

Answer **all** questions.

Question 1: The Global Cocoa Crisis and the Chocolate Industry

Table 1: Global cocoa bean production and average prices (2020-2024)

Year	Production (million tonnes)	Average cocoa price (US\$/kg)
2020	5.68	2.37
2021	5.77	2.43
2022	5.62	2.39
2023	5.12	3.28
2024	5.22	7.33
2025 ^e	4.72*	6.61*

^e = estimate

Sources: Food and Agriculture Organization (FAOSTAT), World Bank Commodity Price Data (The Pink Sheet); International Cocoa Organization (ICCO)

Table 2: Global cocoa bean production by region (2024)

Region	Production (tonnes)	Share of world production (%)
Africa	3,424,758	65.6
Asia	677,328	13.0
South America	961,840	18.4
North America	107,841	2.1
Oceania	51,430	1.0
World total	5,223,196	100.0

Source: Food and Agriculture Organization (FAOSTAT)

Extract 1: Why are cocoa prices rising?

Global cocoa prices reached record highs in late 2024 and remained above US\$10 per kilogram in early 2025. The sharp increase in cocoa prices has been driven by concerns over poor weather conditions in West Africa, a major cocoa-producing region and the primary supplier of cocoa beans to the European Union (EU).

According to the World Bank, global cocoa production is estimated to have declined by 14 percent in the 2023–24 season. This decline is largely due to lower cocoa output in Côte d'Ivoire and Ghana, which together account for nearly 60% of global cocoa production. Cocoa beans is the key ingredient used in the production of chocolate and confectionery products, and manufacturers have limited scope to reduce their use of cocoa in the short run despite the sharp increase in prices.

The rise in cocoa prices has also been exacerbated by strong seasonal demand, as consumers stocked up on cakes and chocolates during the festive season, resulting in a global cocoa deficit. The International Cocoa Organization (ICCO) reported a production deficit of 478 000 tonnes for the 2023–24 season. End-of-season cocoa stocks are projected to fall to 1.3 million tonnes, the lowest level in 46 years.

Source: Adapted from FoodNavigator, 6 February 2025.

Extract 2: European chocolate manufacturers respond to rising cocoa prices

The European Union (EU) is the world's largest importer and processor of cocoa beans. Consequently, the sharp increase in global cocoa prices has significantly increased production costs for chocolate manufacturers across Europe. Retail chocolate prices in the EU increased by an average of 17.9% in 2025, although the increase varied considerably across member states.

The European chocolate manufacturing industry is dominated by a small number of large multinational companies, including Mondelez International, Mars, Nestlé, Ferrero and Lindt & Sprüngli, which together account for a substantial share of the European chocolate market. These firms compete intensely through product innovation, advertising and brand development while closely monitoring competitors' pricing and product strategies.

Chocolate manufacturers have adopted different strategies to reduce the impact of higher cocoa prices. While many firms increased the retail prices of their chocolate products, others reduced the size of chocolate bars while maintaining the same selling price, a strategy commonly known as "shrinkflation". Some manufacturers also reformulated recipes by reducing the cocoa content or using alternative ingredients to limit further increases in production costs.

At the same time, some manufacturers have responded by strengthening their premium chocolate brands. Mondelez International, one of the world's largest confectionery companies, has invested 65 million Swiss francs in expanding production at its Toblerone factory in Bern, Switzerland. The investment forms part of the company's strategy of developing higher-value chocolate products that are expected to maintain consumer demand even as prices rise. According to industry analysts, premium chocolate brands are better able to protect profit margins while differentiating their products in an increasingly competitive market.

Besides adjusting product offerings, manufacturers have also increased investment in automation, product innovation and sustainable cocoa sourcing. These measures aim to improve production efficiency and reduce dependence on volatile cocoa supplies over the longer term. However, these investments require substantial financial resources and are unlikely to reduce production costs immediately. Industry analysts therefore expect chocolate prices to remain relatively high in the near future.

Sources: Adapted from *FoodNavigator*, 6 February 2025; *CocoaRadar*, March 2026.

Extract 3: Can cocoa production become more sustainable?

Cocoa production is one of the leading drivers of deforestation in West Africa. Forests are often cleared to establish new cocoa plantations, threatening biodiversity and wildlife habitats. Unsustainable cocoa production can also contribute to soil degradation and greenhouse gas emissions, threatening the long-term sustainability of cocoa farming.

Governments, chocolate manufacturers and international organisations are encouraging farmers to adopt more sustainable farming practices through training, sustainability certification schemes and investments to improve productivity on existing farmland rather than expanding into forest areas. The European Union has also introduced regulations requiring cocoa imported into the EU to be sourced from land that has not been recently deforested.

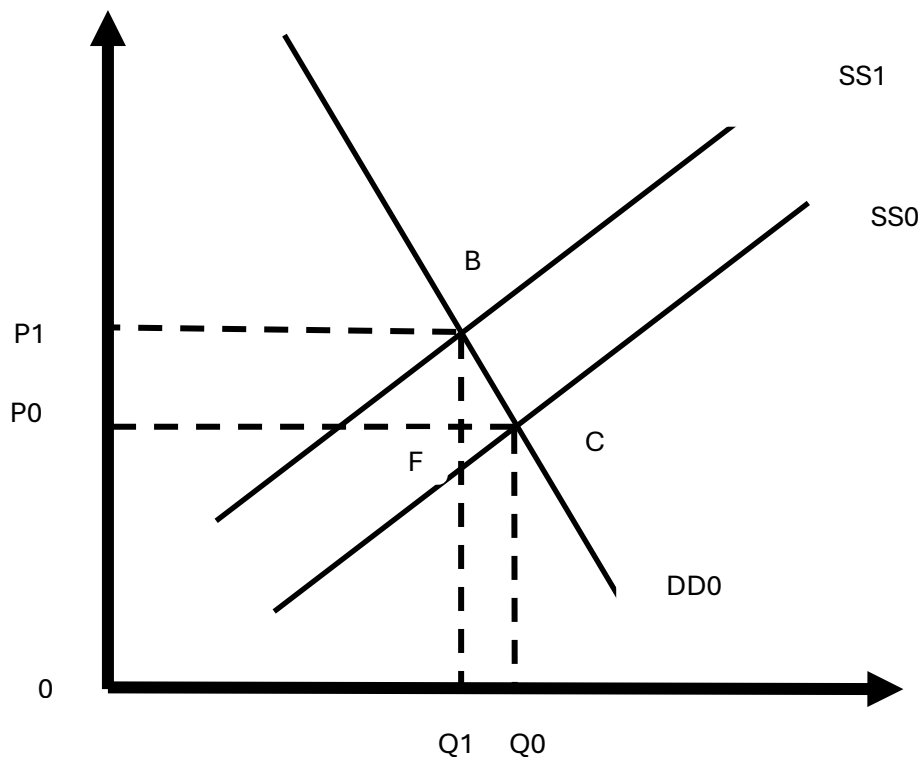
While these measures may increase production costs and limit cocoa expansion in the short run, supporters argue that they will protect forests and improve the long-term sustainability of the cocoa industry. Others argue that cocoa remains a major source of employment and export revenue in many producing countries, and stricter environmental requirements may slow economic growth and reduce farmers' incomes.

Sources: Adapted from National Wildlife Federation, *Cocoa and Deforestation*; United Nations Environment Programme, *Can Cacao Farming, Long a Driver of Deforestation, Really Become Sustainable?*; CBI, *Tips to Go Green for Cocoa Exporters*.

