

2024 JC2 H2 Economics

Common Assessment 1 (CA1)
Revision Package
(2020 – 2023 CA1 Papers)

Order: 2023 QP and Suggested Answers, followed by 2022, 2021 & 2020

Name: _____

Class: _____

TRY THE QUESTIONS, DO NOT SIMPLY READ AND MEMORISE THE ANSWERS

2024 H2 CA1	
Date: Tue, 5 March 2024 Time: 8am – 10.15am (including 10 min time to switch from Section A to B) Format: <ul style="list-style-type: none"> Section A: 1 x CSQ [30m] (Compulsory) Section B: 1 x Essay [25m] (2 choose 1) 	Scope: <ul style="list-style-type: none"> Book 7: AD-AS Model (note: no circular flow of income) Book 8: Economic Growth (whole book) Book 9: Unemployment (whole book) Book 10: Inflation / Deflation (whole book) Book 11: BOP (whole book) Book 12: Fiscal Policy only (only “explain”-type questions; no evaluation of fiscal policy) <p>NOTE: For the 2020-2022 tests, Paper 2’s format is different (3 choose 2 essays); for your CA1 it is 2 choose 1.</p>

Important Notes:

- The format of the papers and scope tested may vary from year to year, so focus on those relevant to your cohort as you prepare for your promotional examination.
- The H2 Economics syllabus has changed since 2022 (it is now 9570, vs 9757 before 2022). Differences in the content have been marked out where applicable, but take note that there is some change to the duration of the examinations too. **As a guide, you should be spending 1h 15 min on a 30 marks CSQ, and 50 min on a 25 marks essay.** There is also some change to the mark allocation for evaluation in essays. It is now E1 (1 to 2 marks), E2 (3 to 4 marks) and E3 (5 marks).
- The markers’ comments contain very useful information, as they highlight the common mistakes that students made, both in terms of content as well as understanding of question requirements. Read them!
- This set of materials should be used in conjunction with your notes, tutorial worksheets and Book 0 ‘Economics Learning Guide’ as you revise.
- Try the questions in this revision package.** You may not have sufficient time to write out full responses for every question – for some of them, you can write brief essay outlines with sketches of relevant diagrams. Then, check them against the suggested responses to see:
 - Have you answered to the question requirements?
 - Is your response structured in a logical and organised manner?
 - Have you given rigorous and developed economic explanations?
 - Have you applied your answer to the given context, or used examples to illustrate?

***** Learning takes place through active processing, not simply passive reading *****

Skills to take note of (refer to Guide to Economics for more information)

Question Dissection	Writing Paragraphs	Evaluation
Command word Content (concepts required) Context given Have I established the two requirements of each question part?	Point Explanation (economic) Evidence / Example Link back to question	Make clear <u>substantiated judgements</u> , considering: <ul style="list-style-type: none"> Context / Circumstances Assumptions Root cause Time period (ST vs LT) Constraints Trade-offs Severity / Magnitude Evidence

2023 Timed Practice QP**Paper 1: CSQ (1 h 15 min)**Answer **all** questions.**Singapore's road to recovery post pandemic****Table 1: Singapore, selected economic indicators (2017 – 2021)**

	2017	2018	2019	2020	2021
Consumer Price Index (2019=100)	99.0	99.4	100	99.8	102.1
Trade balance (S\$ millions)	125,153	146,771	147,216	151,047	167,265
Unemployment rate (%)	2.2	2.1	2.3	2.9	2.7
Real GDP (S\$ billions)	4.58	4.75	4.80	4.61	4.96

Source: *Singapore Department of Statistics, 2022***Extract 1: Singapore's economy continues to recover**

Singapore maintained its forecast for the economy to expand 3 per cent to 5 per cent this year as the city-state's recovery from the pandemic slump continues, although officials flagged possible downside risks to global growth and rising inflationary pressures. The global economic recovery faces risks from mounting price pressures due to supply chain disruptions and rising energy costs amid tensions involving Russia and Ukraine, even as the pandemic appears to abate. For the full year 2021, Gross Domestic Product (GDP) grew 7.6 per cent versus a 4 per cent contraction in 2020. Last year's growth was the highest in a decade.

Singapore's economic recovery has been led by the trade-related and manufacturing sectors, but activity in industries exposed to tourism, aviation and consumers are expected to remain below pre-COVID levels even by the end of 2022. However, bolstered by high vaccination rates, Singapore is loosening border measures and easing local restrictions, in moves that will likely support the recovery of lagging sectors.

Adapted from *Reuters*, Feb 2022**Extract 2: Job challenges of today**

The transformation to digital is radically altering how businesses run and how jobs tasks will be done. New skills will be needed, and new roles have emerged. Research showed that in the six Asia Pacific (APAC) economies surveyed, the total number of workers applying digital skills at work will grow from 149 million workers today to 819 million workers in 2025. Within that, countries like Singapore will need 1.2 million more digital workers by 2025 to maintain their competitive edge. The need to

close the digital skills gap cuts across the region, with each country facing unique challenges and requiring a different policy approach to address the specific pain points.

Another challenge for Singapore's labour market is the 'Great Resignation', which hit its sunny shores amid the pandemic. Describing the trend of employees voluntarily leaving their jobs en masse, this ongoing global phenomenon has had a wide impact on the global workforce. The definition of a 'good job' is changing. What was a good job in the past, usually one that offered steady compensation and stability and long-term prospects, is no longer considered a good job by those entering the workforce today. Today, employees want financial compensation, but that's not nearly enough. In addition, they are looking for a sense of purpose and alignment with their organisation's values. These unemployed workers are fine with taking their time to gather information on what prospective companies can offer. While most are likely to reshuffle and move among different jobs in the same sector, some are considering switching industries entirely. Technological change, the continued impact of COVID-19, changing demographics in the workforce and social needs are all driving this shift.

Adapted from *The Business Times*, Nov 2022

Extract 3: Should Singapore be concerned about inflation?

Singapore's core inflation rose to a 13-year high of 4.8 per cent in July, beating expectations. Selena Ling, chief economist at OCBC, predicts that inflation will stay high into 2023. While inflation is a concern, it may not necessarily result in an economic slowdown amidst hiking interest rates.

"I wouldn't say that a recession is even on the cards for Singapore yet. Mainly because we still have manufacturing, electronics and trade that are very resilient. And if you look across the region, with the reopening of economies, domestic consumption levels are relatively strong. I think inflation really depends on whether it is demand pull or cost push. Demand pull inflation is actually not that bad a thing because it means that the global economy is recovering, and demand is actually picking up." explained Ling.

As the global economy recovers from the pandemic, the war between Russia and Ukraine is also contributing to the inflation in Singapore. Uncertainty over energy supplies from Russia has sent oil prices soaring above US\$100 a barrel, driving up inflation worldwide and indirectly putting resource-scarce Singapore's economic outlook at risk by pushing up production costs and consumer prices.

Generally speaking, inflation erodes the purchasing power of consumers over time as they require more money to buy the same amount of goods. However, inflation hurts low earners disproportionately. This is because higher-income households spend a smaller portion of their total income on necessities. If prices get too high, they can cut back on expenses that are not essential. By contrast, low-income families spend nearly a third of their income on necessities such as food, transportation, utilities, and telecoms services.

Adapted from *The Business Times*, Sep 2022

Extract 4: Budget 2022: \$500 million Package to cope with Covid-19 Challenges

Businesses will continue to get targeted help to cope with lingering challenges amid the Covid-19 pandemic. Workers and businesses in sectors that are still struggling with the impact of the pandemic will receive \$500 million through a Jobs and Business Support Package. Eligible small and medium-sized enterprises (SMEs) will get a payout of \$1,000 per local employee, capped at \$10,000 per firm. Firms must have an annual operating revenue of less than \$100 million or employ fewer than 200 employees as at Dec 31 last year, among other criteria. An additional \$200 million has also been set

aside for schemes to build digital capabilities and support R&D collaborations between SMEs, polytechnics and ITE.

Finance Minister Lawrence Wong said the Government expects to see steady recovery this year.

"Singapore will continue to benefit from the pickup in the global economy. More widespread vaccination and booster efforts will support growth in the major economies like the US and euro zone. The recovery of our key trading partners in the region will also support our growth," said Mr Wong in his Budget speech.

Workers who continue to face income loss due to the pandemic can apply for the Covid-19 Recovery Grant, which has been extended till the end of this year. The grant provides up to \$700 per month for three months for workers who have lost jobs or have been placed on involuntary no-pay leave due to Covid-19.

Meanwhile, households will get more help through vouchers and rebates to cope with higher prices. A \$560 million Household Support Package will help Singaporean families manage cost of living pressures, by providing support for daily essentials through utilities rebates, top-ups for children's education and vouchers they can use at heartland shops. All eligible Housing Board (HDB) households will receive double their regular GST Voucher (GSTV) - U-Save rebates in April, July and October this year under the package. All Singaporean households will also receive another \$100 Community Development Council (CDC) voucher, which they can use at participating heartland shops and hawker stalls.

Adapted from *The Straits Times*, Feb 2022

Questions

- (a) Using Table 1, calculate and interpret the rate of change in consumer prices in 2021. [2]
- (b) (i) Using Table 1, describe Singapore's trade balance from 2017 to 2021. [2]
(ii) Explain **two** possible reasons to account for the above change in Singapore's trade balance. [4]
- (c) With reference to Extract 2, explain **two** causes of unemployment in Singapore in recent years. [4]
- (d) With reference to Extract 3, discuss whether the Singapore government should be concerned with the change in general price level in 2022. [8]
- (e) Discuss the appropriateness of Budget 2022 to help Singapore achieve inclusive growth. [10]

[30]

Paper 2: Essay (50 min)

Answer **ONE** question in total.

Question 1

The Philippines government has dedicated \$1.87bn to the South Commuter Railway Project. This project is expected to cut down net greenhouse gas emissions by more than 284,000 tonnes per annum. “It will strengthen the country’s economic recovery, create over 38,000 jobs, and improve access for residents of Laguna province, a neighbouring province of Manila, to employment in Metro Manila,” says Asian Development Bank deputy director general.

Adapted from *Rail Technology*, 7 Oct 2022

- (a) Explain two causes of high unemployment in a country. [10]
- (b) Discuss whether the South Commuter Railway Project will necessarily help Philippines to achieve sustainable economic growth. [15]

Question 2

Changes in global conditions and exchange rates can affect trade flows between economies.

- (a) Explain how the macroeconomic performance of an economy’s trade partners can impact its balance of trade. [10]
- (b) Discuss the extent to which currency depreciation would be beneficial for an economy. [15]

2023 Timed Practice Suggested Answers

Paper 1: CSQ

(a)	Using Table 1, calculate and interpret the rate of change in consumer prices in 2021. [2]
	<p>Singapore's inflation rate in 2021 $= (\text{CPI}_{2021} - \text{CPI}_{2020}) / \text{CPI}_{2020} \times 100\%$ $= (102.1 - 99.8) / 99.8$ $= 2.30\% [1]$</p> <p>Consumer prices in Singapore rose by 2.3%. [1]</p> <p><u>Calculate [1m]</u> Need to show working for first mark. 0m if students only gave the value without showing how it is derived.</p> <p><u>Interpret [1m]</u> Students must interpret <u>the rate of change</u> for the second mark. 0m if students only said consumer prices rose or there is inflation.</p>
(b)	(i) Using Table 1, describe Singapore's trade balance from 2017 to 2021. [2]
	<p>Singapore's trade balance (BOT) improved [1] and was consistently in surplus from 2017 to 2021. [1]</p> <p>Can credit full 2m if students say trade surplus increased/improved 0m if students say trade balance increased (instead of improved)</p>
	(ii) Explain two possible reasons to account for the above change in Singapore's trade balance. [4]
	<p>Acceptable points include:</p> <ol style="list-style-type: none"> 1) Economic growth in Singapore's trade partners 2) Lower inflation rate relative to other countries 3) Depreciation of currency (assume MLC holds) <p>Deflation and Recession in Singapore are not accepted as they contradict the indicators in Table 1.</p> <p>One possible reason for the improvement in Singapore's BOT was economic growth in Singapore's trade partners. With an increase in national income, foreigners would have enjoyed higher purchasing power and raised their demand for Singapore's exports. This would lead to a rise in export revenue (X). Assuming import expenditure (M) remained unchanged, this would have led to an improvement in Singapore's trade balance. [2]</p>

	<p>One other possible reason for the improvement in Singapore's BOT was a lower inflation rate relative to other countries. Foreigners would have found Singapore's exports relatively cheaper and hence buy more SG exports, leading to a rise in X. At the same time, Singaporeans would have found foreign imports relatively more expensive and hence buy less imports, leading to a fall in M. A rise in X and fall in M would improve Singapore's trade balance. [2]</p> <p>One other possible reason for the improvement in Singapore's BOT is a depreciation of \$S against foreign currencies such as Malaysian Ringgit. This would have caused the price of Singapore's exports in Malaysian Ringgit to decrease, causing an increase in its demand and thus X. At the same time, quantity demanded for Malaysian imports would have fallen as the price of imports in S\$ rose. Assuming the demand for imports is price elastic, there would be a fall in M and vice versa. However, so long as the Marshall Lerner condition holds ($PED_x + PED_m > 1$), the depreciation of the SGD would have improved Singapore's trade balance. [2]</p> <p><i>Other acceptable points include: quality of Singapore's exports rises.</i></p>
(c)	<p>With reference to Ext. 2, explain two causes of unemployment in Singapore in recent years. [4]</p>
	<p>Structural unemployment [2] + Frictional Unemployment [2]</p> <p>DD-deficient unemployment is not accepted as Ext 2 is not focusing on that and Table 1 shows a general rise in real GDP in recent years (except 2020).</p> <p><u>Structural unemployment [1m for cause + 1m for contextualised explanation]</u></p> <p>The first type of unemployment is structural unemployment. Singapore's "transformation to digital" (Ext 2, Para 1) has resulted in many industries adopting more automation in their production processes to increase productivity. Some displaced elderly Singaporean workers who may not be used to the new methods of production, lack the relevant digital skills to take up these jobs. Due to this skills mismatch between what workers possess and what industries demand, structural unemployment is likely to be on the rise in Singapore. [2]</p> <p><u>Frictional unemployment [1m for cause + 1m for contextualised explanation]</u></p> <p>The second type of unemployment in Singapore is frictional unemployment. The recent phenomenon of the Great Resignation saw workers who left their previous jobs being fine with taking their time to gather information on what prospective companies can offer even if it meant staying unemployed longer (Ext 2, Para 2). Due to the imperfect information that these Singaporeans have on what prospective employers can offer them in terms of job satisfaction, they are choosing to take their own time to gather such information by networking with current employees or career counsellors for instance. As such, frictional unemployment is likely on the rise in Singapore. [2]</p>

(d)	<p>With reference to Ext. 3, discuss whether the Singapore government should be concerned with the change in general price levels in 2022. [8]</p>
	<p>Side 1: Negative outcome of inflation Side 2: Positive outcome of inflation</p> <p><u>Introduction</u></p> <p>Singapore experienced inflation i.e. an increase in general price level in 2022. Inflation could have positive or negative impacts on the economy so whether the government should be concerned depends on which impact is more significant.</p> <p><u>Requirement 1: Negative outcome of inflation</u></p> <p>[P] The Singapore government should be concerned as inflation will lead to a fall in material standard of living of Singaporeans.</p> <p>[E,E] Inflation would lead to a rise in cost of living in Singapore. This would erode the purchasing power of Singaporeans assuming the nominal income remains unchanged or does not increase as much, resulting in a fall in their real income. This will lead to decreased ability to consume more goods and services, resulting in a fall in their material SOL. While all households would be affected, this is likely going to impact low-income households more significantly as they spend the bulk of their income on necessities such as food and transportation (Extract 3). Unlike the rich where they can cut back on unnecessary spending, they must incur the higher costs since they are only purchasing necessities or even forced to cut back on spending for such goods. This will significantly reduce their material SOL.</p> <p><u>Requirement 2: Positive outcome of inflation</u></p> <p>[P] The Singapore government should not be concerned if inflation is due to a rise in AD i.e. demand-pull inflation.</p> <p>[E,E] Inflation in Singapore could be demand-pull as the global economy recovers from the pandemic (Ext 3, Para 2). This inflation can be seen as a sign of healthy and growing economy, which will lead to improved outlook of the economy and households expect future income levels to rise while firms predict expected rate of returns to investments to increase. The rise in consumers' and investors' confidence will lead to increases in consumption expenditure (C) and I, leading to a rise in AD from AD1 to AD2.</p>

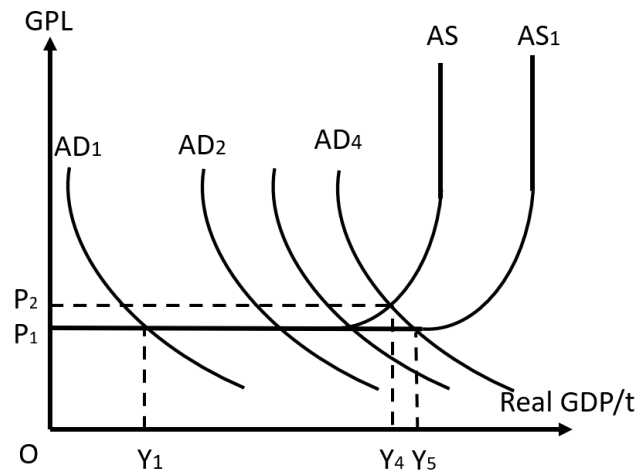


Figure: AD-AS of Singapore's economy

[E,E] A rise in investment expenditure (I) will lead to a rise in aggregate demand (AD) from AD₁ to AD₂. This would lead to firms experiencing unplanned fall in inventories and increase production by hiring more factors of production (FOPs) such as labour. In return, households will receive more income and spend more on domestic goods and services.

