unemployed workers can now move to work in other industries. Such skills training reduce the mismatch of skills and hence structural unemployment is reduced.	XCD2 Most students are unable to give specific examples of relevant skills learnt to reduce the mismatch of skills. XCD2 Some students are not able to explain how SkillsFuture works in details. They only briefly mention that education and training is used without explaining how this is carried out with government intervention.
E2	**Receptiveness of workers to training**: Its success depends on the attitude and aptitude of workers towards training. Some especially the less educated may not be receptive to learning new skills due to fear of the unknown, lack of confidence, or attachment to their previous role. Employers may also be reluctant to send their workers for training in fear of losing them once they are trained. In such cases, the extent of benefits in terms of reducing skill mismatch and improving occupational mobility will not be significant, limiting the effectiveness of supply-side policies. Any other reasons such as requirement of government funds.	XEV2 Some answers are too brief and did not provide a more detailed analysis of its limitations or appropriateness.
R3	**Any other policies to reduce demand-deficient unemployment such as expansionary fiscal policy** ***If new technologies like AI are substitutes for labour*** Can also use demand side expansionary fiscal policy → increase government expenditure to build Smart Nation (2020-2024) → Eg government spending on cybersecurity and digital government services etc → increase demand for workers with about 20,000 total jobs created → fall in demand-deficient unemployment To be effective, needs to be accompanied by skills upgrading and training of workers.	
Conc	**<u>Stand</u>**: Raising exports is not the most appropriate to respond to unemployment in a country such as Singapore in an increasingly uncertain world as it does not address both root causes of unemployment. **<u>Justifications:</u>** In the light of emergence of new technology AI resulting in further digitalization and automation, raising export is insufficient as it does not reduce structural unemployment. Thus it is important to have a combination of policies together with supply-side policies to address structural unemployment. **<u>Recommend</u>**: However, demand-management policies such as expansionary fiscal policy can also be important if the condition in the economy is very bad especially when trade wars lead to severe fall in exports. For example, Singapore government	EV Some students are not able to weigh the two policies using a common criteria.

	spent close to $100b to reduce the fall in real GDP in 2020 and keep unemployment low. **Alternative Evaluation:** **Contextualised evaluation**: As shown in the preamble, uncertainties can arise from geopolitical conflicts, trade war and disruptive technologies, the government needs to consider which of these has greater negative impact on unemployment to assess the appropriateness of the policies . As technology is constantly evolving, it can be argued that the risk of structural unemployment is greater and is likely to persist. In this respect, supply-side policies to reduce structural unemployment is more appropriate. In comparison, demand-deficient unemployment may probably be less severe and short term as economies experience cyclical fluctuations. Also, when demand-deficient unemployment occurs, whether raising exports is the most appropriate approach will also depend on the nature of the economy. In view of this, supply-side policy in the form of training is preferred over promoting exports.	

Mark Scheme

Knowledge, Understanding, Interpretation, Application and Analysis			
Level	**Analysis Level**	**Descriptors**	**Marks**
L3	A+A A+C+K A+C	Response addresses the question fully and contains excellent analytical explanations of (R1) and (R2) using relevant economic concepts, theories and principles in a precise, logical and reasoned manner. Response also contains appropriate examples to show application to current situations.	8-10
L2	A+K C+C+K C+C A+0 C+K+K	Response may contain cursory explanations of (R1) and (R2) with ability to identify facts, some ability at diagrams but theory may be incompletely explained. Response may not fully address question requirements. Examples used may be inappropriate or there may be no examples used.	5-7
L1	C+0 K+K	Response shows some knowledge but does not indicate that the meaning of the question has been properly grasped, thus, answer may be mostly irrelevant. There may be some basic errors in theory and may contain a few valid points made incidentally.	1-4

6. Globalisation has lifted hundreds of millions out of poverty, particularly in China and India. However, critics argue that it has also increased inequality in some Western nations, where losses in manufacturing jobs have adversely affected working-class communities.