Questions

(ai)	Using Table 1, describe the relationship between global cocoa production and average cocoa prices between 2020 and 2025. Inverse/ Negative. [1] As global cocoa bean production decreased, average cocoa prices increased. [1] Marker's Comments Most students were able to identify that global cocoa production and average cocoa prices moved in opposite directions. However, only some students were able to accurately describe this as an inverse/negative relationship. The weakest responses merely traced the data, describing how production and prices changed from year to year, without identifying the overall relationship between the two variables.	[2]
(bi)	With reference to Table 2, explain why cocoa producers in Africa may have significant influence over the world cocoa market price. • Africa accounts for 65.6% of global production. World supply is therefore highly concentrated. [1] • A fall in African output causes a significant leftward shift of global supply [1] • Marker's Comments Most students were able to identify Africa as the largest cocoa-producing region, accounting for 65.6% of global cocoa production. However, few were able to explain why this gives African cocoa producers significant influence over the world cocoa market price. i.e high concentration of global cocoa production in Africa means that a change in African output will cause a significant change in world supply.	[2]
(bii)	Using a diagram and the concept of price elasticity of demand, explain how poor weather conditions in West Africa will affect the total revenue of cocoa producers in 2024.	[4]

Price



[1] Diagram:

The diagram should show a correctly labelled demand and supply diagram (above), with a leftward shift of supply from SS_0 to SS_1 , resulting in a rise in equilibrium price from P_0 to P_1 and a fall in equilibrium quantity from Q_0 to Q_1 .

[1] Fall in supply:

Poor weather conditions in West Africa reduce cocoa production, causing a decrease in the supply of cocoa, represented by the leftward shift of the supply curve from SS_0 to SS_1 .

[1] Relatively price-inelastic demand (PED):

The demand for cocoa is relatively price inelastic because cocoa has a high need in the production of chocolate and confectionery products, as it is a key raw material. Chocolate manufacturers have limited scope to reduce their use of cocoa in the short run despite the higher price.

[1] Impact on total revenue:

As the price of cocoa increases from P_0 to P_1 , the quantity sold falls from Q_0 to Q_1 . Since demand is relatively price inelastic, the percentage increase in price is greater than the percentage fall in quantity sold. The gain in total revenue, represented by area P_1BFP_0 , is therefore greater than the loss in total revenue, represented by area FCQ_0Q_1 . Hence, total revenue of cocoa producers increases.

	<u>Marker's Comments</u> Most students were able to identify the fall in supply and the resulting increase in equilibrium price, with many achieving 2 out of the 4 marks. However, weaker responses struggled to explain why the demand for cocoa is relatively price inelastic, particularly the link between cocoa being an essential raw material in chocolate production and the limited availability of close substitutes in the short run. Some students also failed to identify the impact on total revenue. Students should recognise that with relatively price-inelastic demand, the percentage increase in price is greater than the percentage fall in quantity demanded, resulting in an increase in total revenue for cocoa producers.	
(c)	Using Extract 2, explain two characteristics of the European chocolate manufacturing industry that suggest it is an oligopoly. Explain any of the 2 characteristics below Few dominant firms [2] • The extract states that the industry is dominated by a small number of multinational firms (e.g. Mondelēz, Mars, Nestlé, Ferrero and Lindt). • Therefore, the market is highly concentrated, with each firm holding a relatively large market share. High barriers to entry [2] • The extract states that firms require substantial investment in production facilities, marketing and product innovation. • These large capital requirements make it difficult for new firms to enter and compete with established firms. Non-price competition (2 marks) • The extract states that manufacturers compete by strengthening premium brands, product innovation and sustainable sourcing rather than relying solely on price competition. • This suggests firms engage in non-price competition to differentiate their products and attract consumers, which is a characteristic of an oligopoly. <u>Marker's Comments</u> Most students were able to identify few dominant firms and link this to firms having a large market share, demonstrating a good understanding of market concentration. However, for the second characteristic, many students merely copied or listed strategies stated in the extract, such as strengthening premium brands, product innovation and sustainable sourcing, without identifying these as forms of non-price competition. As the question requires 1 mark for stating the characteristic and 1 mark for explaining it, students needed to go beyond identifying the strategies. They should have explicitly stated that firms engage in non-price competition and explained that firms use strategies such as product differentiation, branding	[4]

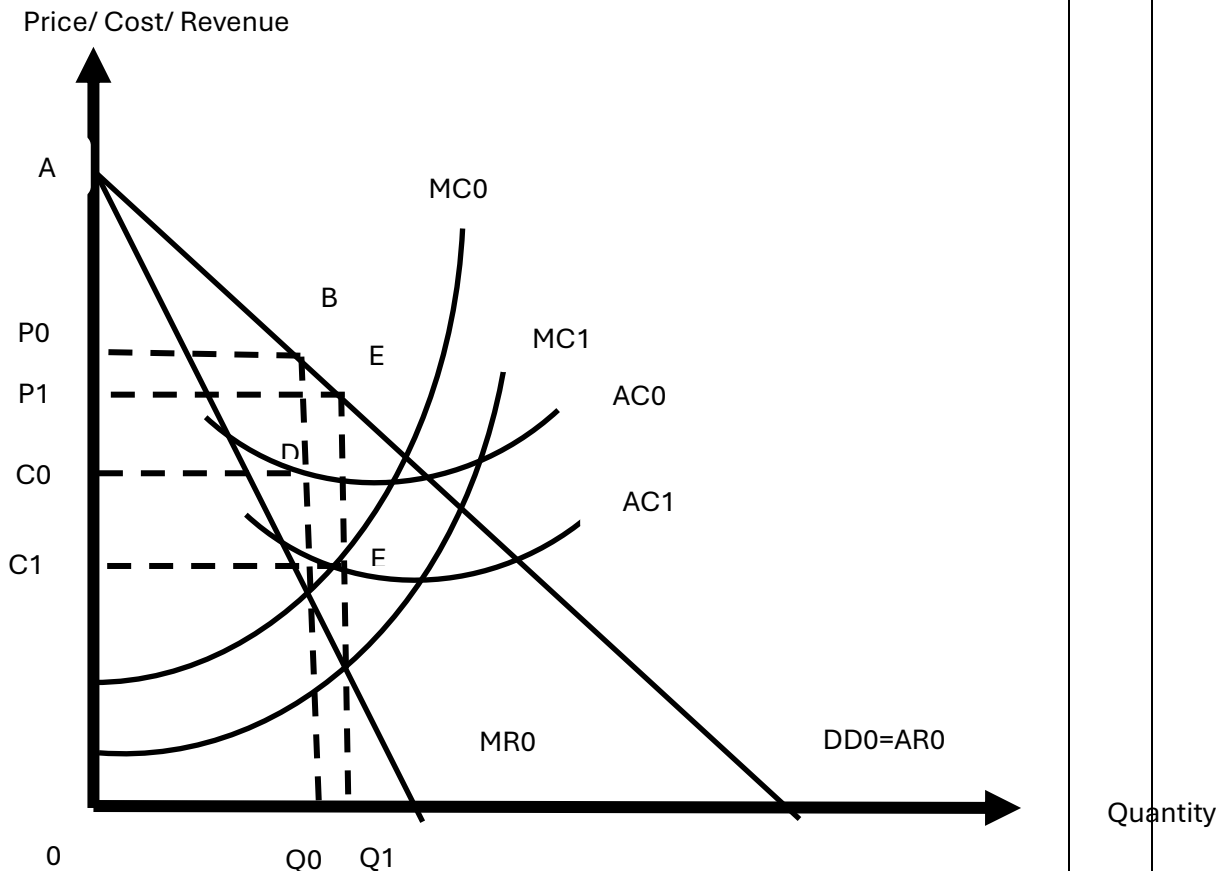
	and product innovation to compete for consumers without relying solely on price.	
(d)	Discuss whether strengthening premium chocolate brands is a more effective strategy than using shrinkflation in reducing the impact of rising cocoa prices on a chocolate manufacturer's profitability. Intro Rising cocoa prices increase production costs, shifting MC (and AC) upwards. Assuming ceteris paribus, this will lead to fall in profits for the chocolate producers. Strategy 1: Strengthening premium chocolate brands - Strengthening premium brands increases product differentiation and brand loyalty. - Initially, the firm faces $DD_0 = AR_0$ and the corresponding MR_0 curve. The firm maximises profit at Q_0, where $MR_0 = MC$, and charges P_0 based on its AR_0 curve. - When the firm strengthens its premium chocolate brand, product differentiation and brand loyalty increase. Consumers become less willing to switch to competing brands. Hence, demand for the firm's product increases, causing its AR curve to shift rightwards from AR_0 to AR_1. At the same time, stronger brand loyalty makes consumers less responsive to price	[8]

changes, so the firm's demand becomes **less price elastic**, represented by the **steeper AR₁** curve.