[L] This will eventually trigger multiple rounds of rise in real GDP, resulting in economic growth illustrated by a rise in real GDP from Y₁ to Y₄ and a fall in demand-deficient unemployment since labour is a derived demand for production of goods and services.

[E,E] In addition, there will be greater capital accumulation in Singapore due to increased investments. This will improve productive capacity of the country and causes a rise in aggregate supply (AS) illustrated by a rightward shift of the vertical AS curve from AS to AS'. The rise in AS will lead to firms being able to use more efficient combinations of FOPs and firms will pass on the cost savings by lowering their prices, leading to a fall in GPL from P₂ to P₁. The fall in GPL will also lead to a further rise in real GDP from Y₄ to Y₅ due to the wealth effect.

Conclusion

[Stand] Overall, the Singapore government should be concerned about inflation in 2022.

[Substantiation] Even though the global economy is recovering, the impact of Russia-Ukraine war is significant, especially since Singapore is "resource-scarce" (Ext 3, Para 3) and heavily reliant on imported oil. This means that the firms are likely anticipating significant rise in their unit cost of production and expected rate of returns to new investments are affected, discouraging firms from investing. This will lead to a recession and slowing potential growth assuming gross investment level still exceeds capital depreciation rate.

Overall, outlook of economy would likely remain gloomy despite global economic recovery due to the ongoing war and thus Singapore government should be concerned due to the negative impacts on the economy.

Possible for students to evaluate DD-pull inflation is more significant.

	Level	Descriptors	Marks
	L2	Well developed and balanced answer that explains the positive and negative impacts of inflation. Max L2-5 marks for two-sided answer that explains flip side of the other i.e. outlook improves if it is DD-pull inflation and outlook worsens if it is cost-push inflation. Max L2-5 marks for 1 theoretical impact and 1 contextualized impact	4-6
	L1	There is some knowledge on the positive and negative effects of inflation. OR Answer only explains either the positive or negative impacts of inflation. Max L1-3 marks for one-sided answer i.e. only positive or negative impacts of inflation	1-3
		Evaluation	
	E	Marks may be awarded for answers that arrive at a conclusion after considering the extent of both the positive and negative impacts of inflation in Singapore	1-2
Answers must be explaining consequences of inflation, not causes of inflation or consequences of a rise in AD and fall in AS. No credit given for latter analysis.			
©	Discuss the appropriateness of Budget 2022 to help Singapore achieve inclusive growth. [10]		
	<p>Point 1: Explanation of how Budget 2022 helps Singapore to achieve actual economic growth</p> <p>Point 2: Explanation of how Budget 2022 helps Singapore to improve equity/ reduce income inequality</p> <p><u>Introduction</u> Budget 2022 outlines a few policies that the government has undertaken in order to achieve inclusive growth.</p> <p><u>Explanation of how Budget 2022 helps Singapore to achieve inclusive economic growth</u></p>		

[P] Budget 2022 included several transfer payments such as the Household Support Package, GST vouchers and Covid recovery grant, which is given to workers who have faced job losses due to the pandemic that will encourage economic growth.

[E,E] These transfer payments in the form of direct cash handouts will increase the disposable income of Singaporean households. The rise in purchasing power will lead to an increase in consumption expenditure © on domestic goods and services which will lead to a rise in AD from AD₁ to AD₂.

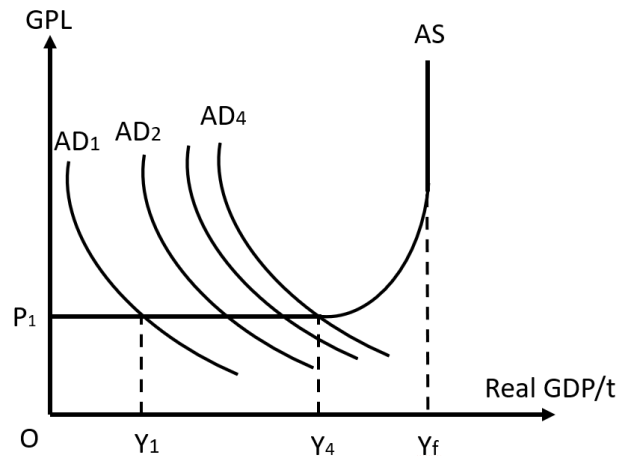


Figure: AD-AS of Singapore's economy

[E,E] This would lead to firms experiencing unplanned fall in inventories and increase production by hiring more factors of production (FOPs) such as labour. In return, households will receive more factor income and spend more on domestic goods and services, savings, taxes and imports. With the increased spending on domestic goods and services, firms again experience another round of unplanned fall in inventories and increase production by hiring more FOPs. Households will receive more factor income again and spend more.

[L] This will eventually trigger multiple rounds of rises in real GDP, resulting in actual economic growth illustrated by a rise in real GDP from Y_1 to Y_4 .

[E,E] These transfer payments can also improve equity. For instance, the Covid recovery grant (Ext 4) will help to increase the disposable income and purchasing power of those who lost their jobs, ensuring that their material standard of living does not deteriorate as much. Additionally, the GST vouchers are also given to eligible households, which suggests targeted transfer payments to better support the lower-income households. This would also improve equity as more support is given to those in need to enable them to better afford necessities.

[L] Hence, Budget 2022 helps to ensure that the economic growth in Singapore is inclusive.

Alternative point: Better support for digital capabilities and R&D collaborations between SMEs which increases I and promotes actual growth but not much angle for inclusiveness

Conclusion:

[Stand] Overall, Budget 2022 is appropriate to help Singapore achieve inclusive growth during the pandemic.

[Substantiation] Even though Russia-Ukraine War poses a downside risk to global recovery, the outlook remains positive as countries recover from the pandemic in general (Ext 1). This reduces the need for precautionary savings. Furthermore, the transfer payments tend to be targeted to lower income households, who have a larger MPCd. This would suggest households who receive the transfer payments from the Budget would likely spend a large proportion of it, leading to a significant increase in C and AD, causing a significant increase in real GDP i.e. actual economic growth.

Furthermore, in light of the rising inflation which is likely to be more hurtful to the lower-income households (Ext 3), the targeted transfer payments such as GST vouchers will be able to improve their material SOL and help Singapore achieve more equitable outcomes.

Alternative point: Investment Subsidies and Schemes seem to target SMEs which might have a limited impact on overall I in Singapore, though it would be effective in improving inequality. So overall there might be limited economic growth, but the growth is inclusive.

Level	Descriptors	Marks
L2	Answers are well developed and considers how the policies in the Budget 2022 will be able to achieve inclusive growth in Singapore.	4-7
L1	There is limited understanding of the effects of the policies which are in the Budget 2022.	1-3
	Evaluation	
E	Marks maybe awarded for answers that arrive at a conclusion after considering the appropriateness of the policies in achieving inclusive growth in Singapore with consideration of case extracts. <i>Max 1E mark awarded for theoretical ev points such as multiplier size. Learning point is to make use of the extracts for CSQ</i>	1-3

Paper 2: Essays**Question 1**

The Philippines government has dedicated \$1.87bn to the South Commuter Railway Project. This project is expected to cut down net greenhouse gas emissions by more than 284,000 tonnes per annum. “It will strengthen the country’s economic recovery, create over 38,000 jobs, and improve access for residents of Laguna province, a neighbouring province of Manila, to employment in Metro Manila,” says Asian Development Bank deputy director general.

Adapted from *Rail Technology*, 7 Oct 2022

a) Explain **two** causes of high unemployment in a country. [10]

Requirement 1: Explanation of one cause of high unemployment.

Requirement 2: Explanation of one other cause of high unemployment.

Approach: When addressing the question, students ought to frame their responses as reasons behind the type of unemployment, instead of merely explaining different types of unemployment. For rigour, students should go for cyclical and structural unemployment rather than frictional unemployment. There is also a need for students to address ‘high’ unemployment in the question.

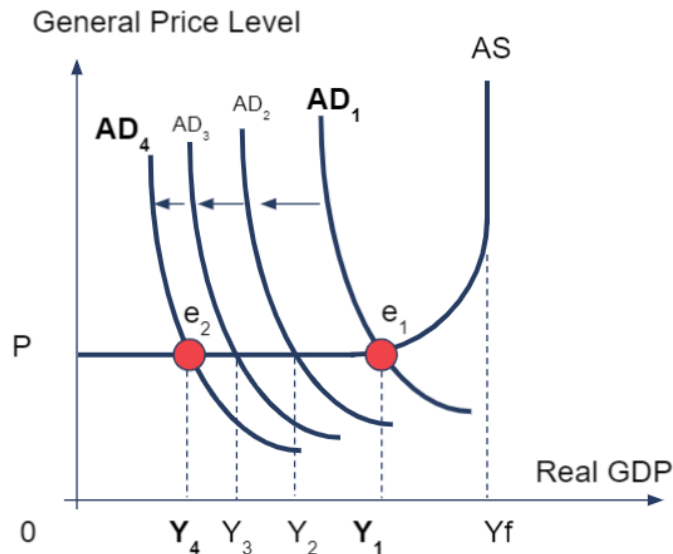
Essay Outline**Introduction**

Countries typically suffer from 3 types of unemployment – cyclical, structural and frictional unemployment. Philippines (or other countries) could be suffering from cyclical and structural unemployment, and the causes could be poor economic outlook, as well as a change in the method of production.

Body

[P] Poor economic outlook stemming from the Covid-19 pandemic could be a cause of high unemployment in a country.

[E, E] The Covid-19 pandemic has brought about a global economic downturn, dampening both consumers’ and firms’ confidence to consume and invest respectively. For consumers, they expect a fall in income and hence hold back on spending. Consumption expenditure (C) falls. For firms, with poor economic outlook, their expected rate of returns falls. Assuming interest rates remain constant, the marginal benefit of investment is now less than marginal cost for some investment projects, and firms will cut back on investments. Investment expenditure (I) falls. With a fall in both C and I, there will be a fall in aggregate demand from AD1 to AD2.



As a result of the fall in AD, firms experience an unplanned rise in the level of inventories. Firms will decrease production and employ less factors of production (FOP), since labour is a derived demand. The fall in national income triggers cuts in consumer spending due to the multiplier effect. AD falls further. This leads to further fall in production and less FOPs hired resulting in another cycle of decreased spending. The national income will be lower as output decreases further. Assuming the economy was operating with spare capacity, the fall from AD2 to AD4 results in equilibrium output falling to Y4. There is an increase in the output gap from $Y_f - Y_1$ to $Y_f - Y_4$, signifying an increase in demand-deficient unemployment.

Also, when firms cut back on production, demand for labour falls but wages remain relatively constant because wages are 'sticky' downwards due to contracts. Firms can only respond by cutting employment of workers and not wages when AD falls. Eventually, the national output falls and demand-deficient unemployment rises. **[L]** Hence, the negative economic outlook, causing significant fall in AD, is one cause of high unemployment in a country.

[P] A change in the method of production is another possible cause of high unemployment in the Philippines.

[E, E] Advancements in technology implies automation, digitalisation, robotisation and artificial intelligence have transformed work processes. These allow the same level of output to be produced with fewer workers, i.e. labour-saving techniques, making certain occupations specialising in routine tasks less in demand. These redundant workers are then retrenched. While it could also create new jobs, for instance, the need to have workers to operate new machinery, many of the unemployed are unable to fill these new posts as their old skills may no longer be applicable. This mismatch in skills results in the retrenched workers remaining structurally unemployed.

[L] As the change in method of production affects many sectors and industries, it will lead to high structural unemployment as workers who are laid off are unable to gain employment due to skills mismatch.

OR

[P] Geographical immobility due to the lack of an efficient transport system is a possible cause of high unemployment in the Philippines.

[E, E] Geographical immobility of labour exists because it is difficult for labour to move between different cities in the country due to an inefficient transport system. The inefficient transport system acts as a barrier for workers to move from one area to another to find work. Therefore, workers are unable to move from areas with surplus labour, such as that in Laguna, to areas with employment opportunities, such as in Metro Manila, **[L]** leading to high regional unemployment.

Note: Students could also bring in structural change in different sectors leading to workers retrenched in sunset industries not being able to gain employment in the sunrise industries. E.g. in the 1990s when Singapore moved from labour-intensive manufacturing industries towards knowledge-based economy – mismatch of skills due to high education and skills required in these sectors.

Mark Scheme

Level	Descriptor	Marks
L3	Well-developed answer which addresses the question fully, i.e. two causes of 2 different types of high unemployment. Economic analysis is rigorously done.	8 - 10
L2	For a response which attempts to answer the question but does not explain in sufficient detail and/or is lacking in economic analysis	5 - 7
L1	Answer is largely irrelevant and/or erroneous and merely states a few valid points without much explanation.	1 - 4

- b) Discuss whether the South Commuter Railway Project will necessarily help Philippines to achieve sustainable economic growth. [15]

Requirement 1: Explanation of how the SCRP will help Philippines to achieve sustainable growth.

Requirement 2: Explanation of how the SCRP may not help Philippines in achieving sustainable growth.

Approach: Students will need to cover both sustained growth as well as environmental impacts when addressing sustainable growth. Students also need to give a balanced two-sided answer before concluding, based on the Philippines context, whether sustainable growth is more likely to be achieved or not.

Essay Outline

Introduction

Sustainable economic growth refers to a rate of growth that is **sustained without creating other significant socio-economical issues** such as depleted resources and environmental problems, especially for future generations. This essay will first explain how the South Commuter Railway Project (SCRP) will enable Philippines to achieve sustained growth, with an improvement in the environment, to achieve sustainable growth, before discussing the extent to which it allows sustainable growth to be achieved in Philippines.

Body**Side 1:** The SCRP will help Philippines to achieve sustainable growth

[P] The SCRP will help Philippines to achieve sustained growth.

[E, E] When the government spends on the SCRP, this increases government expenditure (G). The rise in G increases aggregate demand (AD), and the AD curve shifts rightwards from AD_0 to AD_1 , as seen in Figure 1.

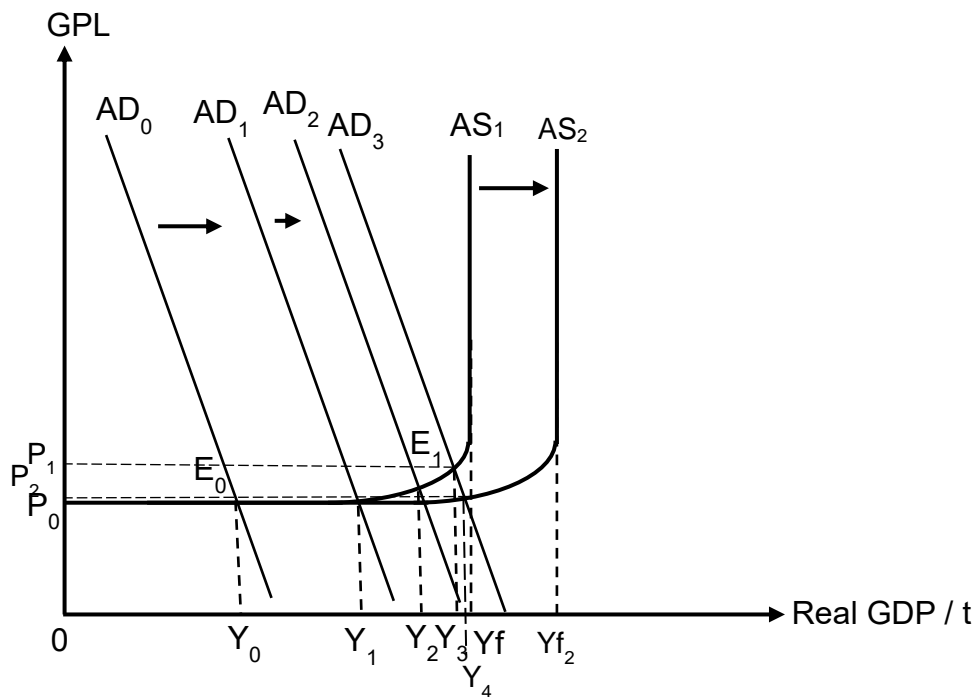


Figure 1

Assuming spare capacity in the economy, a rise in AD will lead to a multiplied rise in real GDP due to the multiplier effect. Assume the economy was initially at equilibrium E_0 and the equilibrium real GDP was at Y_0 . A rise in AD from AD_0 to AD_1 due to increase in G will cause the total planned expenditure to exceed actual output of an economy. As a result, firms will experience unplanned fall in their inventories and increase their production by hiring more factors of production (FOPs). In return, firms will pay more factor income to households and national income rises from Y_0 to Y_1 as shown in Figure 1. With the rise in income, households will spend a portion of it on domestic goods and services (Cd), while the rest are withdrawn as savings (S), taxes (T) and import expenditure (M). This rise in induced Cd will lead to another round of unplanned fall in firms' inventories as the total planned expenditure exceed actual output of the economy again. Firms then react by increasing production and hiring more FOPs. In return, firms will pay more factor income to households and real GDP rises again from Y_1 to Y_2 . Households will then spend a portion of it on domestic goods and services, causing a rise in induced Cd once more, as well as another round of increase in withdrawals. This will trigger multiple rounds of increases in income and the process continues until total withdrawals equal to total injections. The economy reaches a new equilibrium at E_1 where AD_3 intersects the AS curve. Overall, there is a multiplied rise in real GDP from Y_0 to Y_3 , and actual growth is achieved.