Source: BBC News, 17 June 2022

(a) Explain how economists typically use national income statistics to compare standard of living across countries and one reason why it may be an inadequate measure. [10]

(b) Assess how far globalisation can improve the standard of living for residents in various countries. [15]

Part a

Question Interpretation

Command	Explain
Content	Real GDP per capita (PPP) → mechanism → MSOL Real GDP per capita (PPP) → limitation → while MSOL high but overall SOL may be low
Context	Singapore
Approach	Intro: Key definitions and overview R1: Explain how NY statistics measure indicate MSOL across countries R2: Explain the limitations of the indicator Conclusion: Stand, Substantiation, Something Special

In summary, candidates showed awareness of the question's demands, but a sizeable number failed to provide developed analysis beyond listing and occasionally defining indicators.

For the first part, many identified real GDP per capita, but few explained why per capita is important for valid cross-country comparison. A common misconception was treating per capita and purchasing power parity (PPP) as limitations, when in fact they are adjustments that improve comparability. Very few candidates explained the significance of PPP in accounting for cost-of-living differences.

For the second part, many candidates listed alternative indicators (e.g. HDI, GINI) without first addressing the limitations of GDP per capita itself. Stronger responses evaluated 1 shortcoming such as exclusion of non-market activities, inequality, and qualitative aspects of well-being. Weaker responses relied on undeveloped lists.

Suggested Answer

Intro	National income statistics like GDP are used to compare standard of living across time and space. This essay aims to explain how such statistics are used to compare SOL over space and how they may not be accurate.	
R1	One commonly used measure of standard of living across countries is real Gross Domestic Product (GDP) per capita, adjusted for purchasing power parity (PPP). GDP on its own measures the total market value of final goods and services produced within a country's boundaries, but it does not account for population size. For example, a large country like China may have a higher total GDP than a small country like Singapore. However, Singapore's smaller population allows for a much higher average income per person. While China's GDP far exceeds that of Singapore, Singapore's GDP per capita is significantly higher, indicating that the average Singaporean has greater access to goods and services. This suggests a higher material standard of living (mSOL) for Singaporeans. Therefore, to make cross-country comparisons more meaningful, GDP must be adjusted per capita, which divides total output by the population to provide an estimate of the average income per person. However, GDP per capita alone can still be misleading because it does not account for differences in cost of living across countries. For example, a person earning US$10,000 in a low-cost country may enjoy a better standard of living than someone earning US$20,000 in a high-cost country. Therefore, GDP per capita must be further adjusted for purchasing power parity (PPP), which accounts for what people can actually buy in their domestic economy. This allows for more accurate comparisons of real purchasing power across countries. To adjust for PPP, economists use PPP exchange rates instead of market exchange rates. A PPP exchange rate is the rate at which the currency of one country must be converted into another country's currency to purchase the same basket of goods and services in both countries. This reflects the true purchasing power of income by adjusting for cost of living differences. By using PPP exchange rates, we can compare real GDP per capita (PPP) in a way that better captures the average person's ability to consume goods and services, making it a more accurate measure of material standard of living than using nominal income figures based solely on market exchange rates. For example, India's nominal GDP per capita is much lower than that of the United States when converted using market exchange rates. However, when using PPP-adjusted figures, India's GDP per capita rises significantly due to its lower cost of living. This better reflects the real purchasing power and material well-being of the average Indian resident as they would be able to enjoy a greater amount of goods and services. Hence, real GDP per capita (PPP) is widely regarded as a more reliable and comparable indicator of living standards across countries.	XA1 and 2: Unclear topic sentence. Some started off without identifying indicators for measurement XA1: "Per capita" is not a limitation of GDP, it is an adjustment made to enhance usefulness of national income statistic XCD2 and 5: Did not explain why both population adjustments is integral to the measurement of MSOL XC1 and 2: Lack of relevant example to <u>compare across countries</u>. XA1: "Purchasing power parity" is not a limitation of GDP, it is an adjustment made to enhance usefulness of national income statistic XCD2: Sorely lacking in the explanation of how GDP per capita adjusted for purchasing power affects measurement of MSOL XC1 and 2: Lack of relevant example to <u>compare across countries</u>.