- The corresponding **MR curve shifts from MR₀ to MR₁**. The firm now maximises profit where **MR₁ = MC**, resulting in a new profit-maximising output of **Q₁**. At Q₁, the firm is able to charge a higher price **P₁** compared with the initial price **P₀**. Since **TR = P × Q**, the increase in both price and quantity sold causes the firm's **total revenue to increase**, from **TR₀ = P₀ × Q₀** to **TR₁ = P₁ × Q₁**. The firm's profits increased from P0BDC0 to P1AEC1.

Limitations

However, strengthening premium brands requires **substantial expenditure on marketing, product innovation and product development**. These additional costs may reduce the increase in profit generated from higher prices, making the strategy **less effective in offsetting the impact of higher cocoa costs**, particularly in the short run. Furthermore, if consumers of **premium chocolate brands** are highly price sensitive, with **PED > 1**, an increase in the price of premium chocolate may lead to a more than proportionate fall in quantity demanded. This could occur if consumers perceive premium chocolate as **non-essential** and can easily switch to cheaper alternatives. As a result, total revenue may fall, limiting the extent to which strengthening premium brands can offset the increase in cocoa-related production costs and hence **reduce the effectiveness of premiumisation in maintaining profitability**.



Strategy 2: Shrinkflation

- Shrinkflation involves reducing the quantity of chocolate in each package while keeping the **selling price unchanged**. As less cocoa is required per package, the firm's production cost per package falls. Hence, **MC shifts downwards from MC_0 to MC_1** , while **AC shifts downwards from AC_0 to AC_1** .
- Initially, the firm maximises profit at Q_0 , where $MR_0 = MC_0$, and charges P_0 . The firm's initial **profit per unit** is therefore $P_0 - C_0$, represented by **P0BDC0**.
- Following shrinkflation, the lower MC means that the firm can profitably produce a higher quantity, so the new profit-maximising output increases from Q_0 to Q_1 , where $MR_0 = MC_1$. The selling price falls to P_1 , while AC falls from C_0 to C_1 , the firm's **profit per unit increases from $P_0 - C_0$ to $P_1 - C_1$** . The new profit area is therefore **P1EFC1**.
- Hence, the **increase in the profit area** on the diagram shows that shrinkflation increases the firm's profit.

Limitations

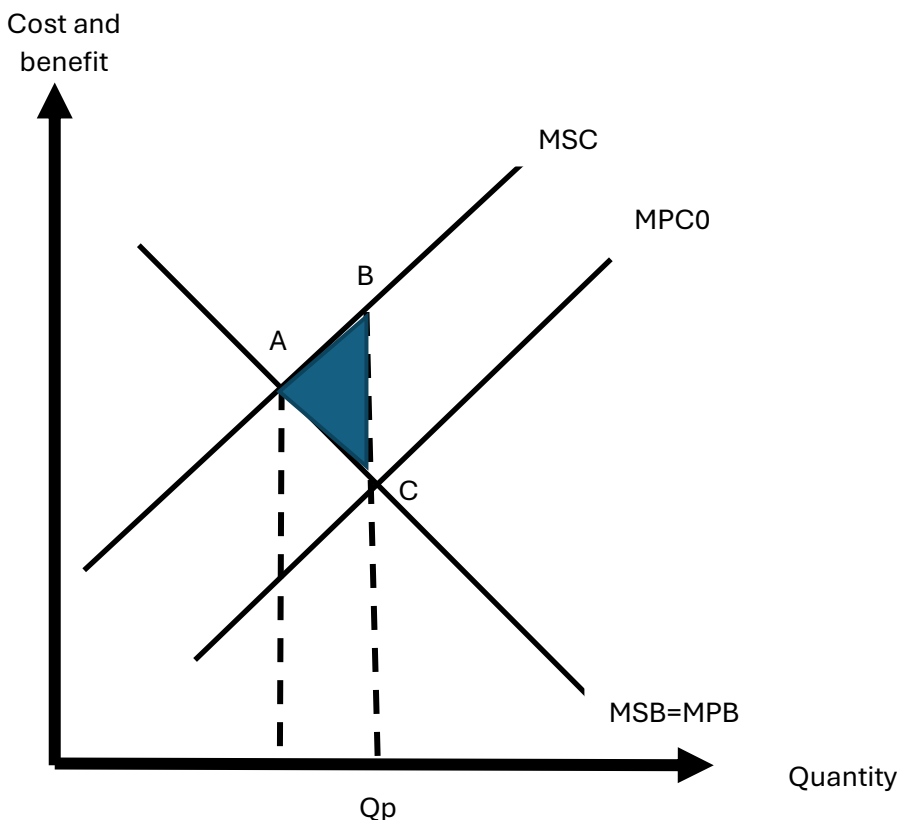
However, the effectiveness of shrinkflation depends on whether the reduction in product size leads to a significant fall in demand. If consumers notice that they are receiving less chocolate for the same price, they may perceive the product as offering **poorer value for money** and reduce their purchases or switch to competing brands. This would reduce the firm's revenue and may offset the cost savings from using less cocoa. Hence, although shrinkflation directly reduces the firm's cocoa cost per package, it may be **less effective in protecting profitability if the resulting fall in demand is significant**.

Conclusion

Overall, the more effective strategy depends on both the time horizon and the characteristics of the manufacturer. In the **short run**, shrinkflation may be more effective for manufacturers that need to respond quickly to a sharp increase in cocoa prices, particularly **smaller manufacturers with limited financial resources**, as it does not require substantial upfront investment in branding and product innovation. In the **long run**, strengthening premium chocolate brands may be more effective for **large, established manufacturers with greater financial resources**, as they are better able to sustain the investment required to develop and market premium products.

Therefore, **shrinkflation may be more effective as a short-term response, especially for financially constrained manufacturers, whereas strengthening premium brands may be more effective as a longer-term strategy for large, established manufacturers.** Hence, the relative effectiveness of the two strategies depends on the **time horizon and the manufacturer's financial capacity**.

Level	Description	Marks
2	Strong and balanced analysis of how strengthening premium chocolate brands and using shrinkflation can reduce the impact of rising cocoa prices on a chocolate manufacturer's profitability. There is clear economic analysis of how each strategy affects the firm's revenue and/or costs and hence profitability. There is good use of Extract 2, including the context of rising cocoa prices and the different responses adopted by chocolate manufacturers.	4- 6
1	Answer shows some knowledge of how strengthening premium chocolate brands and/or using shrinkflation may reduce the impact of rising cocoa prices on profitability. However, there are gaps in economic analysis, with limited explanation of how the strategy affects revenue, costs or profitability. There may be limited use of Extract 2 or the context of chocolate manufacturers facing rising cocoa prices.	1-3
E2	For an answer that came to a reasoned conclusion on whether strengthening premium chocolate brands is more effective than using shrinkflation in reducing the impact of rising cocoa prices on a chocolate manufacturer's profitability . Using both economic analysis and Extract 2, synthesising the economic arguments to arrive at a judgement.	2
E1	For an answer that gives an evaluative statement or unsupported judgement on which strategy is more effective.	1
<u>Marker's Comments</u> This question was poorly done overall. Many students were not familiar with the revenue and cost concepts required to analyse the two strategies. In particular, students struggled to explain how strengthening premium brands affects AR/MR, while shrinkflation affects MC/AC. Students need to develop clear, step-by-step analytical links rather than simply describing what each strategy does. The analysis should be anchored on the relevant changes in curves, followed by the corresponding changes in TR, TC and ultimately profit. Where appropriate, students should use a diagram to show these relationships clearly. For example, for premiumisation, students should establish the chain: Many students also focused disproportionately on the limitations of the strategies, without first providing sufficient analysis of how each strategy could actually reduce the impact of rising cocoa prices on profitability. Evaluation should build on sound analysis and cannot substitute for it.		