[E, E] The rise in G due to the SCRP also increases the productive capacity of the economy, as the increased connectivity improves the productivity of the labour force since workers spend less time travelling to and from work. With increased productivity, the economy is able to produce more output with the same quantity of factors of production. As such, the maximum possible output the country can produce expands, leading to an increase in the productive capacity of the economy. With the building of the railway, quantity of capital also increases, further increasing AS . Vertical AS shifts outwards from AS_1 to AS_2 . Full employment real GDP increase from Y_f to Y_{f_2} , as illustrated in Figure 1.

The rise in productive capacity and hence rise in AS increases the equilibrium real GDP from Y_3 to Y_4 due to the wealth, interest rate, and international substitution effect, while GPL falls to P_2 . The rise in productive capacity hence allows for increases in real GDP to be sustained over time.

[L] Therefore, the SCRP can enable Philippines to achieve sustained growth, which is a pre-requisite for sustainable growth.

[P] Government spending on the SCRP can also help Philippines to improve environmental outcomes to achieve sustainable growth.

[E, E] The preamble mentioned that the SCRP will reduce carbon emissions. Reducing carbon emissions will improve the overall air quality, improving the health and non-material standard of living of citizens once it is built. Moreover, since the rise in G leads to a rise in real GDP, this increases the government's ability to collect a greater amount of tax revenue. If this increase in revenue is used on subsidies for firms using cleaner or alternative energy, economic growth would also become more sustainable.

[L] Hence, the SCRP will help Philippines to achieve sustainable growth.

Side 2: The SCRP may not help Philippines to achieve sustainable growth

[P] However, the SCRP may not help Philippines to achieve sustainable growth as the construction might cause more pollution and negative environmental impacts.

[E, E] The construction of railway infrastructure projects requires intensive use of energy and material resources. Furthermore, it is likely that the construction and operation of the railways will degrade and destroy key ecosystems. It increases soil erosion and land degradation, and possibly causing habitat destruction. **[L]** Since the project causes environmental destruction that impacts future generations, the economic growth enjoyed due to the SCRP may not be sustainable in nature.

[P] Furthermore, the increase in AD may not result in increase in real GDP if the economy is approaching full employment.

[E, E] If the economy is already operating near full employment, there will be limited actual growth experienced because any increases in AD will lead to an increase in GPL rather than real national income. This means that the economy's growth cannot be sustained as the economy cannot grow beyond Y_f .

[L] Hence, the SCRP may not result in sustainable growth in Philippines since sustained growth is a prerequisite for sustainable growth.

[P] Lastly, the growth in Philippines may not be sustainable if the government has to borrow to finance the SCRP.

[E, E] If the government has to borrow to finance the railway project, there will be a crowding out effect. The borrowing by the government will result in the increase in demand for loanable funds, causing interest rates to rise. As interest rate rises, cost of borrowing rises. Households will be less incentivised to borrow to spend on big ticket items, and firms will be less incentivised to borrow for investments since MC of investments has increased. For firms, if expected rate of returns remain constant, $MB \text{ now} < MC$ and firms will reduce I . With the fall in C and I , it will offset the increase in G which is the driver of actual growth.

[L] Therefore, the lack of fiscal sustainability results in the SCRP not being able to help Philippines achieve sustainable growth.

[In-body ev] Since Philippines is a developing country with no reserves and is already in debt, it is likely that she will need to borrow to finance the SCRP. Therefore, the crowding out effect will be significant and sustainable growth is not guaranteed.

Conclusion

[Stand] In conclusion, the SCRP will most likely help Philippines to achieve sustainable growth.

[Substantiation]

(State of economy)

Philippines is a developing country and likely to be operating with spare capacity. Hence, they are likely to experience a multiplied increase in real national income with little or no inflationary pressures when AD increases due to G .

Furthermore, the improved connectivity and economic integration of provinces can lead to more economic opportunities, increasing optimism in their domestic economy. This can stimulate C and I to increase, leading to further increases in AD and hence actual growth.

(Government policies)

With the increase in real national income, there is likely to be an improvement in environmental impacts if the government implements measures to mitigate the environmental damage. For example, if the government provides earthworks stabilisation through lineside vegetation, soil erosion can be minimised. Furthermore, the reduction of emissions per year over the long term will be substantial, as opposed to the environmental issues experienced during the construction which can be mitigated with appropriate measures.

(Multiplier size)

In the case of Philippines, they are known as one of the lowest money savers in Southeast Asia due to their culture of spending. Their MPC_d is very high (0.85, compared to 0.83 for US and 0.52 for China, in 2020). Since $MPW = 1 - MPC$, and $k = 1 / MPW$, the multiplier size of Philippines is relatively big. With a low MPW , this means that there are less leakages out of the economy in each round and more is spent on induced consumption of domestically produced goods and service. This increases the rounds of spending in the multiplier process and hence the overall increase in national income

will be larger. As such, the multiplied rise in real GDP due to the increase in G and thus AD for Philippines would be big. This implies a larger increase in the amount of tax revenue that can be collected by the Filipino government to be used to reduce environmental impact due to the SCRP, and hence sustainable growth may be achieved to a large extent.

Mark scheme

Level	Descriptor	Marks
L3	An excellent well-balanced response to explain how the increase in government expenditure will lead to sustained growth in Philippines AND without negative environmental impacts, depicting sustainable growth. Diagrams used are appropriate and accurate.	8 - 10
L2	Under-developed answer with gaps in explanation on whether the increase in government expenditure will help Philippines to achieve sustainable economic growth (two-sided but under-developed) OR Well-elaborated, one-sided explanation of how the increase in government expenditure will help Philippines to achieve sustained growth OR without negative environmental impacts.	5 - 7
L1	Answer is largely irrelevant and/or erroneous and merely states a few valid points with little or no explanation.	1 - 4
E3	Evaluative comments are made well-developed and backed by economic analysis. An attempt is made to synthesise all the arguments presented in a well-reasoned manner.	5
E2	Some evaluative comments/attempts at making judgements that is sometimes explained using economic analysis	3 - 4
E1	An evaluative statement/Evaluative statements that attempts to justify with economic analysis	1 - 2

Question 2

Changes in global conditions and exchange rates can affect trade flows between economies.

- (a) Explain how the macroeconomic performance of an economy's trade partners can impact its balance of trade. [10]
- (b) Discuss the extent to which currency depreciation would be beneficial for an economy. [15]

Part (a)

Explain how the macroeconomic performance of an economy's trade partners can impact its balance of trade. [10]

Requirement 1: Explain how one aspect of macroeconomic performance in a trade partner can impact a country's BOT

Requirement 2: Explain how one other aspect of macroeconomic performance in a trade partner can impact a country's BOT

Introduction

Macroeconomic performance focuses on how well a country is achieving its macroeconomic objectives relating to economic growth, price stability, employment levels and balance of trade (BOT) position. Whether other countries are performing well or otherwise, has an impact on a country's BOT, which is obtained by export revenue (X) minus import expenditure (M). This essay shall consider the case of Singapore's BOT.

Body

[P] Trade partners' macroeconomic performance in terms of price stability can impact on a country's trade balance.

[E,E] When a trade partner e.g. Malaysia, is suffering from high rates of inflation, i.e. GPL is rising rapidly, assuming low rates of inflation in Singapore, Singapore's goods and services will become more price competitive. Malaysians buy more of the relatively cheaper goods and services from Singapore, and the larger sales of exports will lead to X rising. At the same time, Singaporeans switch away from the relatively more expensive imports from Malaysia, and quantity demanded for imports fall. Assuming Singapore's demand for imports is price elastic, $|PED| > 1$, the rise in import expenditure in price will be smaller than the fall in import expenditure from the more than proportionate fall in quantity demanded for imports, ceteris paribus. M will thus fall. As X increases and M falls, BOT will improve. If trade partners experience lower rates of inflation than Singapore, e.g. because they have performed well with regards to price stability, the reverse would happen and Singapore's BOT will worsen.

[L] Other countries macroeconomic performance pertaining to price stability therefore can impact on a country's BOT.

[P] Other countries' economic growth can impact on a country's trade balance.

[E,E] If a trade partner is performing well in terms of growth i.e., positive real GDP growth rates, income levels would be rising. The rise in foreigners' income levels would increase their purchasing power and ability to consume more goods and services, including those imported. Given that Singapore likely sells normal goods with $YED > 0$, there would be a rise in demand for exports, leading to a rise in X. Assuming no change in M, the rise in X would lead to an improvement in BOT. If trade partners performed poorly in terms of economic growth, the reverse would happen.

[L] Other countries macroeconomic performance pertaining to economic growth therefore can impact on a country's BOT.

Note: Correct application of YED is valid and should be credited!

Alternative to EG point:

[P] Other countries' unemployment levels can impact on a country's trade balance.

[E,E] Economies aim for low rates of unemployment, and a country with low rates of unemployment is deemed to be performing well. Low rates of unemployment leads to higher consumer confidence, since households would be more assured of a steady stream of income. If households in trade partner countries consume more, including imports, there would be a rise in demand for exports in Singapore. This leads to a rise in X. Assuming no change in M, the rise in X would lead to an improvement in BOT. If trade partners suffer from high rates of unemployment, the reverse would happen.

[L] Other countries macroeconomic performance pertaining to employment levels therefore can impact on a country's BOT.

Mark Scheme

Level	Descriptor	Marks
L3	For a response that addresses both question requirements thoroughly i.e., clear links between macroeconomic performance of trade partners and a country's balance of trade.	8 - 10
L2	For a response which is relevant but contains insufficient economic analysis. OR Only 1 requirement is addressed. <i>No recognition of macroeconomic performance (not in introduction, each paragraph doesn't start from 'macroeconomic performance'), cap at 7. (C + C)</i> <i>e.g. would be trade partners automate, more price competitive etc. etc.</i>	5 - 7
L1	Answer is largely irrelevant and/or erroneous and merely states a few valid points without much explanation.	1 - 4

Part (b)

Discuss the extent to which currency depreciation would be beneficial for an economy. [15]

Requirement 1: One positive impact of currency depreciation on the economy

Requirement 2: One negative impact of currency depreciation on the economy

End point must be different e.g. both points cannot be focused on EG, if not there would be insufficient scope.

Introduction

The exchange rate is the rate at which one currency can be exchanged for another in the foreign exchange market. A depreciation would mean one unit of currency can now be exchanged for less units of foreign currency. This would impact on an economy in both positive and negative ways.

Body

Side 1: Currency depreciation can be beneficial for an economy.

[P] A currency depreciation can lead to economic growth.

[E,E] When a currency e.g., USD depreciates, the country's products will become cheaper in foreign currency. In this case, foreigners would buy more from the US, leading to a rise in the demand for their exports. This leads to export revenue (X) rising. At the same time, Americans would find imports more expensive in USD, and reduce the quantity demanded for imports, choosing to consume relatively cheaper local products instead. If demand for imports is price elastic, import expenditure (M) will fall. Assuming Marshall-Lerner condition holds, (X-M) increases, and the greater demand for domestically produced goods and services will lead to a rise in aggregate demand (AD).

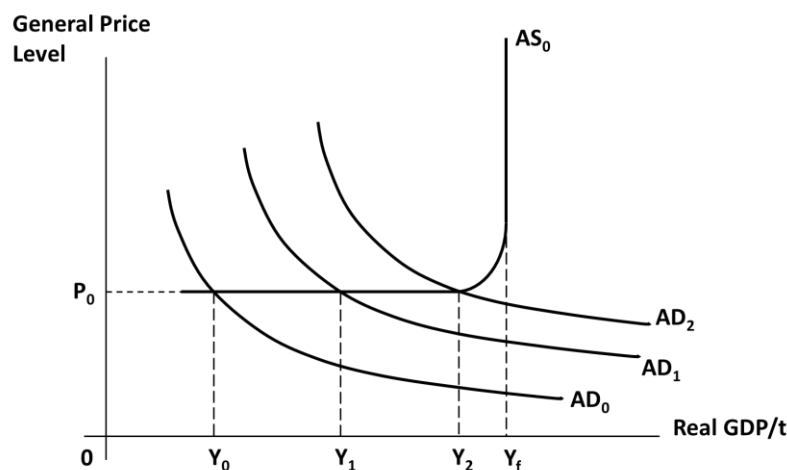


Figure 1

Assuming spare capacity in the economy, the increase in AD would lead to a rise in real GDP. When AD increases from AD_0 to AD_1 (Fig. 1) and exceeds current output, firms would experience an unplanned fall in inventories. In response, firms will increase production to replenish inventories, and real GDP increases from Y_0 to Y_1 . To produce more, firms would hire more factors of production, and pay out more factor income to households accordingly. A portion of this increase in income would be spent on domestically produced goods and services, causing induced consumption expenditure (C) to rise while the rest would be withdrawn from the economy. The increase in C

causes AD to rise further. Firms face an unplanned fall in inventories once more, and the process repeats until injections equals withdrawals again. The initial rise in AD would therefore lead to a multiplied rise in real GDP from Y_0 to Y_2 .

[L] A currency depreciation can thus be beneficial to an economy as it leads to positive economic growth.

[Ev – nature of the economy] The more a country depends on trade for growth, the more beneficial depreciation is likely to be in terms of improving economic growth. For example, in Singapore where X takes up 185% of GDP (based on 2021 data), depreciation which increases X would lead to a significant increase in AD and thus real GDP, leading to higher rates of economic growth.

[P] A currency depreciation can also lead to lower demand-deficient unemployment.

[E,E] As explained above, firms would be increasing output to meet rising demand when a currency depreciates. To do so, firms demand for more factors of production, including labour, which leads to more labour employed. As the economy operates closer towards full employment level of output Y_f , there would be a fall in demand-deficient unemployment.

[L] A currency depreciation can thus be beneficial to an economy as it leads to lower unemployment rates.

Note: This is meant to be the third 'brief' point.

Alternative:

[P] A currency depreciation can lead to improvement in the balance of trade (BOT), which is beneficial to an economy running a trade deficit.

[E,E] When a currency e.g., USD depreciates, US products will become cheaper in foreign currency. In this case, foreigners would buy more from the US, leading to a rise in the demand for their exports. This leads to X rising. At the same time, Americans would find imports more expensive in USD, and reduce the quantity demanded for imports, choosing to consume relatively cheaper local products instead. If demand for imports is price elastic, M will fall, as the rise in price will lead to a more than proportionate fall in quantity demanded, c.p. If demand for imports is price inelastic, M will rise. So long as the Marshall-Lerner condition holds, i.e., $|PED_x + PED_m| > 1$, BOT will improve.

[L] The improvement in BOT brought about by a currency depreciation would be beneficial, if the economy was running a trade deficit previously, such as in the case of the US.

Side 2: Currency depreciation can have negative impacts on an economy.

[P] A currency depreciation can lead to cost-push inflation.

[E,E] Depreciation leads to a rise in the price of imports, including imported inputs e.g. raw materials from trade partners in local currency. If key inputs e.g., crude oil are imported, firms would face a rise in unit cost of production. Firms would be less willing and able to produce, and seek to pass the cost increase to consumers through higher prices. Aggregate supply (AS) falls, as illustrated by an upward shift of the horizontal portion of AS from AS_0 to AS_1 (Fig. 2). The fall in price leads to equilibrium general price level (GPL) rising from P_0 to P_1 .