R2	While a higher real GDP per capita adjusted for purchasing power parity may suggest an improvement in material standard of living (MSOL), it does not necessarily imply that overall standard of living (SOL) is higher. Higher GDP per capita (adjusted for ppp) in a country could be due to strong economic growth achieved at the expense of the environment through greater pollution, resource depletion, and loss of biodiversity. These negative externalities can create health issues and thus reduce life expectancy and overall quality of life, undermining non-material aspects of SOL. Thus, if the fall in non-material SOL supersedes the rise in material SOL, SOL will fall. As a result, a country may record high GDP per capita (adjusted for ppp) but still have a lower Human Development Index (HDI) if its environmental degradation adversely impacts health outcomes, indicating that overall SOL is not higher. Thus, GDP per capita (PPP) would have provided an inaccurate comparison of SOL across countries. Or While the real GDP per capita is high, SOL may not be high in a country as compared to another country. This is due to the unequal income distribution in the country. In countries where wealth is heavily concentrated in the hands of a small elite, real GDP per capita may appear high, but this figure can be misleading. If the gains in national income are disproportionately enjoyed by a small segment of the population, the majority may not experience any significant rise in living standards. As such, GDP per capita can overstate the average citizen's well-being, especially in economies with high income inequality. Thus it is important to look at the Gini coefficient to ascertain the level of income gap in a country. A value which is closer to 0 indicates better income distribution. For example, Singapore's Gini coefficient of 0.437 in 2022 is higher compared to many countries in OECD. (This is slightly better at 0.378 after taking into account government transfers).	XA1: Many did not highlight the shortcoming of national income indicator listed earlier. XCD2: Did not explain how the chosen limitation affects the measurement of overall SOL XCD2: Did not recommend an alternative indicator. XA1: Many did not highlight the shortcoming of national income indicator listed earlier. XCD2: Did not explain how the chosen limitation affects the measurement of overall SOL XCD2: Did not recommend an alternative indicator.
R3	A rise in real GDP per capita **<u>may indirectly</u>** lead to higher quality of life. Rising real GDP per capita allows more government tax revenues to be collected (assuming tax rates remain unchanged), which can be used to enhance social welfare through increased provision of merit goods such as healthcare and education. This could lead to improvements in life expectancy, literacy rates, and overall well-being, thereby boosting non-material aspects of standard of living, as reflected in the Human Development Index (HDI). For example, Norway, with one of the highest GDP per capita figures globally, is known for strong welfare system, suggesting a positive link between real GDP per capita and quality of life.	
Conc	In conclusion, while real GDP per capita is commonly used to measure SOL, it has its limitations. Hence composite indicators such as HDI are both widely used to assess standard of living as it measures the MSOL and NMSOL.	

Mark Scheme

Knowledge, Understanding, Interpretation, Application and Analysis			
Level	**Analysis Level**	**Descriptors**	**Marks**
L3	A+A A+C+K A+C	Response addresses the question fully and contains excellent analytical explanations of (R1) and (R2) using relevant economic concepts, theories and principles in a precise, logical and reasoned manner. Response also contains appropriate examples to show application to current situations.	8-10
L2	A+K C+C+K C+C A+0 C+K+K	Response may contain cursory explanations of (R1) and (R2) with ability to identify facts, some ability at diagrams but theory may be incompletely explained. Response may not fully address question requirements. Examples used may be inappropriate or there may be no examples used.	5-7
L1	C+0 K+K	Response shows some knowledge but does not indicate that the meaning of the question has been properly grasped, thus, answer may be mostly irrelevant. There may be some basic errors in theory and may contain a few valid points made incidentally.	1-4