	For the conclusion, students should avoid simply repeating the analysis or evaluation points already made in the essay. Instead, the final judgement should be anchored in the case-study context and use relevant decision-making criteria, such as the type of manufacturer, financial capacity and time horizon, to determine which strategy is likely to be more effective. This would demonstrate a contextualised and well-reasoned judgement rather than a repetition of earlier arguments.	
(e)	Using Extract 3, discuss whether governments in cocoa-producing countries should prioritise promoting sustainable cocoa production to achieve efficiency over expanding cocoa production to support economic growth. Promote sustainable cocoa production (Analysis) Point 1: Negative externality in production  Cocoa production generates negative production externalities because the expansion of cocoa plantations often involves deforestation, biodiversity loss and greenhouse gas emissions. These environmental costs are imposed on third parties, such as local communities and future generations, who are not	[10]

	directly involved in the production or consumption of cocoa and may end up bearing costs such as poorer environmental quality and loss in livelihoods. - Consequently, the marginal social cost (MSC) is higher than the marginal private cost (MPC), with the vertical divergence between MSC and MPC representing the marginal external cost (MEC). - In the private market equilibrium, cocoa producers make their output decisions where MPC = MPB, as profit-maximising producers consider their own private costs, such as production costs, and the private benefits from producing cocoa, reflected by the revenue that can be earned. As a result, the private equilibrium output is at Q_p. - The private equilibrium output Q_p is higher than the socially efficient output Q_s, where MSC = MSB. Hence, there is overproduction of cocoa. - Between Q_p and Q_s, MSC > MSB for each additional unit of cocoa produced. This means that the social cost of producing each additional unit of cocoa exceeds the social benefit derived from its production. Therefore, these additional units of cocoa production reduce overall social welfare. - Society's scarce resources are therefore over-allocated to cocoa production, resulting in a deadweight welfare loss represented by area ABC. Point 2: Expand cocoa production to support economic growth (AD/AS Analysis) Increasing GDP and employment - Cocoa exports contribute significantly to national income in countries such as Côte d'Ivoire and Ghana. Expanding cocoa production increases cocoa exports, raising export revenue (X) and foreign exchange earnings. - As exports are a component of aggregate demand ($AD = C + I + G + X - M$), an increase in export revenue raises aggregate demand. - The increase in aggregate demand encourages firms to expand production to meet higher demand. Firms therefore employ more workers and purchase more factor inputs, reducing unemployment and increasing household incomes. - Higher household incomes further increase consumer spending (C), while improved business confidence and profitability encourage greater investment (I). This creates a multiplier effect, causing aggregate demand and real GDP to increase by more than the initial increase in exports. - As real GDP rises and more employment opportunities are created, household incomes and living standards improve. Hence, expanding cocoa production may promote economic growth and improve the standard of living.	
	Evaluation/ Conclusion Stage of economic development and economic priorities In low-income countries where cocoa is a major source of employment and export earnings, governments may prioritise expanding cocoa production in the short run to reduce poverty and promote economic growth.	

- However, once incomes rise and alternative sources of growth become available, governments may place greater emphasis on sustainable production to protect natural resources and ensure long-run economic development.

Magnitude of market failure

- If deforestation and biodiversity loss are severe, the welfare loss from overproduction is large.
- In this case, correcting the market failure should be prioritised even if economic growth slows in the short run.
- However, if environmental damage is relatively limited or sustainable farming practices are already widely adopted, expanding cocoa production may generate greater net social benefits.

Short Run vs Long Run

Expanding cocoa production may increase GDP, employment and export earnings in the short run.

However, continued deforestation and soil degradation reduce land productivity, threatening future cocoa output and export competitiveness.

Therefore, prioritising sustainable production may better support **long-run economic growth**, rather than representing a trade-off between efficiency and growth.

The two objectives need not be mutually exclusive.

Governments can promote sustainable intensification, where farmers increase cocoa yields through improved farming techniques, disease-resistant varieties and better technology instead of expanding cultivated land. This allows countries to achieve both environmental sustainability and long-run economic growth.

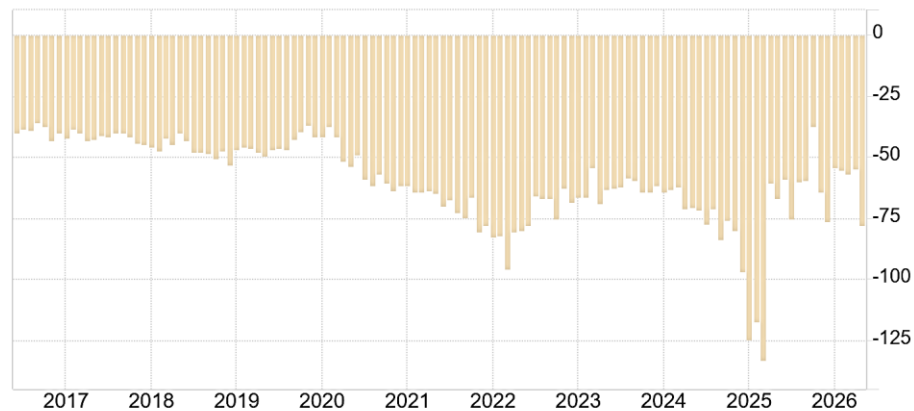
Level	Description	Marks
2	trong and balanced analysis of the arguments for promoting sustainable cocoa production to achieve efficiency and expanding cocoa production to support economic growth. There is clear economic analysis of how sustainable cocoa production can correct market failure and improve allocative efficiency, as well as how expanding cocoa production can increase aggregate demand, real national income and employment to support economic growth. There is good use of Extract information including the context of cocoa-producing countries and the environmental and economic importance of the cocoa sector.	4 - 7
1	Answer shows some knowledge of the arguments for promoting sustainable cocoa production and/or expanding cocoa production. However, the concepts are not well explained or there are gaps in economic analysis. There may be limited use of Extract or limited	1 - 3

	consideration of the context of cocoa-producing countries. Basic errors of theory or inadequate development of analysis may be evident.	
E2	For an answer that came to a reasoned conclusion on whether governments in cocoa-producing countries should prioritise promoting sustainable cocoa production to achieve efficiency over expanding cocoa production to support economic growth. Using both economic analysis and Extract 3, synthesising the economic arguments to arrive at a summative conclusion.	2- 3
E1	For an answer that gives an unsupported statement(s).	1
Marker's Comments This question was poorly done overall, with significant misinterpretation of the question requirements. Many students did not read the key term "allocative efficiency" carefully and therefore answered a different question from the one set. For Requirement 1, many students failed to recognise that the focus was on achieving allocative efficiency through sustainable cocoa production. Instead, students often: • mixed up different concepts, particularly sustainable economic growth, with allocative efficiency; • focused on policies to correct market failure rather than explaining how the negative production externality results in allocative inefficiency; • identified imperfect information as the cause of market failure, which was not the relevant market failure in the context of cocoa production; and • shifted the discussion towards standard of living, rather than analysing MSC, MPC, MSB, overproduction and welfare loss. Students should have recognised that the focus is on how the negative production externality causes over-allocation of resources and a deadweight welfare loss, and how sustainable production can address this inefficiency. For Requirement 2, performance was slightly better, but many students still lacked sufficient economic rigour. While students could identify that expanding cocoa production could generate exports, employment and higher incomes, many merely described the potential improvement in standard of living without explaining the mechanism for economic growth. In particular, students should have used AD/AS analysis to explain how higher cocoa exports can increase aggregate demand and subsequently increase real GDP. For evaluation, many students repeated their analysis instead of evaluating the relative merits of the two objectives. Evaluation should be based on relevant criteria such as the magnitude of the market failure, stage of economic development, and short-run versus long-run considerations. Students should use these criteria to explain when and why one objective		

	should be prioritised over the other , rather than simply restating that sustainability improves efficiency or expansion promotes growth.	
	[Total: 30]	