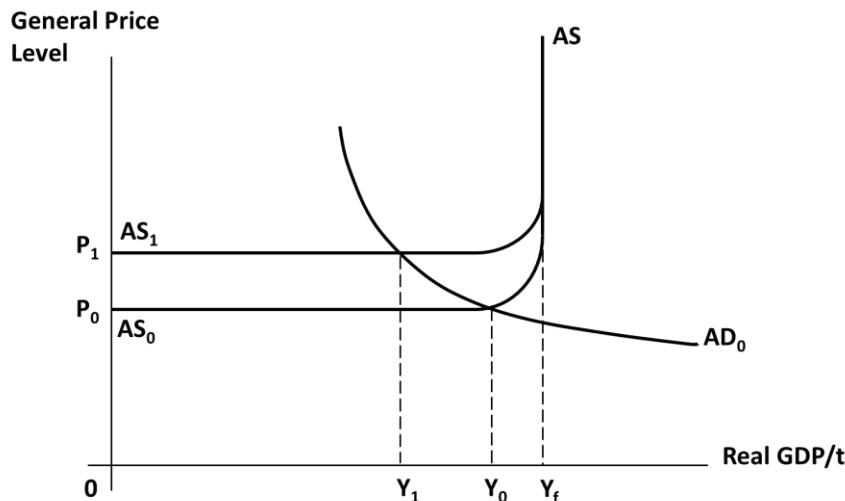


Figure 2

[L] If depreciation continues, GPL will continue to rise, resulting in undesirable cost-push inflation. As GPL rises, real wealth of households also falls, leading to lower consumption levels and a fall in real GDP from Y_0 to Y_1 i.e., negative growth.

[Ev – nature of economy] This negative impact will be significant in economies reliant on imported inputs, such as Singapore, which lacks natural resources. Depreciation would lead to prices of many imported inputs ranging from oil to foodstuff to rise, potentially leading to significant cost-push inflation since firms cannot switch to local substitutes.

Alternative:

[P] A currency depreciation can lead to demand-pull inflation.

[E,E] As explained earlier, depreciation of a currency can lead to a rise in AD. While this can lead to economic growth in economies operating with spare capacity, it will lead to demand-pull inflation instead in economies operating close to or at full employment level of output Y_f .

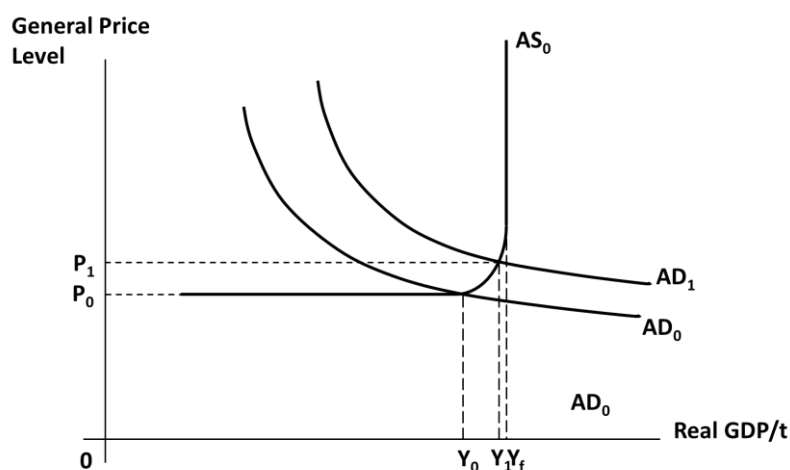


Figure 3

As AD rises from AD_0 to AD_1 (Fig. 3) and exceeds output, firms will experience an unplanned rise in inventories and seek to increase output. However, if the economy is operating with little spare

capacity, there is a lack of unemployed factor inputs firms can hire. This leads to firms hiring increasingly less suitable factors of production, resulting in inefficient factor combinations. More factors of production are needed to produce one output, leading to higher unit cost of production. Firms would only produce more if they receive higher prices, leading to a rise in GPL from P_0 to P_1 . [L] If depreciation continues, GPL will continue to rise, leading to inflation, which can be undesirable for an economy.

Conclusion

[Stand] The extent to which currency depreciation would benefit the economy depends on the initial state of the economy as well as the nature of the economy.

[Substantiation]

State of economy – This is because, while depreciation would increase (X-M) and thus AD, whether this leads to economic growth or fuels demand-pull inflationary pressures depends on whether the economy has spare capacity. In current times where many economies have seen strong recovery as the pandemic wanes in severity, unemployment rates are low e.g., 3.4% in the US, suggesting that the US is operating with little spare capacity. This means currency depreciation would be beneficial only to a small extent, because there would be little growth but inflation instead.

Nature of economy – As previously mentioned, how dependent a country is on X for growth will determine how significant increase in AD and thus real GDP would be, assuming spare capacity. However, in the case of Singapore, some of the growth may be offset as the economy is also very dependent on imported inputs, implying that AS will fall. Thus, while currency depreciation would still be beneficial to Singapore if there is spare capacity, it would only be to a small extent. If Singapore is operating near Y_f as in current times, there currency depreciation would be beneficial only to a very limited extent, and would likely be more harmful than beneficial.

Other points may consider whether the country is running a trade deficit; otherwise, an improvement in BOT is likely not beneficial.

Mark scheme

Level	Descriptor	Marks
L3	An excellent well-balanced response to explain both possible positive and negative impacts of depreciation on an economy. Diagrams used are appropriate and accurate.	8 - 10
L2	For a response that addresses both requirements, but is underdeveloped, i.e., gaps in explanations. OR For a response that is well-elaborated but only addresses 1 requirement.	5 - 7
L1	Answer is largely irrelevant and/or erroneous and merely states a few valid points with little or no explanation.	1 - 4
E3	Evaluative comments are well-developed and well-supported by economic analysis, with relevant contextualisation.	5
E2	Some evaluative comments/attempts at making judgements that are supported by economic analysis, with some contextualisation.	3 - 4
E1	An evaluative statement/Evaluative statements that attempt to justify with economic analysis. Little contextualisation of points.	1 - 2

2022 CT1 QP**Paper 1: CSQ (1 h 15 min)****The Rocky Road to Economic Recovery****Table 1: Annual percentage change of nominal GDP and consumer prices in selected economies**

	Nominal GDP		Consumer Prices	
	2019	2020	2019	2020
India	8.0	-1.1	4.8	6.2
Germany	2.5	-4.2	1.4	0.4
Singapore	1.9	-5.6	0.6	-0.2

Sources: International Monetary Fund and Ministry of Manpower, Singapore

Table 2: Unemployment in selected economies (percentage)

	2019	2020
Singapore	2.3	3.0
India	5.2	7.1

Sources: Ministry of Manpower, Singapore and Macrotrends

Table 3: India's gross fiscal deficit (percentage of GDP)

2018	2019	2020
3.4	4.6	9.6

Source: www.tradingeconomics.com

Extract 1: Singapore's core inflation remains negative in July

Core inflation, which excludes accommodation and private road transport costs, came in at minus 0.4 per cent in July, down from minus 0.2 per cent in June. The cost of electricity and gas saw a much sharper fall in July, at negative 15.2 per cent compared with negative 3.9 per cent in June, mainly due to a steeper decline in electricity prices as the electricity tariff was revised downwards. Domestically, subdued economic sentiment and weak labour market conditions will dampen consumer demand, therefore capping price increases for discretionary spending on goods and services.

Source: The Straits Times, 25 August 2020

Extract 2: Woes of long term unemployment

Singapore has managed to keep unemployment rates relatively low so far through traineeship and job matching programmes, in spite of the devastating impact of the COVID-19 pandemic.

However, it may have to consider instituting some form of unemployment benefits if this approach fails and Singapore ends up with high structural unemployment over a long time, said Senior Minister Tharman

Shanmugaratnam. "Once you're unemployed, particularly for some period of time, your skills tend to fade and employers tend to disfavour you when you try to get back into the market," Mr Tharman said. "So the longer you're unemployed, the more difficult it is over time to get back on track to find a decent job and be on track for wage mobility." The negative effects may be large and sustained. The depreciation of skills may have detrimental effects on the country's output.

Source: Adapted from Today, 23 July 2020

Extract 3: Rise in long-term unemployment rate

The latest Ministry of Manpower (MOM) report on the labour market showed that in September, 22,000 people had been jobless for at least 25 weeks — the definition used by MOM for long-term unemployment. This means that the long-term unemployment rate for residents rose to 0.9 per cent in September, up from 0.8 per cent in June, a trend that MOM said "bears close watching".

Economist Song Seng Wun from CIMB private banking said that the rise in long-term unemployed numbers is likely because some of the sectors most badly hit by the coronavirus are still struggling to get back on their feet, and workers retrenched from these sectors also face greater challenges switching to work in different sectors. "While there are plenty of job opportunities, some of the areas where companies are hiring do not appeal to those (who have been retrenched)," Mr Song said, citing as examples the healthcare and construction industries. Some of these workers may also require more extensive retraining to jump into the industries that are doing well, and this will take some time, he added.

Ms Selina Ling, head of treasury research and strategy at OCBC bank, said that the increase in the long-term unemployment rate is also due to structural issues such as the digital disruption rendering some skills obsolete. Agreeing, economist Chua Hak Bin from Maybank Kim Eng said it is likely that some of these jobs would be lost permanently, not just because of digitisation but also because firms are finding ways to cut costs and become leaner during this period.

Source: Today, 17 December 2020

Extract 4: The "twin evils" of stagflation

Amit Mitra, West Bengal's former finance minister and current chief advisor to Chief Minister Mamata Banerjee on Monday said he fears India may be heading towards "stagflation". "Wholesale inflation is 14.2 per cent and unemployment has expanded by 10.48 per cent. Private investment is also expected to remain sluggish in the absence of demand. Now, without private investment (increasing), we may be heading towards stagflation." Stagflation is defined as a situation with persistent high inflation combined with high unemployment and stagnant demand in a country's economy.

"Infrastructure capital expenditure by the government to boost the economy will have a time lag and we need immediate spending and for that the government has to give money directly into the hands of the people. The minister accepts that private investment is not happening and is asking different government departments to spur (public) capital expenditure but that will not yield immediate results," he said.

Source: The Economic Times News, 20 December 2020

Extract 5: India unveils infrastructure spending in new budget, but is it enough?

Triggering concern among macroeconomics experts, India's trade deficit was calculated at US\$23.37 billion for the month of November and is expected to hit US\$65 billion by the third quarter. As per official data, the value of imports have gone up by 57 per cent (year-on-year) to US\$53.15 billion. Increased commodity prices has been hit hard by the high prices of crude oil and coal. The widening trade deficit could affect India's economic recovery after the pandemic.

Finance Minister Nirmala Sitharaman has cut income tax rates and announced an increase in spending on infrastructure to spur growth. She announced a government allocation of 1.7 trillion rupees (US\$22.6 billion) for transport infrastructure, including more highways. The government also announced plans to build 100 new airports by 2024.

India is in the throes of the worst economic slowdown in a decade. Unemployment is rising with reports of firms downsizing, daily wage labourers failing to get steady employment, and small and medium size enterprises in the doldrums. The slump is broad based and almost every GDP component has been hit hard, but private consumption and investment have suffered the largest blows. Economists and analysts pointed out that the finance minister had limited space to manoeuvre due to fiscal constraints. The fiscal deficit was 4 per cent for the financial year, which ends in March, and the figure is expected to increase further the next year.

Source: The Straits Times, 1 February 2020

Questions

- (a) With reference to Table 1: [3]
- (i) Compare the economic growth performance of India, Germany and Singapore in 2020.
- (ii) Explain an additional piece of information that you would need to determine the change in a typical Indian resident's material living standards in 2020. [2]
- (b) Using an appropriate diagram, explain the reasons for the change in consumer prices for Singapore in 2020. [5]
- (c) With reference to the data, explain the change in the Indian government's budget as percentage of GDP in 2020. [2]
- (d) Discuss whether the Singapore or Indian government should be more concerned with the unemployment situations in their respective countries in 2020. [8]
- (e) Discuss the appropriateness of India's policy on infrastructure spending and tax cuts to achieve sustained economic growth. [10]

Total marks [30]

Paper 2: Essay**Answer two questions.**

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

Start **each question** in this section on a **new** sheet of paper.

Questions

- 1** Overall, Singapore's GDP is projected to gradually recover and expand by 4.0 to 6.0 per cent this year. The pace of recovery is expected to be uneven across sectors. For instance, while export-oriented sectors are likely to benefit from the pickup in global economic activity, activity levels in tourism- and aviation-related sectors are projected to remain below pre-pandemic levels even by the end of 2021.

Source: Ministry of Trade and Industry, Singapore. 15 February 2021

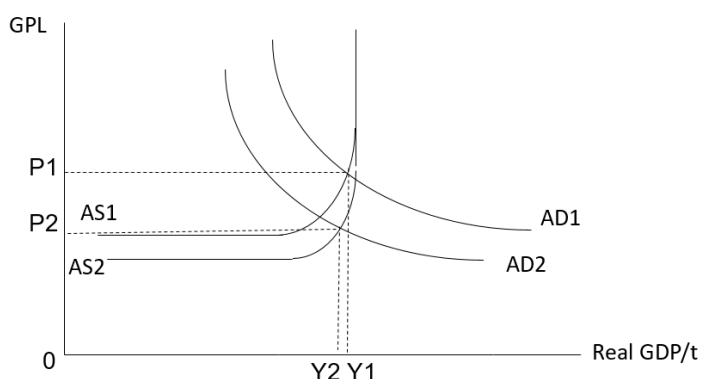
- (a) Explain how a government knows whether the economy is performing well. [10]
- (b) Assess the impact of a pickup in global economic activity on the living standards of Singapore residents. [15]
- 2** (a) Explain the importance of price stability to a government wanting to achieve inclusive economic growth. [10]
- (b) Discuss the extent to which inflation in Singapore is an externally rather than internally driven phenomenon. [15]
- 3** (a) Explain what might cause a balance of trade surplus. [10]
- (b) Discuss whether a balance of trade surplus is always desirable for an economy. [15]

2022 CT1 Suggested Answers

Paper 1: CSQ

ai)	Compare the economic growth performance of India, Germany and Singapore in 2020. [3]
	<p><u>Similarity:</u> The economic growth performance declined for all three countries as the real GDP growth rate turned negative [1 mark], which means that <i>real GDP fell</i> in 2020. [1 mark]</p> <p><u>Difference:</u> India can be said to experience the worse economic growth performance as it had the largest fall in real GDP (largest negative percentage change in real GDP). [1 mark]</p> <p>OR</p> <p>Germany can be said to have performed the best in terms of economic growth as it had the least fall in real GDP. [1 mark]</p> <p><u>Markers' Comments:</u></p> <p><u>Skills</u> Weaknesses in data handling:</p> <ul style="list-style-type: none"> Some students misinterpreted Table 1 as levels (and not % change) of Nominal GDP and CPI, respectively. Students that went ahead to calculate real GDP got absurd figures (e.g. growth rates of -144%), which should have raised great suspicion that the answer is wrong. In some scripts, students calculated the change in real GDP in 2020 by subtracting the growth rates in 2019 from that in 2020. This calculation is incorrect, as the growth rate in 2020 itself already shows that real GDP fell in 2020, signaling worsening economic performance. <p>Weaknesses in question dissection:</p> <ul style="list-style-type: none"> Some students used both real and nominal GDP in their answers, demonstrating a lack of understanding of the question requirement. The command word “compare” requires students to address a similarity and a difference. A few students did not remember the need to do so. <p><u>Content</u></p> <ul style="list-style-type: none"> A significant number of students used nominal GDP growth rates to compare economic growth performance across the countries. This is incorrect, as real GDP growth rates (i.e. nominal GDP growth rate - inflation rate) should be used instead. Students do not understand what the question wanted (meaning of economic growth performance). Many merely compared nominal GDP rates separately from inflation rates between the countries. The students who understood the question requirement were able to apply the approximation method for the real GDP growth rates for comparison. Many students used the wrong formula: <i>Real GDP = Nominal GDP - inflation rate</i> to answer this question, showing a poor understanding of growth rates and inflation rates. It is also mathematically unsound to subtract a value that is in % (inflation rate) from a value that is in \$ (nominal GDP level). A statement that said that the economic growth performance worsened for all three countries is not sufficiently informative because there is no indication of whether the

	economies were still growing or were contracting. An explicit demonstration of whether the GDP is rising or falling is needed.
aii)	Explain an additional piece of information that you would need to determine the change in a typical Indian resident's material living standards in 2020. [2]
	<p>Population growth [1 mark] – growth in real GDP per capita will better reflect the change in a typical Indian residents' purchasing power and its material SOL because taking into account population changes will capture the change in the SOL on average. [1 mark].</p> <p>Markers' Comments:</p> <p><u>Skills</u></p> <ul style="list-style-type: none"> Weak but correct responses <u>merely stated</u> the additional piece of information without any explanation on how it would be better than simply using real GDP growth alone. This question is a follow up to part (i), and so the instruction to 'explain an additional piece of information that you would need' means there is a need to explain additional information <u>to what is already</u> found in table 1. As such, stating that the additional piece of information is 'GDP per capita' doesn't answer the question directly. There was a failure to indicate that Table 1 only provides enough information to estimate the % change in aggregate GDP. And so, if one wants to estimate the % change in real GDP per capita, there is a need for figures on % change in population. <p><u>Content</u></p> <ul style="list-style-type: none"> A handful of students still raised the inflation rate as an additional indicator, which showed a poor understanding of the relationship between CPI and inflation rate. Learning point: Always pay close attention to the headings of tables as these will indicate the units of measurement. Table 1 says 'annual percentage change in consumer prices', which means that the inflation rates are already given in table 1. Most students who raised the Gini coefficient as an additional piece of information were not able to show a good understanding of how it would help determine the change in a typical Indian resident's material SOL. They do not recognise <u>that a change in the value of the Gini coefficient</u> would be more useful than just by looking at the Gini coefficient for that particular year. It should have been explained that not all residents are facing a <i>fall</i> in real income by the same extent.
b)	Using an appropriate diagram, explain the reasons for the change in consumer prices for Singapore in 2020. [5]
	<p>There was deflation in Singapore in 2020</p> <p>Deflation due to a rise in AS [1 mark] – 'steep fall in electricity prices' (Extract 2), will cause a fall in the firms' unit cost of production as electricity affect all firms' production processes. This will result in a downward shift of the horizontal portion of AS curve. [1 mark]</p> <p>Deflation due to a fall in AD [1 mark] – as there is 'subdued economic sentiment and weak labour market', households expect their future income level to fall and they will cut back on discretionary spending. Or as there is 'subdued economic sentiment, firms, on the other hand, expect the rate of return on their investments to fall, causing a fall in investments [1 mark]</p> <p>Correctly drawn diagram (e.g. labelling of axes must be correct) to illustrate the changes in AD and AS, with reference made to the diagram e.g. fall in AD and a rise in AS lead to a fall in equilibrium GPL from P1 to P2. [1 mark]</p>