Part b

Question Interpretation

Command	Discuss how far
Content	Globalisation → Mechanism AD/AS and SOL indicators → Impact on MSOL Impact on NMSOL
Context	Singapore
Approach ***can accept multiple approaches**	see below

Intro: Key definitions and overview		
R1: Globalisation improve living standards	R2: Globalisation worsen living standards	R3: A third point
E1: Evaluate the extent/or may worsen	E2: Evaluate the extent/or may improve	
Conclusion: Stand, Substantiation, Something Special		

Accept both versions
R1+R2 both improve, with eval
R1-improve, R2-worsen, with eval

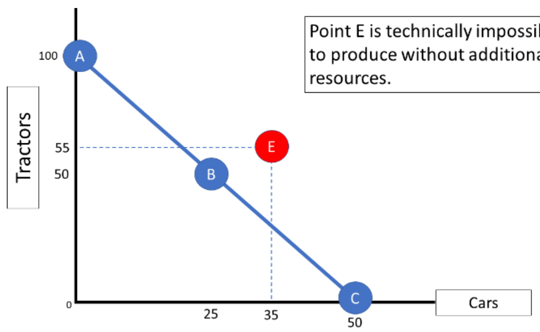
2 out of 3 flow should appear in the answer
MSOL and NMSOL should be addressed in the ans

Most candidates were able to make a basic link between globalisation and its impact on material (MSOL) and non-material standard of living (NMSOL). However, many responses lacked depth of economic analysis. Explanations often stopped at description without clarifying how specific globalisation channels (trade, labour, or capital flows) generated the observed effects.

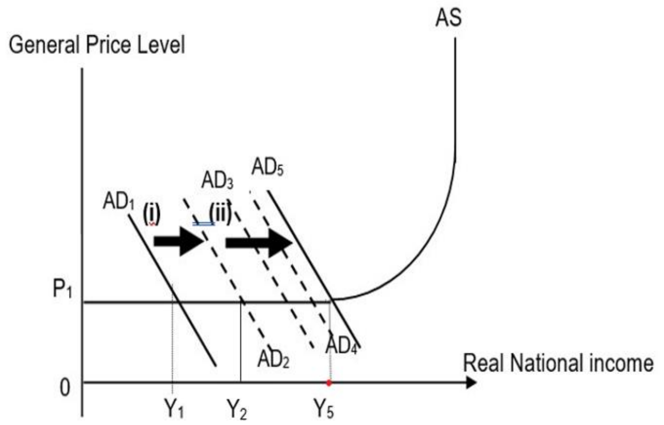
Even when flows were mentioned, they were not always well developed. Some candidates highlighted points such as the building of roads or firms hiring and firing labour, but these tended to be superficial and disconnected from broader macroeconomic impacts, displayed limited awareness of the impacts of globalisation.

Stronger answers demonstrated that globalisation influences macroeconomic aims such as growth, employment, price stability, and equity, which then translate into changes in standard of living. Weaker

		answers did not establish this chain of reasoning, leading to a fragmented discussion and a weak understanding of the question's requirements.