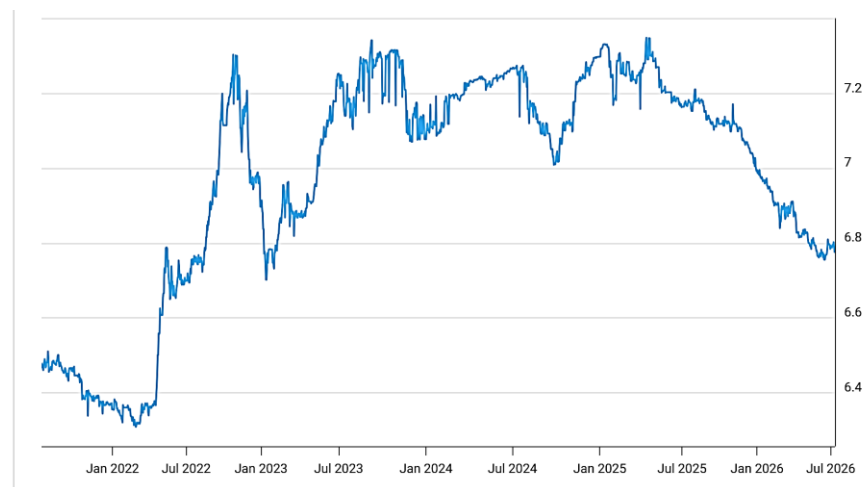
Question 2: Trade War between the US and China

Figure 1: The United States's (US) Balance of Trade (USD billion)



Source: tradingeconomics.com

Figure 2: Dollar Yuan Exchange Rate (Yuan/ USD)



Source: macrotrends.net

Extract 4: Trump threatens to hit China with 100 percent tariff starting in November

President Donald Trump on Friday said he will set a 100 percent tariff on Chinese goods starting on Nov. 1 and will “impose Export Controls on any and all critical software.” Trump’s announcement on social media came after he shared a post earlier in the day threatening “massive” new tariffs on China and hinted he might cancel an upcoming summit meeting with President Xi Jinping in response to a move by Beijing earlier this week to restrict exports of rare earth magnets and raw materials. Trump also indicated

he could drop his tariff threat if China rolls back its plan to impose new export controls. China should not be allowed to exert “monopoly” power over the exports of rare earth magnets, which are used in a number of high-tech, green energy and medical goods, Trump continued.

Source: Politico, 10 October 2025

Extract 5: Ministerial Statement by PM Lawrence Wong

There is a growing push across the West to strengthen their domestic manufacturing capabilities and reduce dependence on global supply chains, especially in strategic industries. Business and consumer confidence has already been hit by the tariffs. International trade and investments will suffer. Our economic agencies got in touch with several multinational enterprises and local businesses after the tariff announcement. Even those who were not directly affected by the tariffs are worried about weakening demand from their consumers. Some have put new projects on hold while they assess the full implications of the tariffs.

What is troubling is not just the tariffs themselves – which are already damaging – but the fact that this new wave of protectionism is unpredictable and unstable. Protectionism is already bad – unstable protectionism is even worse. Businesses do not know what to expect. Many are holding back, fearful that changing rules will leave them with stranded assets. And all this creates an environment of deep uncertainty – one that could tip both the US and global economy into recession. The consequences extend far beyond economics. More countries are turning away from win-win cooperation and deeper integration. In the near term, we expect weaker global growth, which means external demand for our goods and services will fall. The outward-oriented sectors of our economy will suffer the brunt of the impact. They include manufacturing, especially segments like electronics and semiconductors; biomedical science, which have higher export exposure to the US. The global uncertainty and dampened sentiments will also impact some services industries, including finance and insurance. Singapore may or may not go into recession this year. But I have no doubt that our growth will be significantly impacted. We had originally projected GDP growth of 1 to 3% for 2025. MTI is reassessing the growth forecast, and will likely revise it downwards.

Slower growth will mean fewer job opportunities and smaller wage increases for workers. And if more companies face difficulties or relocate their operations back to the US, there will be higher retrenchments and job losses. We have a comprehensive package of measures for households and individuals. They will receive CDC vouchers, SG60 vouchers and U-Save rebates to help with their cost of living. And there are targeted measures like increased ComCare Assistance for the more vulnerable groups. We are also supporting workers through investments in SkillsFuture. And those who find themselves involuntarily unemployed will receive help to get back on their feet through the SkillsFuture Jobseeker Support which will start later this month. We have also rolled out measures in the Budget to help businesses – there are short-term support measures through corporate income tax rebates, as well as schemes to boost their productivity and competitiveness, and to pivot to new markets. Our economic agencies are also engaging

the firms impacted by the tariffs to better understand their responses, and see how we can support them, and assist them with any specific issues they face.

In this new environment, Singapore must redouble our efforts to remain a key node in global flows, and a trusted business hub. We will forge closer links with like-minded partners who share our commitment to open and free trade. The US may have decided to turn protectionist. But the rest of the world does not have to follow the same path. We will identify other partners to join us and work around this – to ensure resilience and maintain critical parts of the multilateral system, while laying the foundations for a possible new and different global system that can be achievable later. And this is why I have made the effort to engage and visit my counterparts in different countries. I touched base with the UK Prime Minister Keir Starmer yesterday and have a few more conversations lined up in the coming weeks. They are all keen to do more with Singapore, and to expand our economic cooperation including in new areas like the digital and green economies, in line with the Singapore Green Plan 2030 that charts ambitious and concrete targets to advance Singapore's national agenda on sustainable development. We will also strengthen our collaboration and integration within ASEAN.

Sources: Prime Minister's Office Singapore 8 April 2025

Extract 6: Singapore sees zero growth as a possibility this year as it cuts GDP outlook on tariff worries

Singapore on Monday eased its monetary policy for the second straight time, as the city-state sees zero growth this year as a possibility after posting a lower-than-expected GDP expansion of 3.8% for the first quarter. The Monetary Authority of Singapore had eased its policy stance in its January meeting too, loosening policy for the first time since 2020. Singapore's year-on-year quarterly GDP growth missed expectations of 4.3% from economists polled by Reuters, and was lower than the 5% expansion seen in the last quarter of 2024. The country's Ministry of Trade and Industry downgraded its GDP forecast to 0%-2% for 2025, down from its previous outlook of 1%-3% — MAS also projected GDP growth of 0%-2% for 2025. In a release, MTI said the growth slowdown was due to declines in manufacturing, as well as some services sectors such as finance and insurance.

MTI said that Singapore's external demand outlook has "weakened significantly." It highlighted that the manufacturing sector was likely to be negatively affected by weaker global demand, and services such as finance and insurance could see a slowdown. This is due to risk-off sentiments that will adversely affect the net fees and commission incomes of the banking, fund management, forex and security dealing segments. Manufacturing, as well as the finance and insurance sectors are some of the largest contributors to Singapore's economy, making up about 17% and 14% of its GDP, respectively.

Source: CNBC, 14 April 2025

Questions

(a)	(i)	With reference to Figure 2, describe the changes in the value of the Chinese Yuan against the US dollar from 2022 to 2026	[2]
		General trend [1] From 2022 to 2026, the yuan generally depreciated against the US dollar, as more yuan were required to exchange for US\$1. This indicates that the value of the yuan fell relative to the US dollar. Specific observation [1] However, from 2025 to 2026, the yuan appreciated against the US dollar, as fewer yuan were required to exchange for US\$1. Examiner's Report: A significant proportion of students misinterpreted the exchange-rate data and stated the opposite trend. Many appeared to rush into describing the movement without first identifying how the exchange rate was quoted. Students should pay closer attention to the units and direction of the exchange rate. When the exchange rate is expressed as yuan per US dollar, an increase in the number of yuan required to purchase US\$1 indicates a depreciation of the yuan, while a decrease indicates an appreciation of the yuan. Greater precision is also needed when distinguishing between the overall trend across the period and specific year-to-year movements.	
	(ii)	Explain one possible reason for the general change in value of the Chinese Yuan against the USD on the foreign exchange market using demand and supply analysis.	[2]
		Possible reason [1] Rising protectionism in the US, such as higher tariffs on Chinese imports, reduces the price competitiveness of Chinese goods and therefore reduces US demand for imports from China. Demand and supply analysis [1] As US consumers and firms spend less on Chinese imports, there is a decrease in the derived demand for Chinese yuan, since fewer yuan are required to purchase Chinese goods. This causes the demand curve for yuan to shift left, lowering the equilibrium exchange rate and resulting in a depreciation of the yuan against the US dollar. Other acceptable reasons could include an improving US trade deficit with China due to lower US import expenditure, or an improvement in the quality/competitiveness of US domestic products that causes consumers to switch away from Chinese imports.	