Markers' Comments:

Skills

- Students should pay closer attention to the question requirements –
 - Some students drew two separate diagrams when the question explicitly stated to use one.
 - Some students also only explained one (AD or AS) reason, although the question asked for reasons.
 - Some students only lifted the evidence from the extracts without explaining the link to the AD-AS model. This was more evident in the part on AD change due to a pessimistic outlook.

Learning point: Do not just cut and paste from the data. You need to show an application of economic analysis - in this case, you need to explain how **consumer pessimism leads to falling consumption**.

- Students must also learn to save time. While it is not wrong to explain the impact of falling AD on the GPL and then the impact of rising AS on the GPL, with reference to the same diagram, doing it in this sequential way is too time-consuming for a 5-mark question. Students who used this approach should have instead considered the impact of simultaneous fall in AD and rise in AS on the GPL to save time.
- Whenever a question requires a diagram to be drawn, answers must explicitly make reference to the diagram. This is especially important to show the impact on GPL (e.g. GPL falls from P1 to P2) through the diagram. Students also need to be precise in their drawing for the leftward shift in the AD curve and downward shift in the horizontal portion of the AS curve to depict the fall in GPL for each of them on their own before showing the final effect on the fall in GPL.

Content

- Some students spent too much time describing the multiplier process, which would have been appropriate for a question focused on explaining changes in real NY but not when it is asking about GPL.
- Some students explained that AD fell due to the loss/fall in household income from higher unemployment. This is incorrect, as income changes do not *cause* a shift in AD. Instead, the change in income leads to the change in induced consumption. This makes salience conceptual errors of students who are unable to differentiate induced autonomous changes.

c) With reference to the data, explain the change in the Indian government's budget as a percentage of GDP in 2020. [2]

There was a rise in spending by the Indian government (e.g. increased spending on infrastructure (extract 5) to stimulate the economy in 2020 to increase AD, when it was in a

	<p>recession [1mark] coupled with a fall in income and corporate tax revenue as households' and firms' income fell (Extract 5, para 3: Unemployment is rising with reports of firms downsizing) that resulted in a larger budget deficit as % of GDP. [1mark]</p> <p><u>Markers' Comments:</u></p> <p><u>Skills</u></p> <ul style="list-style-type: none"> Some scripts answered the question only using theory - that a worsening budget deficit was due to higher government spending and lower tax revenue collected. Given that this is a case study (and the explicit question requirement), students need to refer to the data in answering the question. Weaker answers only described the data in Table 3 numerically instead of explaining the underlying reasons for the change (qualitatively using case extracts) There is a need to recognise that the question is asking for reasons why the Indian government budget changed (i.e. worsened), not why it is in deficit. <p><u>Content</u></p> <ul style="list-style-type: none"> It was evident from some scripts that some students do not know what the government budget is (i.e. Tax Revenue - Government Spending), with a minority even mistaking the government budget deficit for a balance of trade deficit. Others identified the numerical change incorrectly as an increase in the government budget; without reading carefully, the title shows 'fiscal deficit.' The change in budget balances should always be described either as worsening or improving rather than increasing or decreasing.
d)	<p>Discuss whether the Singapore or Indian government should be more concerned with the unemployment situations in their respective countries in 2020. [8]</p>
	<p>The Indian govt should be concerned:</p> <ul style="list-style-type: none"> [P] The Indian government should be concerned as the high level of unemployment suggests rather widespread economic hardship among its residents. [E] The Indian economy is experiencing cyclical unemployment. <i>[Extract 5, para 3: India is in the throes of the worst economic slowdown in a decade. The slump is broad based...]</i>. This may be evident that AD has fallen and the fall in national income would cause firms to lay off workers. [E] <p>There is also cost push inflation that is present in the economy due to the rise in price of imported factor inputs such as crude oil and coal. The rise in GPL coupled with a fall in in national income and rise in unemployment will lead to a reduction in households' income which results in lower satisfaction of wants and needs and [L] hence a fall in material SOL of these affected households.</p> <ul style="list-style-type: none"> [P] Higher employment may cause the economy to go deeper into the recession and may slow down long-term growth. [E] With high unemployment, businesses may lose confidence in the economy and may expect a lower expected rate of return on their investments, causing them to cut back on investments. Additionally, households will also cut back on consumption as they may be cautious to spend due to the weak economy and labour market (which caused them to be uncertain about their future income stream). [E] <i>[Extract 5, para 4: consumption and investment have suffered the largest blows]</i>. [L] The fall in C and I will cause AD to fall and the economy's national output will shrink further. The fall in investments could lead to a fall in the country's capital stock if the level of investment is less than the level of capital depreciation, which will cause vertical AS to shift left causing negative potential growth.

- [P] The unemployment may result in greater inequity. [E] Although the unemployment is broad-based, a higher proportion of low-income earners have lost their jobs [E] (Extract 5, para “daily wage labourers failing to get steady employment”) This may be because the small and medium size businesses are badly affected by the pandemic causing them to retrench these daily wage workers. [L] The loss in income for this group of workers will worsen inequity.

Singapore govt should be concerned:

- [P] Structural unemployment may have a negative impact on economic growth. [E] Prolonged periods of joblessness caused by the pandemic resulted in workers in some hard-hit industries to be retrenched. As a result, they might find it difficult to get new jobs as their skills are not relevant to industries that are still hiring [E] *[Extract 3, para 2, “...plenty of job opportunities”]*. Over time, these unemployed workers become de-skilled, as the longer they are unemployed the less human capital they acquire, affecting the overall labour productivity in the economy.

[E] In addition, if the structural unemployment rate becomes very high and the situation persists, the Singapore government may have to give out some form of transfer payments e.g. unemployment benefits (*Extract 2, para 2*) to help the affected workers. Such spending will divert government funds from public investments. [E] The fall in labour productivity and government investments may cause productive capacity to fall and vertical AS will shift to the left. The fall in government investments may also cause a fall in AD through the G component, which causes a fall in real national income via the multiplier. [L] Therefore, structural unemployment may result in negative actual and potential growth (*Extract 3, para 3: “detrimental effects on the country’s output”*).

- [P] Structural unemployment may also worsen income inequality. [E] Even if they are able to find jobs, they may end up with low paying ones or their wages may increase at a slower rate as there is limited demand for the skills they possess (*Extract 2, para 3: ...difficult to be on track for wage mobility*) [E] On the other hand, workers with relevant skills who are able to work in new digitalised industries e.g. Infocomm, Fintech, etc, (*Extract 3, para 3*) will see a faster rise in demand for their skills, causing their wages to rise at a faster rate. [L] This uneven rise in wages between these groups of workers will increase the income inequality in Singapore.

Evaluation:

[Stand] The Indian government should be more concerned as the impact of cyclical unemployment is more severe, compared to Singapore’s structural unemployment.

[Substantiation]: Unemployment in India is more widespread across many sectors, and the unemployment rate is higher than Singapore's. [Table 3: India's unemployment rate was 7% compared to Singapore's 3%]. The high unemployment rate, together with the inflation problem, would cause a significant fall in citizens' material SOL, resulting in a very bleak economic outlook. The government may need to spend a substantial portion of its budget to instill confidence and overcome the severe cyclical unemployment despite the poor economic outlook that may hamper government spending. In the case of Singapore, structural unemployment also entails government spending in the form of 'traineeships and jobs matching programme' to help increase workers' occupational immobility. Such expenditure not only helps keep the current unemployment rate low, it also raises workers' skills and productivity growth, which can help boost Singapore's actual and potential growth. Such spending is more effective because of the smaller size of the Singapore economy and the presence of more effective institutions to support these training.

Level 2 (4-6 marks): Answers in this level are well-developed answers with good analysis that explain the negative macro or microeconomic effects of unemployment in India AND Singapore. The impact suggested should be related to the context of both countries

Level 1 (1-3 marks) Answers in this level will only consider the negative effects of unemployment either in India OR in Singapore.

OR Undeveloped answers that do not draw links to macro or microeconomic effects of unemployment using relevant economic analysis.

Evaluation (1-2 marks) Evaluation marks will be awarded for a justified conclusion and evaluation on whether India or Singapore should be more concerned with their unemployment situations based on critical analysis and the given context.

Markers' Comments:

Skills

- Weaker answers focused on explaining how the different types of unemployment came about rather than the effects of the different types of unemployment in the two countries.
- Students should learn to save time by focusing on the more salient arguments for comparison. For example, there isn't much point in bringing in frictional unemployment because this is not a typical concern of governments.
- Evaluation - it is not sufficient for answers to point out that Singapore has policies on skills upgrading and traineeships, and therefore Singapore should be less concerned with its unemployment situation. Instead, students should consider the type of unemployment and compare the prevailing economic conditions to ascertain the impact/effectiveness of the policies to address the unemployment problem. For example, in India, the fiscal policy spending as a proportion of its budget will be relatively more significant as the country is experiencing demand-deficient unemployment, which is widespread and may not be effective because of the bleak economic outlook. Whereas for Singapore, the spending to reduce structural unemployment may not be as high as India's budget spending since only specific sectors are affected.

Content

- Students tend to make the mistake that unemployment leads to lower-income, reducing consumption and AD. As a lagged indicator, it is part of the movement of AD.
Learning point: Starting from national output equilibrium, a change in AD (represented by a shift of AD) cannot be due to a change in income. This is because when national output is in equilibrium, national output/income is in a state of rest. It is not changing. A change in income causes changes in AD (as shifts) only during the multiplier process.
Learning point: It is the fall in AD that leads to unemployment.
- Some students attempted to evaluate the point that SG should be less concerned with its structural unemployment because the policies used (skills upgrading) were potential growth generating whilst Indian unemployment policies targeted at reducing demand-deficient unemployment are not. This is not entirely correct because the use of fiscal policy to lower DD-deficient unemployment can also be potential growth generating if the government had spent on capital goods (e.g. infrastructure, which the Indian government did).
- Other examples of conceptual mistakes:
 - The argument that rising unemployment leads to a shrinking labour force is wrong unless the unemployed withdraws from the labour force (i.e. give up

	looking for a job). As long as the unemployed person is still looking for work, he is part of the labour force.
e)	Discuss the appropriateness of India's policy on infrastructure spending and tax cuts to achieve sustained economic growth. [10]
	<p><u>Intro</u> The appropriateness of the policy will be examined by considering the effectiveness of the policy and whether its implementation encounters constraints on leads to adverse unintended consequences.</p> <p><u>Body</u></p> <p>[P] India's policy will result in actual growth. [E, E] The fall in income tax will cause a rise in disposable income and there will be a rise in consumption. The fall in corporate tax on the other hand will cause a rise in after-tax profits, giving the incentive for firms to invest.</p> <p>A rise in government spending on infrastructure, together with a rise in C and I will cause a rise in AD. This is illustrated by the rightward shift of AD from AD1 to AD2. With AD exceeding AS at the current general price level, there will be an unplanned fall in inventories. This will lead to firms increasing production and hiring more factors of production, such as labour. As a result, national income will increase via the multiplier process. [L] There will be actual economic growth.</p> <p>[P] The increase in spending on infrastructure e.g. highways, airports, <i>[Extract 5, para 2]</i> will also result in potential growth. [E] Better transport infrastructure may increase the capital stock of the economy (if the rise in investment exceeds the level of capital depreciation) and increase labour productivity as workers may take a shorter time to reach their workplaces and lower delivery costs for firms. The increase in efficiency will raise the country's productive capacity, causing a rightward shift in vertical AS from AS1 to AS2. [L] The increase in the country's potential output will result in potential growth. With the rise in actual and potential growth, the economy can achieve sustained economic growth where there is an increase in real national income with price stability.</p> <p>Limitations of policy:</p> <p>[P] The large budget deficit which requires government borrowing may result in a crowding-out effect and this limits the impact on sustained economic growth. [E] Assuming that the government borrows from domestic financial institutions, the rise in demand for loanable funds would increase interest rates and raise the cost of borrowing. Households will have more incentive to save and they will borrow less, causing a fall in consumption. Firms will cut back investments as the rate of returns is lower (MB of investments) than the interest rate (MC of investments). The increase in government spending will be offset by a fall in consumption and investments. [L] The overall rise in AD and real national income may not be significant. The slower increase in capital stock may also be detrimental to the country's productive capacity and potential growth.</p> <p>[P] Cuts in income tax and corporate tax may not be able to achieve sustained economic growth. [E] The cuts in taxes may not be able to stimulate consumption and investments as there may be a poor economic outlook (<i>Extract 5, para 3: private consumption and investment have suffered the largest blows</i>) due to the severe recession and high unemployment rate (<i>Extract 5, para 3: throes of the worst economic slowdown in a decade</i>). [E] Households may not be willing to spend as they expect a fall in their future income level whereas firms may expect a fall in the returns on their investments. [L] The limited rise in C and I will limit the impact on actual and potential growth.</p>

[P] Also when the impact of the policy kicks in, it may worsen the inflation problem. [E] As there is cost-push inflation present, the rise in AD due to government spending and tax cuts will cause a further rise in GPL. [E] The fall in AS (due to inflation), coupled with a rise in AD, will create a shortage at the initial GPL, and there will be a further rise in GPL. [L] The inflation problem may be made more severe in the short run and this will hamper the achievement of sustained economic growth.

Other possible limitations:

[P] The rise in government spending has little impact on the root cause of inflation in India and may not be able to stimulate growth. [E] The cost push inflation is due to higher price of imported inputs (*Extract 5, para 1: high prices of crude oil and coal*). The Indian government policy is not able to reduce the price of these imported inputs [L] Should the rise in horizontal AS persists, then the economy may experience a fall in national income with rising GPL.

[P] Even if the spending is successful, the impact on growth may not be seen immediately. [E, E] Infrastructure development may take a few years to complete and furthermore the impact on efficiency may only be seen in the longer term (*Extract 4, para 3: "Infrastructure capital expenditure ... will have a time lag"*). [L] There may be prolonged high unemployment and recession as the policy will take a long time to see its effects.

Conclusion (Evaluation):

[Stand] Despite the limitations, overall, the Indian government spending and tax cuts policy are appropriate to achieve sustained economic growth. [Substantiation] Although tax cuts may not raise consumption and investments significantly due to poor confidence, the rise in governments' spending has a direct effect on AD and will raise national income. Also, since spending is on public transport infrastructure, which may involve projects that span across regions many jobs will be created. This can help to reduce the widespread unemployment problem. In times of deep recession, there may be excess loanable funds since savings tend to rise as a result of the poor economic outlook. This rise in savings could meet the rising demand for loanable funds by the government. There may be also less competition for loans from private firms as they may not want to borrow to invest due to a lower expected rate of return on investments. Interest rates may not rise, and the crowding-out effect may not be a concern. Although India's expansionary fiscal policy may cause inflation to rise further and does not help to alleviate the stagflation, the spending on infrastructure may lead to a rise in efficiency which can help lower unit COP. In the longer term when the impact of the policy on full employment level is realised, the rise in vertical AS will also help to reduce some of the inflationary pressures.