Introd	Globalisation refers to the increasing integration and interdependence of economies through trade, capital flows, technology, and labour mobility as the barriers are reduced. It can affect both material and non-material aspects of the standard of living, such as income levels, education, healthcare access, and overall well-being. However, the extent to which globalisation improves the standard of living varies across countries and within populations.	
R1	Globalisation promotes specialisation and international trade, enabling countries to produce goods and services in which they have a comparative advantage, which is defined as goods they can produce at lower opportunity cost than others. With reduction of trade barriers through globalisation, countries will then allocate resources more efficiently according to their comparative advantage and engage in trade, increasing global output and economic welfare. Therefore, with specialisation and trade, not only would there be an increase in world output, but also countries can consume more goods at lower opportunity cost than if they were to produce them themselves. Both countries will be able to consume beyond their PPC, at point E, which was previously unattainable if the country produced on its own, without trade. This increases the country's consumption possibilities, and with an increased quantity of goods and services consumed, there is an increase in material standard of living for the consumers.  For example, Singapore, a small and highly open economy with limited natural resources, specialises in high-value-added exports such as electronics, pharmaceuticals, and petrochemicals. Its integration into global markets allows it to import essential goods it cannot efficiently produce, while exporting high-tech products.	XA1 Some started off analysis without connecting globalisation to a relevant impact through a relevant channel XCD2: Not many candidates used Theory of CA to showcase how trade increases MSOL across countries XCD4: Few candidates drew the diagram despite using Theory of CA. XC1/2: Some did not provide any examples of countries with CA
E1	However, globalisation also exposes economies to greater external vulnerabilities, making them more susceptible to external shocks. During the global COVID-19 pandemic, for instance, many export-driven economies experienced widespread factory closures and mass layoffs. Hence, countries that are highly dependent on exports or foreign capital may be more susceptible to external shocks. A fall in global demand leads to a leftward shift in the AD curve, causing rounds of fall in income and income induced consumption, reducing real national output and increasing unemployment. Assume population unchanged, the real GDP per capita declines resulting in reduction in material living standards.	XEv1: Many candidates considered evaluation that may not be related to the globalisation channel highlighted

<table>
<tr>
<td></td>
<td>Hence, economies that become overly reliant on external demand may experience volatility in living standards, particularly among workers in trade-dependent sectors.</td>
<td>XEv2: Lack of tool in analysis in many scripts.</td>
</tr>
<tr>
<td>R2</td>
<td>Besides promoting freer trade, globalisation also facilitates the freer flow of capital across borders. Multinational corporations (MNCs) are more likely to invest long-term in countries where expected profitability is high, often due to factors such as lower labour costs, abundant natural resources, or access to global consumer markets. As foreign firms anticipate higher returns, the Marginal Efficiency of Investment (MEI) curve shifts to the right, resulting in higher levels of investment.

Since foreign direct investment (FDI) involves foreign firms spending on capital goods, it is a component of aggregate demand (AD), causing the AD curve to shift rightward. Assuming the economy is not at full employment, this increases in AD from AD_1 to AD_2 prompts firms to hire more factors of production to raise output, leading to an increase in real national income (RNY) from Y_1 to Y_2. As household income rises, this generates income-induced consumption, further shifting AD rightward. This initiates the multiplier process, where each round of rising income leads to additional, though diminishing, rounds of consumption. The process continues until the increase in income becomes too small to trigger further induced consumption. As a result, there is a multiplied increase in RNY, eventually rising from Y_1 to Y_5. This reflects actual economic growth.
If the rate of real GDP growth exceeds population growth, the real GDP per capita increases, a key indicator of improving material standard of living (mSOL).


Over the long run, foreign direct investment (FDI) facilitates technology transfer, enhances human capital, and improves labour productivity. These developments increase the efficiency of production and expand the economy's productive capacity, resulting in a rightward shift of the Long-Run Aggregate Supply (LRAS) curve. This allows for sustained increases in real national income without upward pressure on the general price level. As the economy grows, the material standard of living (mSOL) improves, especially if real GDP per capita continues to rise.

Countries like Vietnam and Bangladesh have benefited significantly from globalisation through their integration into global supply chains. These countries have attracted substantial FDI in export-oriented industries, particularly in textiles and electronics, which has led to job creation, higher wages, and poverty reduction. The resulting income gains have contributed to improved access to goods and services, thereby raising the material standard of living for large segments of the population.</td>
<td>XA1 Some started off analysis without connecting globalisation to a relevant impact through a relevant channel

XCD2: Clear explanation of the benefit using ADAS is needed. Some candidates skipped the use of ADAS.

XCD4: Relevant and well-drawn diagram is necessary

XCD2: Clear links to SOL should be made at the end. Some scripts ended analysis at the point when actual economic growth is achieved.