	Examiner's Report: Most students were able to identify a plausible reason for the depreciation of the yuan. However, a small number of responses did not complete the foreign exchange market analysis. To obtain full credit, students should explicitly identify whether the factor affects the demand for or supply of yuan, state the direction of the shift, and link this to the resulting change in the equilibrium value of the yuan.	
(b)	Using a diagram, explain how a tariff implemented by US mentioned in Extract 4 would affect the consumer surplus and producer surplus in the market.	[4]
	[1] Diagram (Accurate and quality diagram) [1] Explaining how the tariff works Implementation of import tariff is a tax on imported g&s where the prices of imported g&s from free trade would increase from $P_{\text{free trade}}$ to P_{Tariff} decreasing the quantity of imports from Q_0Q_3 to Q_1Q_2 [1] impact on Consumer surplus with reference to diagram Decrease in consumer surplus from $EDP_{\text{free trade}}$ to ECP_{Tariff} [1] Impact on producer surplus with reference to diagram Increase in producer surplus from $EDP_{\text{free trade}}$ to ECP_{Tariff} Examiner's Report: Many students were unable to accurately illustrate and explain the impact of a tariff on the domestic market. Common errors included shifting the supply curve, rather than representing the tariff as an increase in the price of imports, and drawing the diagram as though a quota had been imposed. There was also considerable confusion in identifying the relevant consumer surplus and producer surplus areas after the tariff. Students should ensure that they clearly distinguish between the effects of a tariff, quota and changes in market supply, and practise identifying the welfare areas accurately before analysing the impact on different stakeholders.	

(c)	Explain the factors that a firm might consider in deciding whether to invest in Singapore in view of the uncertainty arising from unpredictable tariffs.	[4]						
	Cost effect [2] A firm may consider how unpredictable tariffs affect its expected costs of production. If the firm imports raw materials or intermediate inputs, higher or uncertain tariffs may raise the unit cost of production. This reduces expected profit margins and makes the expected return on investment less attractive, thereby reducing the firm's willingness to invest in Singapore. Revenue effect [2] A firm may also consider the impact on its expected revenue. For firms exporting from Singapore, especially to markets such as the US, tariffs may raise the final price of their products and reduce their price competitiveness. If demand is price elastic, quantity demanded may fall more than proportionately, causing export revenue and expected profits to fall. This may discourage investment. More importantly, because the tariffs are unpredictable, firms face greater uncertainty over both future costs and revenues. This makes expected profitability harder to forecast and may lead firms to delay, scale down or cancel investment plans until there is greater certainty. Examiner's Report: Most students were unable to access the full range of marks because their explanations of the cost and revenue considerations were insufficiently developed. A key weakness was the failure to address the main trigger in the question — uncertainty arising from unpredictable tariffs. Some responses discussed tariffs generally but did not explain how uncertainty affects firms' expectations of future costs, revenues and profitability. Even among students who identified uncertainty, many were unable to clearly establish the transmission mechanism. Stronger responses should explain the full chain: Unpredictable tariffs → greater uncertainty over future costs/revenues → greater uncertainty over expected profitability and returns → firms may delay, reduce or cancel investment. Students should therefore focus not only on identifying a relevant cost or revenue factor, but also on explaining how tariff uncertainty affects expected returns and ultimately the investment decision.							
(d)	Discuss the extent to which the US–China trade war is likely to worsen the standard of living of Singapore residents. Question Analysis <table><tr><td>Command</td><td>Discuss whether- 2 sided analysis with conclusion</td></tr><tr><td>Content</td><td>Effects of Trade War on SOL</td></tr><tr><td>Context</td><td>Singapore</td></tr></table>	Command	Discuss whether- 2 sided analysis with conclusion	Content	Effects of Trade War on SOL	Context	Singapore	[8]
Command	Discuss whether- 2 sided analysis with conclusion							
Content	Effects of Trade War on SOL							
Context	Singapore							

	QR	QR1: US China trade war would worsen the standards of living in Singapore. QR2: US China trade war would not worsen the standards of living in Singapore.	
QR1: US China trade war is likely to worsen the standards of living in Singapore. Extract 5: In the near term, we expect weaker global growth, which means external demand for our goods and services will fall. The outward-oriented sectors of our economy will suffer the brunt of the impact. They include manufacturing, especially segments like electronics and semiconductors; biomedical science, which have higher export exposure to the US. The global uncertainty and dampened sentiments will also impact some services industries, including finance and insurance. Economic Analysis: Expect weaker global growth, which means external demand for our goods and services will fall - US China Trade War results in poor business and consumer confidence in the world economy - Weak global growth and Fall in purchasing power - Decrease demand of exports from Singapore (Export driven growth and therefore a significant impact) - Fall in export revenue - Decrease AD and fall in RNY by multiplier - Singapore also experience a fall in purchasing power (In conjunction with the rising cost of imported g&s as a result of rising cost from the trade war) - Fall in consumption of g&s - Fall in satisfaction and utility - Fall in material SOL - Slower growth - Lower government tax revenue - Lesser budget to spend on healthcare especially with the rising economic uncertainty from the trade war, priorities of the government could be on the economy (Singapore highly dependent on trade for growth and implications are larger) - Lower quality healthcare - Lower life expectancy - Lower quality of life in accordance to HDI QR2: US China trade war is likely to worsen the standards of living in Singapore to a smaller extent Extract 5: We have a comprehensive package of measures for households and individuals. They will receive CDC vouchers, SG60 vouchers and U-Save rebates to help with their cost of living. And there are targeted measures like increased ComCare Assistance for the more vulnerable groups. We are also supporting workers through investments in SkillsFuture. We have also rolled out measures in the Budget to help businesses – there are short-term support measures through corporate income tax rebates, as well as schemes to boost their productivity and competitiveness, and to pivot to new markets.			

They are all keen to do more with Singapore, and to expand our economic cooperation including in new areas like the digital and green economies, in line with the Singapore Green Plan 2030 that charts ambitious and concrete targets to advance Singapore's national agenda on sustainable development. We will also strengthen our collaboration and integration within ASEAN.

Economic Analysis:

We are also supporting workers through investments in SkillsFuture. We have also rolled out measures in the Budget to help businesses – there are short-term support measures through corporate income tax rebates, as well as schemes to boost their productivity and competitiveness, and to pivot to new markets.

- Reduce the decrease in consumption and investments
- Extent of fall in AD is lesser
- Fall in income and purchasing power is lesser
- Reduction in the extent of fall in satisfaction and utility and material SOL. (Singapore is a small and efficient economy, lesser time lag in the implementation of the policy, better regulations and monitoring)

They are all keen to do more with Singapore, and to expand our economic cooperation including in new areas like the digital and green economies, in line with the Singapore Green Plan 2030.

- Opportunities to expand into new digital and green economies (Singapore has been focusing on these new sectors to develop comparative advantage, skilled labour force that facilitates the development of new industries)
- Improvement in productivity to minimize use of resources
- Enhance sustainability of resources
- Green economies with more sustainable and environmentally friendly production processes
- Reduction in pollution
- Lesser environmental degradation
- Quality of life is reduced at a slower rate and non- material SOL is worsened to a smaller extent according to MEW

Summative Conclusion

Stand: SOL worsens, but to a **moderate rather than large extent**.