In the case of potential growth, it is vital for the government to spend to boost the country's productive capacity as the economy is not able to rely on the weak private domestic investments. India may be lacking in an efficient transport infrastructure and the government's spending in this area may help to attract foreign investments and further generate long term growth.

Level 2 (4-7 marks): Answers in this level will consider how both government spending and cuts in taxes work to achieve sustained growth using AD-AS analysis. There will be consideration of the difficulties in implementing this policy given India's inflation situation and size of the budget deficit.

Level 1 (1-3 marks): Answers in this level will show an undeveloped explanation of how government spending and cuts in taxes work to achieve sustained growth. Limitations of policy are also not well developed or are rather generic.

Evaluation (1-3 marks) A stand must be made and this stand is based on the evaluation of the arguments for and against the use of the policies and the evaluation is based on the context of the Indian economy.

Markers' Comments:

Skills

- Some students did not link actual and potential growth to sustained growth which was the question's content requirement.
- A handful of students digressed to explain the impact of fiscal policy to solve inflation and unemployment issues, which was not the question requirement of sustained EG.
- It is critical that diagrams need to be drawn and labelled correctly. Answers must also refer to the diagrams using economic analysis.
- Students must learn to save time - instead of explaining that cuts in direct tax will lead to a rise in C/I and hence AD with multiplier effect and then repeating the latter for the increase in G, students should combine the explanation for the rise in AD from an increase in C/I/G.

Content

- In explaining the working of expansionary fiscal policy to generate actual growth, answers MUST acknowledge the workings of the multiplier.
- There is a confusion between 'government budget/fiscal deficit' and 'trade deficit'. Students need to recognise that the former is incurred by the government while the latter is incurred by the country. In their explanation to this question, students tend to argue that 'an increasing trade deficit means that the government has to borrow money to finance its debt'. This shows that they are not very clear about the difference between these two forms of deficit.
- There was a lack of analysis and links between govt spending and tax cuts to change in AD as well as the change in AS. Instead, these answers tend to be very descriptive.
- There were also gaps in explanation of the impact of govt spending on infrastructure on the country's economic growth. The answers either linked that to rise in AD or rise in AS instead of having both possibilities.
- The explanation of how tax cuts affect investment is often incorrectly explained. Tax cuts affect the after-tax profits and the expected rate of returns. While there were attempts to explain the impact on investments, some students incorrectly pointed out that the MC of I falls - the MC of I should be assumed to be constant; it is the MB of I that increases. So when $MB > MC$ of I, I increases.
- A few students had misconceptions about the crowding-out effect. They explained that government debt lowers business and consumer expectations, which may decrease the expected rate of return for investment for firms and lower the expected future income of households. This is inaccurate as the crowding-out effect is related to government borrowing, and demand for loanable funds rises, and by extension, the interest rates. Consumption and investments decrease because the cost of borrowing is now higher.
- Although the size of the multiplier could affect the appropriateness of fiscal policy, in theory, students need to consider its applicability given the context of the case study. As it is a case study, evidence from the case should be provided to justify an argument that relates to the size of the multiplier. If there is no evidence, then do not use the point on the size of the multiplier. Some students suggested that because C probably takes up a high % of India's AD, India's MPCd is high, giving rise to a high multiplier. This is not a correct correlation.

Paper 2: Essays**Question 1**

Overall, Singapore's GDP is projected to gradually recover and expand by 4.0 to 6.0 per cent this year. The pace of recovery is expected to be uneven across sectors. For instance, while export-oriented sectors are likely to benefit from the pickup in global economic activity, activity levels in tourism- and aviation-related sectors are projected to remain below pre-pandemic levels even by the end of 2021.

Source: *Ministry of Trade and Industry, Singapore. 15 February 2021*

- (a) Explain how a government knows whether the economy is performing well. [10]
 (b) Assess the impact of a pickup in global economic activity on the living standards of Singapore residents. [15]

- a) Explain how a government knows whether the economy is performing well. [10]

Approach

Explain the 4 indicators of economic performance. For each, define the indicator, explain how to interpret it, highlighting what readings are considered good performance

R1: Explain one indicator that helps a government know whether the economy is performing well.

R2: Explain another indicator that helps a government know whether the economy is performing well (in another aspect of the economy).

Answer outline**Intro**

An economy is performing well when it experiences sustained economic growth, full employment, general price level (GPL) stability and a favourable balance of trade (BOT).

A government knows that an economy is doing well by tracking the following indicators.

Body

[P] A government looks at **real GDP growth rates** to find out whether the economy is experiencing **economic growth**.

[E] Economic growth refers to increases in a country's national output. The real GDP growth rate **is the percentage change in a country's real GDP**. Real Gross domestic product (GDP) measures the value of a country's total final output produced within the boundaries of a country during a period of time, using constant prices.

[E] When the real GDP growth rate is positive, it means that the quantity of the country's final output has increased, rather than a mere rise in money value of the GDP, indicating economic growth. When the real GDP growth rate is negative in value for two successive quarters, it means that the economy is in a recession where the national output is falling. For example, in 2020, when the COVID19 pandemic broke out, many countries all over the world experienced poor economic performance with year-on-year negative economic growth rates.

[L] The percentage change in real GDP is thus a measure of a country's economic growth performance.

[P] Another indicator that governments monitor is the **unemployment rate** to find out whether the country is producing at full employment or facing a problem of unemployment.

[E] A country's **unemployment rate is the percentage of people in the labour force who are unemployed**. The unemployed are people who are willing and able to work but are not able to get a job.

[E] When an economy is at full employment, which is a state of the economy where the number of job vacancies available matches the number of unemployed people, there will still be some unemployment because there will at least be frictional unemployment which is inevitable due to imperfect information and some degree of structural unemployment which is also inevitable at any one point in time due to imperfect mobility of labour. The unemployment rate that occurs in the state of full employment is called the **natural rate of unemployment**.

[E] When a country's unemployment rate rises above the natural rate, it means that indicates that the economy is producing at below full-employment and the country is facing demand deficient unemployment and/or rising structural unemployment.

Or

When the unemployment rate is higher than the natural rate of unemployment which is the unemployment rate that occurs when the economy is at full employment, it means that the country's national output level is below the maximum level achievable. In terms of the production possibility curve (PPC), it means that the production point is lying inside the PPC, with some resources being idle. This prevent welfare from being maximised.

[L] A government thus knows the economy is doing well when the county's unemployment level is close to the natural rate of unemployment.

[P] Governments look at the **inflation rate** to determine whether there is general price stability in the economy.

[E] A country's inflation rate is measured by the **percentage change in its consumer price index (CPI)**. The CPI measures the change in the weighted average price of a basket of goods and services typically purchased by households in that country.

[E] Governments/central banks typically aim for an inflation rate of around 2 to 3%. When the inflation rate is negative, it means the country is facing deflation where the general price level is falling and this is considered as poor performance (unless it is temporary and supply-side in nature) [Note to students – there is no need to elaborate because the questions is not about the effects of macroeconomic problems]. When inflation rate > 3% and continues to rise, the economic performance of the country is considered to be deteriorating and governments begin to worry because high inflation adversely impacts other aspects of economic performance. When inflation rates >50%, the country is facing hyperinflation where the country's currency cease to be accepted as a medium of exchange bringing about economic collapse. E.g. Zimbabwe, in 2004-2008, recorded annual inflation rate of over 11 million percent.

[L] A government thus closely monitors the country's inflation rate.

[P] By monitoring **the real GDP growth rate together with the unemployment rate and the inflation rate**, the government will be able to gauge how well the internal sector is performing.

[EE] Rising unemployment rate together with negative real GDP growth rate and negative inflation rate suggests that the economy is in a recession with deflation and demand deficient unemployment. Rising unemployment rate together with positive growth rates suggest that structural unemployment is on the rise and all is not well with the economy.

On the other hand, negative inflation rate with positive real GDP growth rate and falling unemployment indicate good deflation caused by rising AS.

[L] A government will this look at all 3 indicators collectively.

[P] Governments look at the **balance of trade (BOT) position** because it can affect the country's output, employment ang GPL performance.

[E] The balance of trade is the difference between the country's export earnings and import expenditure.

[E] When the country's export earnings exceed the import expenditure, it is said to be in surplus and when export earnings is less than the import expenditure, the BOT is in deficit.

Governments aim for a favourable BOT which means that a big BOT deficit or a big surplus is considered poor economic performance because both these positions could adversely impact the country's internal sector, depending on the internal state of the economy.

[L] On the other hand, when the BOT is close to zero in value, then that indicates that the external sector is not adversely affecting the internal sector. However, it should be noted that the BOT on its own can't measure the overall health of an economy. A government would look at the BOT together the other macro indicators. For example, a country with a BOT that is close to zero could possibly be in a recession with negative real GDP growth rate and rising unemployment which means the economy is not doing well.

Mark Scheme

L3	8-10	Accurate and well-developed explanation of the 4 indicators of macroeconomic performance or only give 3* but also explains the collective interpretation of the 3 indicators of the internal economy. * But Max 9 if only considered 3 indicators of internal sector. Some examples are provided
L2	5-7	Well-developed explanation of at least 2 indicators or Explain all 4 indicators but not all explanations are sufficiently developed
L1	1-4	Only able to identify relevant macroeconomic performance indicators There are major errors in the explanation.

Markers' comments

SKILLS

Question interpretation

- A key stumbling block to good performance in this question was the failure to understand the content requirements of the question. The question is not about living standards because the question is not about WHY a government desires good economic performance. Rather it is about how the government KNOWS whether the economy is doing well, which is about economic performance indicators.
- The question is also not about why the government wants to achieve the 4 macroeconomic goals or how they are achieved. Many students focused on the impact or effects of achieving the macro goals rather than explaining how these indicators reflect the performance of the economy. Their answers did not address the question.

Learning point: Spend a couple of minutes to fully understand the requirements of the question before you start writing your answer.

Analytical & Contextual Explanation (e.g adequacy of rigour, choice of examples)

- For students who realised that the question is about economic indicators, the explanation tended to be underdeveloped resulting in marks that were stuck in the L2 range.

Learning points:

The question requires explanation as to why an indicator can measure the attainment of a certain goal. This requires **showing understanding of the goal and the indicator**. For example, since the goal of economic growth is about rising national output, then an indicator of economic growth has to i) be about measuring national output – which explains the use of GDP

and ii) indicate the change in quantity (and not merely money value) of the national output – which explain the need to use % change in *real* GDP instead of % change in nominal GDP.

To show understanding of the indicator, there is a need to **explain the interpretation of the indicator**. For example, it is not sufficient to merely highlight that when there is low inflation, it means that the economy is doing well. This explanation is rather vague, instead answers must be clear as to what values of the inflation rate constitute as low inflation, e.g. many governments regard low inflation to be around 2%.

CONTENT (major misconceptions)

- Another key stumbling block to good performance in this question is lack of accuracy in explanation of the measures. Key mistakes included –
 - Confusing level of GDP with % change in GDP
[**Learning point:** Growth is about change and hence it has to be measured by % change in GDP rather than the level (high/low) of the GDP.]
 - Confusing GPL with CPI
[**Learning point:** CPI is an index and any index number measures 'change' and not 'level'.]
 - Confusing inflation rate with CPI
 - Confusing BOT with BOP

b) Assess the impact of a pickup in global economic activity on the living standards of Singapore residents. [15]

Approach

As there can be both positive and negative impact on SG's residents when there is a pickup in global activity, the analysis must be 2-sided. Because material SOL is dependent on households' income which is determined by the country's output and employment performances, the AD/AS model is expected for the analysis of the impact of the pickup in global economic activity on SG's GDP performance. The implications for SOL (material and non-material) should then next be considered. To conclude, substantiate your stand by evaluating the relevance of the arguments based on the Singapore context in the period considered by the question.

R1: Explain positive impact of a pickup in global economic activity on SOL.

R2: Explain adverse impact of a pickup in global economic activity on SOL.

Intro

- A country's standard of living (SOL) refers to the material and non-material well-being of its residents.
- To assess the impact of a pick-up in global activity on SG's SOL, need to consider the initial state of economy and nature of SG economy.

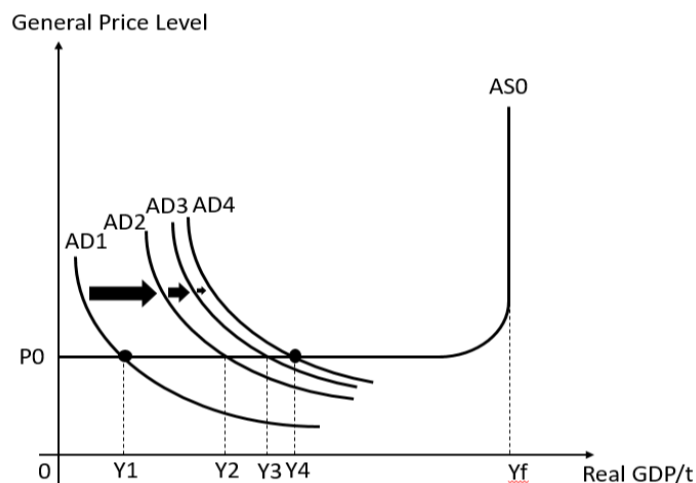
Body

Thesis (Positive impact on SOL)

[P] Pick up in global activity will lead to actual growth of the Singapore economic and improved material SOL of Singapore residents.

[EE] When other countries experience economic growth, their residents experience a rise in income which induces them to increase their demand for SG's exports which in turn leads to a rise in the aggregate demand (AD) for SG's total final output from AD1 to AD2. This causes unplanned fall in the inventories of the exporting industries. The firms will respond by increasing production which in turn leads to rise in demand for factors of production (FOP) like labour, and hence rise in households' income. This rise in income induces households to increase spending on *domestically* produced consumer goods/services as well as increase saving, payment of taxes and increase spending of imports. This leads to further rise in AD which in turn causes firms that produce consumer

goods/services to increase production and increase employment of FOP. This multiplier process continues until a new equilibrium is reached at a higher national output level of Y_4 , where total withdrawals match total injections again. Actual growth thus occurs.



[L] In 2020, SG was in a recession which means that there was excess capacity and demand deficient unemployment. The rise in AD, as a result of the pickup in global activity in 2021 would have helped bring the economy closer to full employment. The rise in income leads to a rise in the material SOL of SG residents because the increased in their purchasing power would have enable them to better satisfy their wants/needs via the rise in consumption.

Evaluation:

- Although Singapore's multiplier is small, due to her high MPS and MPM, the overall rise in national output would have been rather significant given the high share of X in SG's AD.
- However, not all households' SOL would have risen by the same extent and some might not see an improvement because of the unevenness in the recovery of the economy. For example, there are sectors, like tourism and air travel, that continued to face low demand due to the pandemic. The households who work in these sectors would have remained unemployed because they lack the relevant skills to take up jobs in the sectors that recovered.

[P] A pick up in global activity also leads to a rise in non-material SOL.

[EE] Unemployment could drive some people to turn to theft for survival. With the economic growth and fall in unemployment in SG, brought about by the pick-up in global activity, the level of crime rate should fall. This leads to increase peace of mind of Singapore residents.

Also, with improved job prospects, Singapore residents may feel less stressed and thus enjoy improved mental well-being or stronger sense of self-worth by being employed.

[L] The improved intangible factors leads to rise in non-material SOL.

Anti-thesis (Adverse impact on SOL)

[P] A pick up the level of global activity can cause SG to face cost-push inflation which leads to lowered material SOL for some SG residents

[EE] With a pickup in global activity, it means that firms in many countries are increasing production which leads to a rise in the derived demand for commodities like crude oil, various metals and also various other raw materials. This will drive up the price of commodities which leads to rise in unit cost of production because Singapore is a price taker in the global markets for such commodities and also dependent on imported inputs. Ceteris paribus, faced with rising price of imported raw materials, firms in SG will respond by offering the same quantity for sale at higher prices. This leads to cost-push inflation.

Or

[P] A pick up in global activity, which leads to rise in AD for SG's final output can cause SG to face demand-pull inflation which leads to lowered material SOL for some SG residents.

[EE] If the economy was not that far below full employment, the rise in AD caused by pick up in global activity will lead to demand pull inflation. Because as firms increase production, they are not able to get the FOP that best suits their production process. This results in loss of efficiency and rise in unit COP and they will produce the higher output only at higher prices.