XC1/2: Some did not provide any examples of different countries.</td>
</tr>
</table>

E2	While globalisation can accelerate economic growth through greater investment flows, it often comes at the expense of environmental sustainability. Rapid increases in FDI-led growth can lead to pollution and resource depletion, particularly in developing economies with weak institutional capacity and limited green infrastructure. Profit-driven corporations may exploit regulatory gaps and engage in exploitative practices that prioritise short-term profits, taking advantage of lax enforcement to pollute, or over extract resources. While real GDP per capita may rise, deteriorating environmental quality and public health significantly reduce non-material standards of living, leading to a decline in the Human Development Index (HDI). The HDI is a composite measure of development based on life expectancy, mean years of schooling, and gross national income (GNI) per capita. When environmental degradation severely harms health, it lowers life expectancy, thereby reducing the HDI, even if national income per capita continues to rise. For example, in Bangladesh, the garment sector has caused severe water pollution through the discharge of untreated chemicals, leading to increased incidences of respiratory and waterborne illnesses among local residents.	XEv1: Many candidates considered evaluation that may not be related to the globalisation channel highlighted XEv2: Lack of tool in analysis in many scripts.
R3	Any one **<u>clearly written alternative impact of globalisation</u>** will be accepted. • Developed economies – structural unemployment as industries decline from global competition → disparity in income → fall in living standards for the affected. • Emerging economies → labour exploitation → by paying low wages → despite rising GDP per capita, MSOL for many remain stagnant or improve only marginally. • Labour flows → relieve labour shortages in developed countries and raise incomes for migrants (material SOL) • Labour flows → Brain drain → reduce LRAS → limit increase in RNY→ limit MSOL	
Concl	Stand: In conclusion, globalisation offers significant potential to raise both material and non-material standards of living through increased trade, capital flows, and labour mobility. Justification: However, the extent of these improvements highly depends on the economic situation. Countries with strong institutions, sound infrastructure, and inclusive policies tend to benefit more broadly, while others may face rising inequality, environmental costs, or social dislocation. Thus, globalisation can largely improve living standards, but only in countries when its risks are managed through complementary domestic policies that promote equity, sustainability, and resilience, which will tend to be developed economies rather than developing economies. Recommend: Policymakers especially in developing economies should focus on strengthening institutions, investing in human capital and infrastructure, and implementing regulatory frameworks that uphold labour rights and environmental protection to make globalisation more inclusive and sustainable.	XEV3 and 4: Many take this as a chance to repeat previous analysis. Many attempted comparisons did not address the requirement of “various countries”. XEV5: The recommendation should be accompanied by sound judgment and weighing

Mark Scheme

Knowledge, Understanding, Interpretation, Application and Analysis			
Level	**Analysis Level**	**Descriptors**	**Marks**
L3	A+A A+C+K A+C	Response addresses the question fully and contains excellent analytical explanations of how far globalisation can improve the standard of living for residents in various countries, using relevant economic concepts, theories and principles in a precise, logical and reasoned manner. Response also contains appropriate examples to show application to current situations.	8-10
L2	A+K C+C+K C+C A+0 C+K+K	Response may contain cursory explanations of how far globalisation can improve the standard of living for residents in various countries, some ability at diagrams but theory may be incompletely explained. Response may not fully address question requirements. Examples used may be inappropriate or there may be no examples used.	5-7
L1	C+0 K+K	Response shows some knowledge but does not indicate that the meaning of the question has been properly grasped, thus, answer may be mostly irrelevant. There may be some basic errors in theory and may contain a few valid points made incidentally.	1-4

Evaluation

Level	Descriptors	Marks
E3	Response contains well-explained evaluative judgments for **two** requirements and a well-justified summative conclusion	5
E2	Response contains a well-explained evaluative judgment for at least 1 requirement; the other requirement may not be well evaluated. Response may not have a summative conclusion.	3-4
E1	Response contains evaluative judgments that is unexplained or not supported by the arguments presented in the answer. Judgment may not be linked to the context of the question. OR A well-explained evaluative judgment linked to one requirement.	1-2