Criteria: **severity + duration of external shock versus effectiveness of adjustment/policies.**

Substantiation: Singapore is **highly exposed to global trade**, making the initial impact large, but its **fiscal capacity, worker support and economic diversification** reduce the persistence of the impact.

Overall, the US–China trade war is likely to worsen the standard of living of Singapore residents, but **only to a moderate extent**. The key criteria are the

magnitude and duration of the impact on real income and employment, and the **effectiveness of government measures** in cushioning these effects.

In the short run, Singapore's high dependence on trade means weaker global growth and external demand could reduce exports, real national income and employment. Higher import costs may also reduce purchasing power, lowering **material standard of living**.

However, the impact is unlikely to be severe or persistent. Government transfers, SkillsFuture support and assistance to firms can protect incomes, employment and consumption. In addition, Singapore has also diversify towards ASEAN and new digital and green markets, creating alternative growth opportunities, limiting the extent of the lowering of material living standards in the long run.

Hence, the extent of deterioration depends largely on **how prolonged the trade war is and how effectively Singapore adapts and diversifies its economy**.

Other acceptable Criteria:

- (1) **duration/severity of the trade war**,
- (2) **Singapore's ability to diversify and adapt**, and
- (3) **the distribution of the impact across different groups of residents**.

Examiner's Report:

Most students were able to recognise the need to link their explanation to the **standard of living (SOL)**. However, many responses contained **gaps in analysis**. Students tended to focus more on explaining the implications for **economic growth**, which could already be inferred from the extract, rather than explaining clearly **how these changes would affect SOL**.

For students who did make the link to SOL, the explanation was often generic and lacked effective use of the **extract information** to support their analysis.

Stronger responses should therefore:

- use the extract evidence explicitly,
- explain the transmission from the change described in the extract to **material and/or non-material SOL**, and
- avoid stopping at economic growth without completing the link to household well-being.
-

A useful analysis chain would be:

Extract evidence → impact on income/employment/consumption or quality of life → impact on material/non-material SOL.

Level	Description	Marks
2	Strong and balanced analysis with good use of economic analysis to explain at least 2 views on the extent to which the US–China trade war is likely to worsen the standard of living of Singapore residents. With consideration of	4- 6

		both material and non- material SOL and Singapore context.										
	1	Answer shows some knowledge of the extent to which the US–China trade war is likely to worsen the standard of living of Singapore residents. With consideration of both material and non- material SOL and Singapore context. There is a lack of economic analysis and limited reference to the case material. Basic errors of theory or an inadequate development of analysis may be evident.	1- 3									
	E2	For an answer that builds on appropriate analysis to evaluate the strengths and limitations of the policies, synthesizing economic arguments to arrive at a summative conclusion.	2									
	E1	For an answer that gives an unsupported evaluative statement(s).	1									
(e)	Singapore on Monday eased its monetary policy for the second straight time as the city-state sees zero growth this year. Discuss the factors that the Singapore government should consider when deciding whether to ease its monetary policy in response to weaker economic growth arising from the US–China trade war. Question Analysis <table><tr><td>Command</td><td><i>Discuss the factors</i> → students should identify several relevant considerations, explain how each affects the decision, weigh their relative importance, and arrive at an overall judgement.</td></tr><tr><td>Content</td><td>Monetary policy, economic growth, inflation, exchange rate, external trade. (Factors of consideration for decision making)</td></tr><tr><td>Context</td><td>Singapore facing weaker external demand due to the US–China trade war.</td></tr><tr><td>QR</td><td>QR1: Benefits consideration of the use of easing monetary policy in response to weaker economic growth arising from the US–China trade war. QR2: Cost consideration of the use of easing monetary policy in response to weaker economic growth arising from the US–China trade war. Unintended consequences of the use of policy.</td></tr></table> Singapore is a small and highly open economy, so weaker global growth arising from the US–China trade war can reduce external demand for Singapore’s exports. This can lower aggregate demand, real national income and employment. In deciding whether to ease monetary policy, the Monetary Authority of Singapore should therefore consider the severity of the slowdown, inflationary conditions, the source of the slowdown, and the possible trade-offs from allowing the Singapore dollar to appreciate more slowly or depreciate.			Command	<i>Discuss the factors</i> → students should identify several relevant considerations, explain how each affects the decision, weigh their relative importance, and arrive at an overall judgement.	Content	Monetary policy, economic growth, inflation, exchange rate, external trade. (Factors of consideration for decision making)	Context	Singapore facing weaker external demand due to the US–China trade war.	QR	QR1: Benefits consideration of the use of easing monetary policy in response to weaker economic growth arising from the US–China trade war. QR2: Cost consideration of the use of easing monetary policy in response to weaker economic growth arising from the US–China trade war. Unintended consequences of the use of policy.	[10]
Command	<i>Discuss the factors</i> → students should identify several relevant considerations, explain how each affects the decision, weigh their relative importance, and arrive at an overall judgement.											
Content	Monetary policy, economic growth, inflation, exchange rate, external trade. (Factors of consideration for decision making)											
Context	Singapore facing weaker external demand due to the US–China trade war.											
QR	QR1: Benefits consideration of the use of easing monetary policy in response to weaker economic growth arising from the US–China trade war. QR2: Cost consideration of the use of easing monetary policy in response to weaker economic growth arising from the US–China trade war. Unintended consequences of the use of policy.											

QR1: Benefits consideration of the use of easing monetary policy in response to weaker economic growth arising from the US–China trade war.

The benefit of the easing of monetary policy to manage the severity of the fall in external demand is one key factor of consideration.

Extract 6: Singapore on Monday eased its monetary policy for the second straight time, as the city-state sees zero growth this year as a possibility after posting a lower-than-expected GDP expansion of 3.8% for the first quarter. MTI said that Singapore's external demand outlook has "weakened significantly." It highlighted that the manufacturing sector was likely to be negatively affected by weaker global demand, and services such as finance and insurance could see a slowdown.

Economic Analysis & Contextualization:

One important consideration is the extent of the fall in external demand and economic growth.

If the **trade war substantially weakens business and consumer confidence globally**,

- demand for Singapore's exports may fall significantly
- Export-oriented sectors such as manufacturing, electronics and financial services may experience lower revenue and investment.
- As net exports fall, aggregate demand decreases from AD_0 to AD_1 , leading to a multiplied fall in real national income and an increase in cyclical unemployment.
- If the negative output gap is large and persistent, there would be a stronger case for MAS to ease monetary policy.
- **A slower rate of appreciation or depreciation of the Singapore dollar can improve export price competitiveness and reduce the extent of the fall in net exports and aggregate demand.**

The easing of monetary policy will:

- Exports to become relatively cheaper in foreign currency.
- Foreigners will then demand more of the country's exports
- thereby increasing export revenue (X).

On the other hand, prices of imports (P_m) into the country will become relatively more expensive in domestic currency.

- Discourage locals from buying imported goods and services.
- Assuming that the demand for imports is price elastic, ($PED_m > 1$)
- quantity demanded decreases more than proportionately,
- import expenditure (M) will decrease.

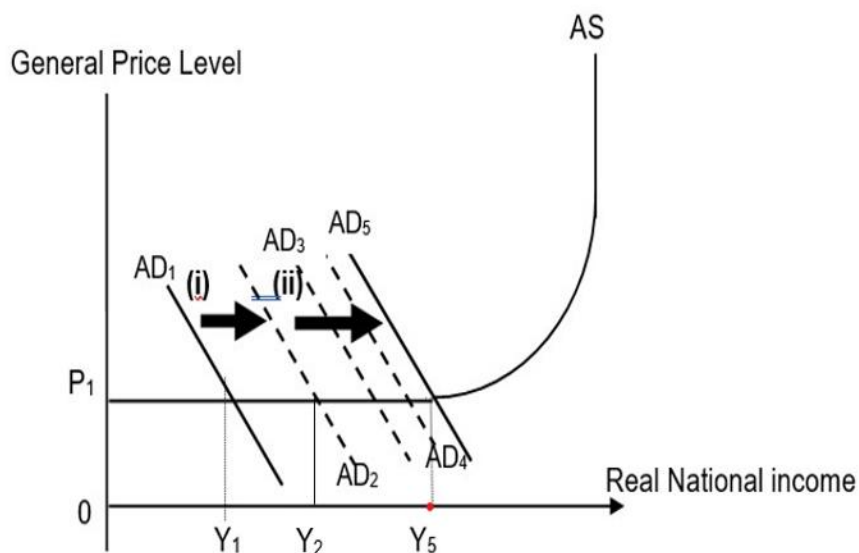
Depreciation can also encourage the domestic sector to switch from purchasing imports to domestically produced substitutes

- increasing demand for domestic goods hence increasing consumption expenditure on domestically produced goods and services (C), ceteris paribus.