[L] The rise in GPL means that some households, like those with fixed income or those whose nominal income rises by a lesser extent than the GPL, will face rising cost of living and falling real income, leading to falling material SOL.

Evaluation:

The rise in AD would have most likely led to only mild DD-pull inflation since SG was in a recession in 2020 where there would have been spare capacity.

[P] A pick up in global activity can lead to decreases in non-material SOL of SG residents.

[EE] This is because when domestic firms increase their output, there will concurrently be a rise in pollution which causes negative externalities like harmful effects on residents' health. Profit-maximising firms typically do not internalise the external cost that arises from their production activities, resulting in adverse impact on residents' non-material SOL when they suffer a deterioration in the quality of the natural environment.

Also, the increase in external demand may also lead to firms having to ramp up production quickly, causing their employees to have to work overtime and hence workers have less time for socialising and family.

[L] The fall in air quality and fall in leisure hours adversely impact residents' non-material SOL.

Conclusion

[Stand] Overall, SOL of Singapore residents should rise

[Substantiation]

1. Although not all sectors recovered, the overall actual growth that is experienced enables the SG government to obtain more direct tax revenue. This enables the government to spend more on transfer payments for households who did not benefit from the pick-up in global economic activity or those facing a rise in COL without a rise in their nominal income. The economic growth can thus be inclusive and enable most, if not all households, to enjoy an improvement in their material SOL.
2. Given SG's economic structure – service dominated and manufacturing is not the heavy type, pollution level should not worsen greatly with economic growth. Moreover, the SG government has also put in place policies to lower carbon emission and its ability to monitor firms' pollution levels improves with rising tax revenue from a recovering economy.
3. Also, with a pickup in global economic activity leading to an improving BOT, there will be upward pressure on the forex rate of the SGD. The appreciation of the SGD helps to reduce the imported inflation that rises from a pickup in global economic activity.

Mark Scheme

L3	8-10	<p>Considers both positive and negative effects on SOL and considers both material and non-material SOL.</p> <p>Explanation is well developed and analytical (i.e. using relevant model and concepts)</p> <p>Explanation is also contextual – i.e. relates to SG context.</p>
L2	5-7	<p>Considers either positive or negative effects with analytical and contextual explanation.</p> <p>Or considers both positive and negative effects but explanation is under-developed.</p>

L1	1-4	Only able to identify plausible effects on SG's SOL. Serious errors in attempts at explanation.
E3	5	Overall stand is made by balancing the positive vs negative effects and consideration of the nature of the SG economy.
E2	3-4	Weak attempt to balance the positive vs negative effects. Or Balancing is done by only considering theory. Or Only has in-body EV which might be SG context related
E1	1-2	Either at least 1 poorly developed in-body evaluation or made unsubstantiated overall judgement about positive effects likely to outweigh negative effects or vice versa.

Markers' Comments

SKILLS

Question interpretation

- The majority of students correctly realised that this question requires a 2-sided analysis of the impact of a pick-up in global economic activity on Singapore's SOL with most considering the impact on both material and non-material SOL.

Analytical & Contextual Explanation (e.g adequacy of rigour, choice of examples)

- While students usually knew that a pick-up in global economic activity would lead to rising income which in turn contributes to rising material SOL, the weaker scripts failed to apply AD/AS analysis to explain the former. Others applied but the explanation was missing.
Learning point: Examiners want to see analytical explanations which means applying relevant concepts and tools of analysis (in this case, AD/AS model). There was also a lack of development of explanation by students who brought in the AD/AS model. A mere statement that rise in X leads to rise in AD and hence rise in national output/income, even with reference to a diagram doesn't show understanding. There is a need to elaborate on how the rise in X and hence AD will lead to the multiplied rise in national output/income. The multiplier is an important idea to include because it will explain why the pickup in global economic activity will affect, in theory, not just the X-sectors, but also the sectors that produce domestic consumer goods/services. (However, this question does not require a full-blown explanation of the working of the multiplier).
- On the other hand, there are students who went overboard in explaining 1 argument, resulting in lack of breath of analysis. For example, while it is indeed correct to explain that a pickup in global activity could lead to increases not just in X but C and I too, there is no great need to touch on all 3, unless one were to bring in the rise in C and I as evaluative points on the strength of AG (in spite of the small multiplier) triggered by the pickup in global economic activity. And if one were to pick only 1, then go for the rise in X since this is most directly linked to a pickup in global economic activity.
- Students should consider the most straightforward points that directly impact SOL instead of considering the secondary impact. For example, when considering the impact on non-material SOL, many students extended the point on the rise in national income. They explained that

because of the rise in national income, the government would have more tax revenue to spend on environmental policies, resulting in a rise in non-material SOL. Although this argument is valid, a better answer would consider how the global economic pick-up affects exporting sectors **directly** by raising production and increasing manufacturing activities, which may generate higher levels of pollution or traffic congestion.

- Also, many students regarded the point from the preamble regarding the uneven recovery in certain sectors resulting in income inequality as an anti-thesis argument. This point should be considered as an evaluative point in that the rise in national income may not necessarily cause everyone's material SOL to increase by the same extent. Anti-thesis arguments should revolve around how global economic pickup may cause a fall in SOL.

Evaluation

- In general, students tended to be able to give evaluative comments by taking into account the nature of the Singapore economy in terms of her reliance on exports to drive actual growth but fell short when it came to the synthesis in the conclusion to support the over-all judgment. This is one skill to work on.
- There was also a tendency to give generic evaluative comments – e.g. by highlighting that whether the pickup in global activity would lead to actual growth instead of inflation depends on the 'initial state of the economy'. This is indeed correct but the student ought to have applied it to Singapore and judge based on SG's initial state of its economy (which is 2020, was not at Yf due to the COVID19 pandemic).
- Stronger scripts added depth to the evaluation in terms of the nature of the SG economy by considering the type of forex system that SG adopted, by considering how the impact of the pickup in global economic activity on the forex rate of the SGD, will affect the overall impact on SG economy.

CONTENT (major misconceptions)

- One key misconception was about the concept of non-material SOL. Going on overseas holidays when income rises is actually about increasing one's material SOL and so is better access to education or healthcare. On the other hand, having less time for rest (whether abroad or locally) or sleep or interaction with friends/family is about non-material SOL being impacted. Government spending on education and healthcare (due to the higher tax revenue collected as a result of economic growth) impacts material SOL.

Learning point: Non-material SOL is not about consuming goods/services.

- Mistakes / gaps in analysis/evaluation include
 - Judging that the overall AG brought about by the rise in X (as a result of the pickup in global economic activity) due to SG's small multiplier. SG indeed has a small multiplier but the overall rise in Y, a result of the rise in AD also depends on the size of the 1st shift and this depends on the size of (X-M) in AD which is big. Also, with a pickup in global activity, expected ROR of I rises because firms expect to export more. So, I rises too, which adds to the expansion in AD.
 - Shifting AD over the upward sloping part of AS when explaining the multiplier.
Learning point: This is wrong because the multiplier is actually based on the circular flow of income model and in this model, the GPL is constant due to assumption that there is excess capacity in the economy.

Question 2

- (a) Explain the importance of price stability to a government wanting to achieve inclusive economic growth. [10]
 (b) Discuss the extent to which inflation in Singapore is an externally rather than internally driven phenomenon. [15]

Suggested outline

Part (a)

Explain the importance of price stability to a government wanting to achieve inclusive economic growth. [10]

Approach

Candidates are expected to explain how stable prices will enable a government to attain inclusive economic growth. This entails the goal of sustained economic growth, comprising both actual and potential growth. Candidates then need to attempt to link how price stability to growth benefiting most citizens, by drawing on their knowledge of the negative effects of high inflation.

R1: Explain importance of price stability for sustained growth (which is a necessary prerequisite for inclusive growth).

R2: Explain importance of price stability for economic growth to benefit all citizens (in order to achieve inclusive growth).

Introduction

Define inclusive economic growth:

Inclusive economic growth refers to sustained economic growth which is broad-based across economic sectors and creates productive employment opportunities for all, while not widening income inequality. It suggests that all citizens benefit from economic growth.

Sustained economic growth refers to a situation where real national output increases over an extended period of time without accelerating inflation rates i.e, there is price stability in the economy and comprises actual and potential growth.

Define price stability

The general price level is considered stable when the inflation rate is positive and does not exceed 2 %.

Body

Explain importance of price stability for sustained economic growth

[P] Price stability is needed for an economy to be able to experience sustained economic growth because it is needed for a sustained level of investment that is needed for economic growth.

[E] Firms will undertake investments, which is needed for sustained economic growth, if the MB of I is greater than MC of I. As rational decision makers, they would invest up to the point where the MB of I = MC of I, where MB is the expected rate of return of the investment and MC is the interest rate. To do so they need to accurately forecast the expected rate of returns on investments, which would entail them being able to accurately forecast their expected revenues and cost incurred in producing goods and services and hence profits. This would only take place if prices are changing at a stable rate, for e.g. 2% annually, as high inflation would lead to prices of various goods and services changing in an arbitrary manner such that firms can no longer predict how much their various inputs would cost and how to price their goods.

[E] When there is mild demand-pull inflation such that prices remain relatively stable, firms continue to be able to predict the expected rate of returns on investment. At the same time, assuming nominal i/r remains unchanged (as savings continue to take place and hence the supply of loanable funds remains constant), the real i/r falls as $\text{real } i/r = \text{nominal } i/r - \text{inflation rate}$. This causes the MC of I to be less than the MB, and hence investment increases.

[E] The rise in investments increases AD which leads to a multiplied increase in real NY via the multiplier effect, whereby the initial increase in AD triggers further increases in AD due to induced consumption as workers who receive wages as a result of being hired to meet the initial increase in demand for goods and services spent part of their wages on domestically produced goods and services, resulting in final increase in real NY being greater than the initial increase in I. There is hence actual growth in the economy.

Investments also leads to potential growth in the economy, assuming that the rate of capital accumulation exceeds the capital depreciation rate. This enables the actual growth experienced by the economy to be sustained into the long run.

[L] Hence price stability is an important pre-requisite for an economy to be able to experience sustained economic growth, whereby both actual and potential growth takes place.

Explain importance of price stability for economic growth to be benefit all citizens.

[P] Price stability is needed for growth experienced to be inclusive such that it benefits all citizens through creation of productive employment opportunities.

[E] If the general price level were unstable where there is high inflation, it leads to a loss of export competitiveness of an economy. Assuming other countries experience constant prices or low inflation, prices exports from an economy experiencing inflation for e.g. Malaysia could be increase and hence be less competitive in international markets. Foreigners demanding products from Malaysia will switch to those from other economies for e.g. Thailand or their own domestically produced ones. As a result, there will be less demand for exports from Malaysia and workers working in exporting industries e.g. electronics component manufacturing there will face in a decrease in demand for their wages and/or face unemployment.

[E] While there are some sectors which will gain in times of high inflation, these are few and these will often be associated with property or the sale of speculative assets such as gold, as residents in a country to such assets as a store of value during inflationary periods. However, these sectors unable to create as many employment opportunities as manufacturing for exports.

[L] As such, price stability is important for the creation of productive employment opportunities in a country.

[P] Price stability is needed for growth experienced to be inclusive such that it prevents income inequality from widening.

[E] In general, inflation leads to a decrease in SOL of residents whose - nominal incomes rise less than inflation rates. With nominal income rising less than inflation rates there would be a fall in real incomes and hence purchasing power. Examples include casual workers without indexed wage contracts and the elderly who rely on the interest earnings from their savings.

[E] However, this may not apply to all workers as those with stronger bargaining power as a result of their specialised skills – for e.g. data scientists in today's context or highly experienced and recognised professionals may see their wages being able to keep up with inflation as economic growth generates demand for their skills. As these are likely to be the higher income earners in society, there would be a rise in income inequality.

[L] As such, price stability is important to ensure that income inequality does not widen, where there are households who don't benefit as much from economic growth as other households.

Mark Scheme

L3	8-10	Answer explains how stable price levels helps a governments attains inclusive economic growth using rigorous economic analysis.
----	------	---

L2	5-7	Answer explains how stable price levels helps governments attains inclusive economic growth but there are gaps in analysis or/and the explanation is more descriptive than analytical. Answer explains how stable price levels helps a government attained achieve sustained economic growth (max of 6)
L1	1-4	For an answer with relevant but undeveloped ideas and which has major conceptual errors

Markers' Comments

SKILLS

Question dissection

Some students did not adopt the analytical approach required which was to first address how inflation would help an economy achieve sustained economic growth before proceeding to explain how it would allow the growth to be inclusive i.e. create productive employment opportunities and/or not widen income inequality. The failure to adopt this approach stems largely from an inability to define 'inclusive economic growth' in full - students who did so tended to adopt the analytical approach which put them into the L2 mark range (students who did not adopt the approach tended to get L1 marks)

Learning point: Study your definitions, and fully. There are some questions where you need the definition to help you dissect the question and adopt an analytical approach.

Analytical & Contextual Explanation (e.g adequacy of rigour, choice of examples)

Many students were not sufficiently precise in explaining how price stability would lead to an increase in investment expenditure. It needs to be clear that 'price stability' being referred to here would have to be mild inflation (as opposed to prices literally not changing - remember that governments aim for mild inflation rather than 0 inflation) It needs to be mild because under such conditions prices are not changing in an arbitrary way and hence, returns on investments can still be predicted accurately. At the same time, for I to increase (change) there needs to be an increase in returns on investments (change) such that MB is now more than MC. For this, we need 'inflation' as this would cause real i/r to fall, assuming nominal i/r remains constant. Being able to predict prices (describing a state) cannot result in an increase in investments (change).

Content (major misconceptions)

Term 'equity' was often used loosely and interchangeably with inequality. 'Equity', which means fairness, does not come into play when explaining inclusive economic growth. Following from the definition of 'inclusive economic growth', inclusive growth is associated with income inequality not widening, which suggests at least some of the benefits of growth is being experienced by lower income workers. While high inflation may negatively impact equity due to income or wealth being redistributed in an arbitrary manner, this is not relevant to a question on inclusive economic growth.

Learning point: Equity vs inequality are 2 very different concepts.

Part (b)

Discuss the extent to which inflation in Singapore is an externally rather than internally driven phenomenon. [15]

Approach

Candidates are expected to explain both the internal and external factors which can cause inflation, via both increases in AD (demand-pull inflation) and fall in AS (cost-push inflation). Factors explained should have some degree of relevance to Singapore as part of demonstrating good application to context. Evaluation marks would be gained examining the relative importance of these factors to Singapore and having an overall synthesis to conclude whether inflation is, on balance, likely to be an externally rather than internally driven phenomenon in Singapore.

R1: Explain how inflation in SG can be an externally-driven phenomenon.

R2: Explain how inflation in SG can be a domestically-driven phenomenon.

Introduction

Define inflation:

Inflation is a situation where there is a sustained increase in the general price level of an economy. It can be either demand-pull or cost-push in nature, or both. Demand pull inflation results from a continuous increase in AD when the economy is near or at full employment; cost-push inflation results from a continual increase in unit cost of producing goods and services which are not caused by an increase in AD.

Thesis: Inflation in Singapore can be an externally driven phenomenon

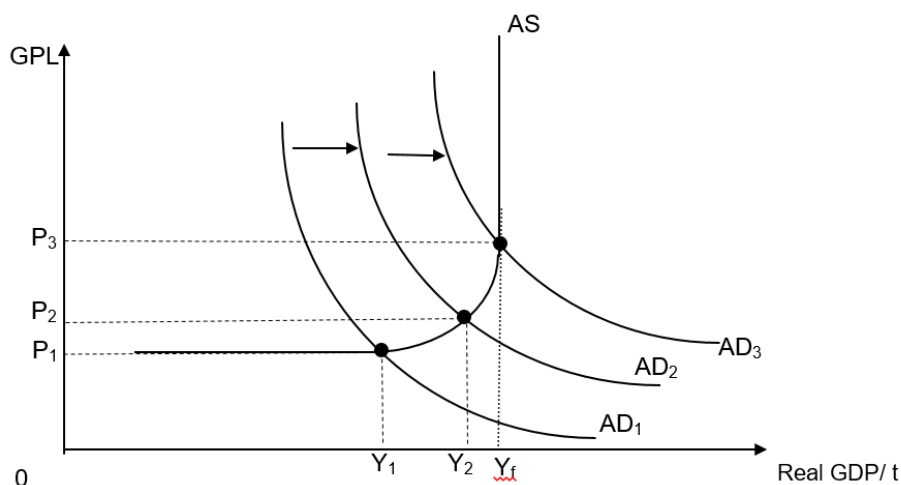
[P] Demand-pull inflation in Singapore can be an externally driven phenomenon.

[E] A continuous increase in AD due to an external factor in the form of an increase in net exports (X-M) can also result in inflation in Singapore.