Since both net export revenue and consumption expenditure on domestically produced goods and services have **increased and are components of Aggregate Demand (AD), AD will increase, increasing RNY by a multiplied amount.**

(For detailed analysis) With a rise in C and net export, this leads to a rise in AD and through the multiplier effect causes a multiple rise in real national income.

- Assuming the economy is not at full employment level
- 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 Y_1 to Y_2 .
- Increase in national income, which will increase income induced consumption and result in a further increase in AD.
- 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 Y_1 to Y_5 .



QR2: Cost consideration of the use of easing monetary policy in response to weaker economic growth arising from the US–China trade war. Unintended consequences of the use of policy.

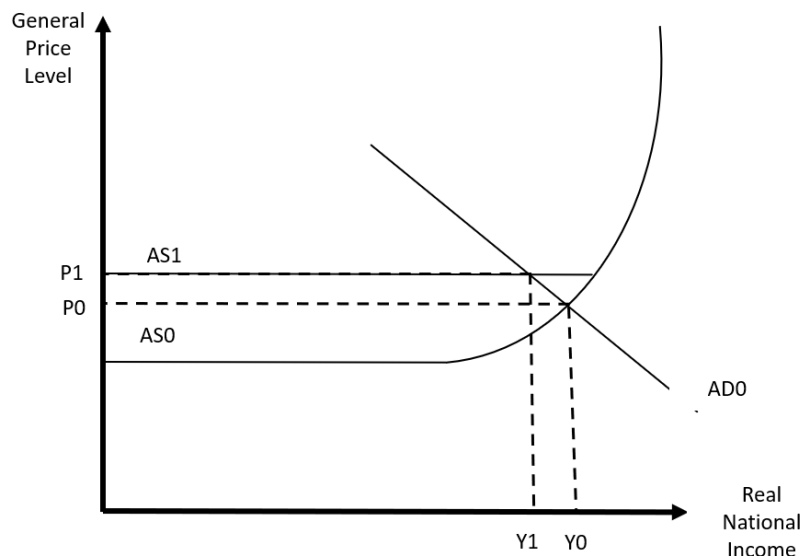
Extract 4: Mentioned the possibility of China holding monopoly power and charging higher for raw earth minerals that are critical components of factors of production.

Extract 5: The trade war has also disrupted supply chains especially those between China and US.

Economic Analysis:

MAS must also consider the **prevailing rate and source of inflation.**

- Easing monetary policy may cause the Singapore dollar to depreciate or appreciate more slowly, making imported goods and intermediate inputs more expensive in Singapore-dollar terms.
- Since Singapore imports a large proportion of its food, energy and raw materials, this may generate imported cost-push inflation.
- Higher price of imported raw materials, the unit cost of production throughout the economy may be higher
- Decrease in SRAS, AS0 to AS1. (Esp for small and import dependent economies)
- Higher GPL from P0 to P1 (Cost Push Inflation)-> Unintended Consequences
- Actual Economic Growth will decrease (Y0 to Y1)



- Worsens the already slower economic growth.
- Given the trade war, leading to supply shocks and additional costs from tariffs, G&S might already be more expensive.
- If inflation is already high, easing monetary policy could worsen price instability and reduce households' real purchasing power.
- Hence, even if economic growth is weak, MAS may be reluctant to ease aggressively if imported inflation remains a significant concern.

Summative Conclusion

Overall, the severity of the fall in external demand (Benefit consideration) is likely to be the more significant factor in determining whether MAS should ease monetary policy, especially if the US-China trade war causes Singapore's growth to weaken substantially towards zero.

The key criterion should be the relative magnitude and persistence of the threat to Singapore's macroeconomic stability. As a small and highly open economy, Singapore is highly dependent on external demand. Hence, a sharp and

prolonged fall in exports can cause a sizeable contraction in aggregate demand, create a persistent negative output gap and increase cyclical unemployment. In such circumstances, allowing the Singapore dollar to appreciate more slowly, or even depreciate, could help cushion the fall in net exports and support economic activity. This is particularly important if weak external demand is expected to affect several major sectors such as manufacturing, finance and trade-related services.

However, **MAS should only ease monetary policy to the extent that inflationary pressures remain manageable**. The trade war may simultaneously disrupt global supply chains and raise the prices of imported intermediate goods and raw materials. Since Singapore is heavily dependent on imports, excessive monetary easing could compound these cost pressures through a weaker Singapore dollar, worsening imported inflation and further reducing households' real purchasing power.

Therefore, the decision depends ultimately on whether the demand-side contraction or the supply-side inflationary pressure is the larger and more persistent shock, which is the root cause of the slower economic growth. If Singapore faces near-zero growth, substantial spare capacity and weak underlying inflation, the benefits of easing monetary policy are likely to outweigh the inflationary costs. Conversely, if supply-chain disruptions generate strong and persistent imported inflation, MAS should adopt a more cautious degree of easing. Thus, rather than asking simply whether monetary policy should be eased, the more important judgement is **how much easing is appropriate given the balance between supporting growth and maintaining price stability.**

Examiner's Report:

Many students were unable to complete the final question, suggesting that **time management** remained an important issue.

Among those who attempted the question, many were unable to accurately explain the **factors that the Singapore government should consider when deciding whether to ease monetary policy in response to weaker economic growth arising from the US–China trade war.**

Common weaknesses included:

- simply explaining **how monetary policy works**, without addressing the decision-making factors;
- discussing considerations in a **generic manner without applying them to the US–China trade war and Singapore context**;
- discussing **alternative policies** instead of evaluating whether monetary policy should be eased; and
- incorrectly explaining monetary policy using **interest-rate policy**, rather than recognising that Singapore's monetary policy is centred on the **exchange rate**.

Stronger responses should focus on the relevant trade-offs and contextual factors, such as the **severity and duration of the slowdown, impact on employment and external demand, prevailing inflationary pressures, risk of imported**

inflation, and the likely effectiveness of exchange-rate easing in supporting growth.

Students should ensure that every factor is explicitly linked back to the key decision: **whether the benefits of easing monetary policy outweigh the potential costs and limitations in the Singapore context.**

Level	Description	Marks
2	Strong and balanced analysis of the arguments for factors that the Singapore government should consider when deciding whether to ease its monetary policy in response to weaker economic growth arising from the US–China trade war. With good use of extract materials in consideration of Singapore context and the implications on weaker economic growth from the US China Trade war.	4 - 7
1	Answer shows some knowledge of arguments for factors that the Singapore government should consider when deciding whether to ease its monetary policy in response to weaker economic growth arising from the US–China trade war. but the concepts were not well explained. There is a lack of economic analysis and limited reference to the case material. Basic errors of theory or inadequate development of analysis may be evident. With little use of extract materials in consideration of Singapore context and the implications on weaker economic growth from the US China Trade war.	1 - 3
E2	For an answer that came to a reasoned conclusion on factors that the Singapore government should consider when deciding whether to ease its monetary policy in response to weaker economic growth arising from the US–China trade war. Using both economic analysis and case material, synthesizing economic arguments to arrive at a summative conclusion.	2- 3
E1	For an answer that gives an unsupported statement(s).	1

[Total: 30]