[E] This can occur, for example when there is a rise in income levels driven by economic growth in countries which buy Singapore's exports such as China, UK, EU, the US, or more generally major economies since Singapore produces a lot of intermediate goods such as high end semiconductor chips which make their way into various electronic gadgets. When income in other economies rise, there will be a rise in demand for these various final products which results in increased demand for these intermediate goods which Singapore produces.

[E] With a small domestic market, Singapore has made export and engine of growth such that Singapore exports to markets much larger than itself. As such net exports (X-M) is a major contributor to Singapore's AD and the value of exports is 175% of Singapore's GDP.

Figure 1: Demand-pull inflation



[E] With reference to Figure 1 above, with an increase in AD, from AD1 to AD2 and AD3, profit-motivated firms respond by increasing production as they face an unplanned fall in inventories. However, as firms increase output and operate closer to full employment levels of output (Y_f), they have to resort to using less and less suitable factor inputs as more suitable factors had been used up. Hence, increasingly larger amounts of labour and other inputs are required per additional unit of output produced, resulting in higher unit costs of production which are passed on to consumers in the form of higher prices and hence GPL increases from P_1 to P_2 and then P_3 as AD rises.

[L] Hence inflation in the form of demand pull inflation in Singapore could be externally driven

[Ev] While X-M is part of the external sector of the Singapore economy, the underlying reason could still be domestic. For example, increase in the quality of products produced by Singapore due to efforts by the Government to promote research and development could lead to greater demand for products from Singapore.

[Ev] In addition, demand-pull inflation occurs only when there is lack of spare capacity in the economy, government policies - i.e. a domestic factor in the form of supply side policies which increase the productive capacity of the economy is able to prevent demand-pull inflation from occurring in the first instance.

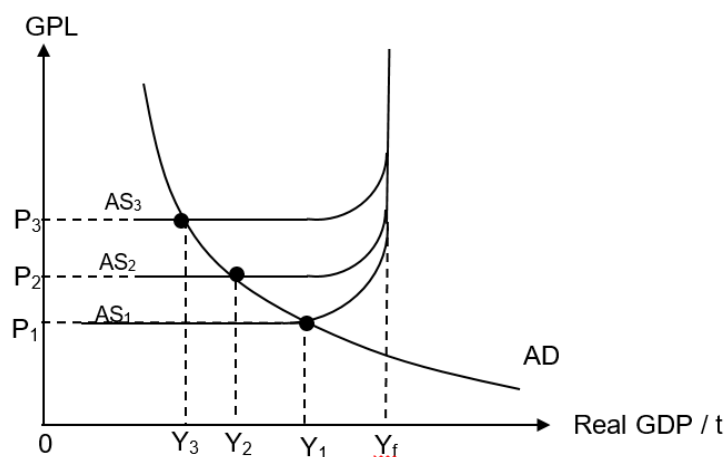
[P] Cost-push inflation in Singapore can be an externally driven phenomenon

[E] A fall in the AS could be due to an increase in price of imported raw material or components which are used to manufacture goods.

[E] This can occur as a result of an increase in global price of crude oil and/or other important commodities used in a wide range of industrial processes such as aluminum or intermediate products such as steel. The continued rise in global crude oil prices in the 2000s for example resulted in significant inflationary pressures in Singapore.

[E] Since Singapore lacks any natural resources but has a strong industrial base, producing a wide range of goods ranging from petrochemicals to semiconductors, Singapore is reliant on, and is dependent on the import of large quantities of commodities, making it susceptible to imported inflation.

Figure 2: Cost-push inflation



[E] With reference to Figure 2 above, when there is a rise in unit cost of production (profit motivated firms will be willing to continue producing the same output level only if they receive higher prices, i.e. pass on the rise in unit cost of production to consumers. Hence AS falls, as shown by an upward shift of the horizontal portion of the AS curve from AS_1 to AS_2 to AS_3 . This causes the equilibrium GPL to rise from P_1 to P_2 to P_3 while the equilibrium national output drops from Y_1 to Y_2 to Y_3 .

[L] Hence inflation in the form of cost-push inflation in Singapore could be externally driven.

Anti-Thesis: Inflation in Singapore can be a domestically driven phenomenon

[P] Demand-pull inflation in Singapore can be a domestically driven phenomenon

[E] A continuous increase in AD due to an increase in domestic consumption, investment or government expenditure such that AD is rising faster than the AS/productive capacity of the economy can trigger demand-pull inflation.

[E] This would occur when, for example, there is an improvement in consumer sentiments due a period of continuous growth, such that consumers expect that they will receive pay rises or additional bonuses from their employers as the economy continues to expand. They would hence reduce their savings and spend more, for example on domestic services such as dining.

[E] It could also occur when Government needs to undertake infrastructure projects and especially large ones – for e.g. construction of new HDB estates to meet the desires of Singaporeans who intend to get married and desire a home of their own, construction of new hospitals to meet needs to an ageing population or new MRT lines to cope with increased public transport ridership.

[L] Hence inflation in the form of demand pull inflation in Singapore could be domestically driven

[Ev] While any component of AD can theoretically cause an increase in AD, an increase in C will not lead to significant increase in AD for Singapore due to the small size of the domestic market and C is not a significant component of AD.

Similarly, the size of the government sector is small compared to other countries. Furthermore, in reality because the government in Singapore often plans ahead for the future, it is often able to defer major infrastructure projects if the economy shows signs of overheating.

[P] Cost-push inflation in Singapore can be a domestically driven phenomenon

[E] A fall in the AS due to an increase in unit cost of production stemming from increase in cost of domestic factor inputs can trigger cost-push inflation.

[E] For example, there could be wage-push inflation as a result of government policies to tighten the inflow of foreign labour. As foreign labour is used to supplement the domestic labour force especially in sectors such as manufacturing, retail and construction, a reduction in foreign labour inflow would reduce the overall labour supply and drive up wage rates. Assuming wage rates increase more than growth in labour productivity there will be an increase in the unit labour cost of production. OR

[E] For example, there could be wage-push inflation in light of an ageing population which leads to a smaller size of the workforce. Assuming insufficient inflow of foreign workers this leads to rise in wages rates. If productivity does not increase as much as wages, unit labour cost of production increases.

[L] Hence inflation in the form of cost-push inflation in Singapore could be domestically driven

[Ev] In reality, the government carefully calibrates policies to ensure that macroeconomic stability is not threatened. In this case the government has chosen to reduce foreign labour inflows in a gradual way while at the same up providing more assistance to firms to increase their productivity through grants to help defer cost of purchasing labour saving technology as well as technical help through Enterprise Singapore. OR

[Ev] In reality, the government allows for sufficient inflow of foreign labour and aims for productivity growth to ensure that unit labour cost of production. However, with calls for greater curbs by some segments of the population on labour inflows, there is a risk of unit labour cost of production rising if productivity does not rise as much as wages.

Conclusion

[Stand] In conclusion, inflation in Singapore is to a large extent, an externally driven phenomenon rather than a domestic one.

Substantiation

Given the export-oriented nature of the Singapore economy, small domestic market, and dependence on imports of commodities for manufacturing goods, inflation is more likely to be an

external phenomenon brought about by an increase in net exports leading to demand pull inflation, and imported cost-push inflation.

Furthermore, effective government policies ensure that domestic factors including rise in government expenditure or government policies such as aimed at reducing dependence on foreign labour or factors such as ageing population do not significantly contribute to inflation. The former is attained by having long term planning of government projects such that they can be deferred in times of strong inflationary pressures. In the case of the latter which leads to cost-push pressures, the government constantly pursues policies aimed at increasing productivity – labour productivity, capital productivity and total factor productivity through upgrading of workers skills, incentivising firms to adopt more efficient production methods such as automation through tax rebates, and giving grants for the conduct of R&D in production methods.

L3	8-10	For a 2-sided answer which explains why Singapore can experience both demand-pull and cost-push inflation caused by external <u>and</u> internal factors. Rigour in use in economic analysis and explanation is contextualised to SG economy.
L2	5-7	For a 2-sided (i.e. considers both external and internal causes) answer which is lacking in economic analysis (i.e. more descriptive than analytical) Or For a 1-sided answer (either internal or external causes) with well-developed analytical and contextual explanation that considers both demand pull and cost push inflation.
L1	1-4	For an answer has little economic analysis and contains major conceptual errors

E3	5	Well-reasoned evaluative comments are made with a well-reasoned synthesis.
E2	3-4	Evaluative comments made with some attempt at substantiation.
E1	1-2	For an attempt at unsubstantiated judgements

SKILLS

Question interpretation

Not all students understood what is “internal” or “external”. There isn’t a clear definition of what defines ‘internal’ vs ‘external’ but one would logically look at the root cause of a phenomenon rather than the phenomenon itself. Using exchange rate changes as an example, it could be internal or external depending on a root cause - for example exchange rate changes caused by central bank policy could be classified as internal whereas exchange rate changes due to short term capital inflows when other countries reduce their exchange rates would be external.

Analytical & Contextual Explanation (e.g adequacy of rigour, choice of examples)

- Poor choice of examples was demonstrated by some students. In analytical writing examples chosen should support the case one is arguing for most strongly. Often this is related to doing a complete chain of cause-effect analysis starting with the root cause. Hence, rather than say that rise in net exports is an external cause of demand-pull inflation, a better response would say ‘rise in net exports due to rise in foreign Y levels’ is an external cause of demand-pull

inflation. What can be used as an internal factor to prove that inflation could be caused by demand pull factors could be 'a rise in government spending to increase healthcare facilities in light of a rapidly ageing population' as that is clearly an internal factor.

Learning point: Use examples/factors which support your case most strongly when developing content in a 2-sided essay (or case study)

- Many students did not begin analysis at the root cause, for example merely stating that rise in consumption could lead to a rise in demand-pull inflation without suggesting why this could be the case for e.g. a rise in consumer confidence due to positive economic growth forecasts.

Learning point: Do complete chain of analysis starting at the root cause

- Many students who drew diagrams did not explain the effects sufficiently well - for example they merely stated that 'As can be seen on diagram, when AD increase, GPL increases' without explaining why exactly the increase in AD would lead to a rise in GPL. As an essay centered on AD/AS analysis (to explain inflation) this is important to securing high marks.

Evaluation

Some students did not sufficiently make use of the Singapore context, which was a pity because this was a question for which it was relatively easy to get high evaluation marks.

CONTENT (major misconceptions)

Some students attributed a rise in AD to a rise in income. When starting from a point of equilibrium national income and GPL, the factor to trigger a change in AD has to be a non-income factor because national income is in a state of rest at the point, i.e. equilibrium where AD cuts AS.

Question 3

- a) Explain what might cause a balance of trade surplus. [10]
 b) Discuss whether a balance of trade surplus is always desirable for an economy. [15]
- a) Explain what might cause a balance of trade surplus. [10]

Approach

Students are expected to explain the possible causes of a BOT surplus. The chosen factors should include a range of factors that include both domestic and foreign causes, and also effects on both export revenue and import expenditure.

R1: Explain one cause of a BOT surplus.

R2: Explain another cause of a BOT surplus.

Note: Ensure that there is sufficient scope in your causes e.g. internal vs external.

Intro

Balance of trade (BOT) is the difference between a country's export revenue and import expenditure. When a country's export revenue is greater than import expenditure, the country is said to be experiencing a BOT surplus. **In our analysis, we assume that the country, Singapore was initially facing a balanced BOT.**

Body

[P] Inflation experienced by trade partners would result in a trade surplus for Singapore.

[EE] When Malaysia experiences inflation, it would mean that Malaysia products become more expensive. This would cause Singapore households to switch from Malaysia products to goods produced in Singapore which are now relatively cheaper, assuming general price level stability in Singapore. This causes a fall in quantity demanded of good imported from Malaysia and thus a fall in import expenditure, assuming that the demand for Malaysia good is price elastic. When the demand for Malaysia goods is price elastic, there would be a more than proportionate fall in quantity demanded when there is a rise in the price of Malaysia goods, causing the fall in expenditure from the reduced quantity demanded to be greater than the rise in expenditure from paying higher prices. This leads to an overall fall in import expenditure. At the same time, there would be a rise in demand for Singapore goods, as Malaysians find that this country's goods and services have become relatively cheaper. This causes export revenue to rise.

[L] Given the rise in export revenue and fall in import expenditure, Singapore would now experience a trade surplus.

[P] A depreciation of the Singapore Dollar (SGD) would result in a trade surplus for Singapore.

[EE] When the SGD depreciates against Ringgit Malaysia (RM) due to increase in capital outflow, the price of Singapore goods in terms of RM falls, and this result in a rise in demand for Singapore goods. This leads to a rise in export revenue. On the other hand, the price of Malaysia goods in terms of SGD rises. This results in a fall in the quantity demanded of Malaysia goods and causes a fall in import expenditure, assuming the demand for Malaysia goods is price elastic. If demand for imports is price inelastic, expenditure on imports (in S\$) will rise. However, as long as the rise in export revenue outweighs the rise in import expenditure, balance of trade will still improve. This outcome will be observed so long as the Marshall-Lerner condition holds i.e. $|PED_x + PED_m| > 1$.

[L] Given the rise in net export revenue, Singapore would now experience a trade surplus.

[P] Global economic recovery would result in a trade surplus for Singapore.

[EE] Global economic recovery would mean that many of Singapore's trade partners would be experiencing economic growth. With a rise in the income, and thus purchasing power of its households, there would be a rise in the demand for Singapore's exports, assuming that they regard Singapore export of consumer goods/services to be normal goods. Furthermore, as the trade partners increases their production, there would be a rise in the demand for intermediate goods, leading to rise in demand for Singapore's exports such as computer chips as the trade partners would require these products to produce more goods and services.

[L] Assuming that import expenditure remains the same, Singapore would experience a trade surplus.

Mark Scheme

Level	Level Descriptors	Marks
L3	Well-developed analytical explanation of factors causing trade surplus <ul style="list-style-type: none"> - Has both internal and external factors - Covers both import expenditure and export revenue 	8-10
L2	Underdeveloped explanation of factors causing trade surplus <ul style="list-style-type: none"> - Has only internal or external factors - Only covers import expenditure or export revenue Could also have internal + external, import expenditure + export revenue but with gaps in explanation.	5-7
L1	Mere listing of factors causing trade surplus	1-4

Markers' Comments

Question interpretation

There wasn't any issues with question interpretation as this was a pretty straightforward question.

Organisation of points

In general, students were able to present their answers in a clear manner that demonstrated that they were aware of the need to bring in both external and internal factors, and also how both import expenditure and export revenue changed.

Analytical and Contextual Explanation (e.g. adequacy of rigour, choice of examples)

- Many answers did not link the explanation of factors to how a country will experience BOT surplus. It is insufficient to explain that the factors cause a situation where exports revenue increased and import expenditure fell – this is merely an improvement in BOT position. In order for an improvement in BOT position to result in a BOT surplus, the assumption of how the country was initially experiencing a balanced BOT is crucial
- Some students also used merely 'exports' and 'imports' instead of export revenue and import expenditure. This is not precise enough as BOT is about export revenue and import expenditure.
- Students also must be more precise about the terms used. It shouldn't be 'exports increased' – are we referring to change in demand or change in export revenue? There has to be a very clear idea of what you're referring to.
- There is still some confusion over the use of quantity demanded vs demand for imports and exports. One simple rule of thumb is to look at whether the price of the imports or exports has changed in domestic currency. If the price of the good has not changed in domestic currency, then it will be a change in demand.
- Some students also do not know when the relevant time is to bring in 'price elasticity of demand'. This is seen from a few scenarios such as

- “The demand for exports has gone up. If the demand for exports is price elastic, it will lead to a more than proportionate change in quantity demanded”. [**Learning point:** If it's a demand change, PED wouldn't matter.]
- “Assuming that the demand for imports is price elastic, quantity demanded for imports will fall.” [**Learning point:** Price elastic demand causes a more than proportionate fall in quantity demanded, not just a fall in quantity demanded.]
- Explanation of the significance of PED was often lacking in rigour. Students have to remember to explain that price elastic demand would result a more than proportionate change quantity demanded, and thus result in the subsequent change in export revenue/import expenditure.
- Many students pointed out that the inflation rate of a country may be lower than trade partners' inflation rate, causing the BOT surplus. This does not mean that the domestic level of GPL is relatively lower than trade partner's GPL, it just means that there is a slower rise in GPL. Instead, answers should explain there is a fall in GPL in the domestic country, and assuming that GPL of trade partners stays constant. Thus this relates to how the price of exports will fall relative to other countries' goods and services and quantity demanded for exports will rise, causing a change in total revenue through applying the PED concept.
- Some factors, such as depreciation of currency and a fall in the relative GPL in the economy, impact both export revenue and import expenditure. For a complete explanation of the factor, students need to explain both the impact on X and M
- Some students were not very clear in their answers as they used 'this country' and 'other country'. It would be easier for them if they used specific countries (such as Singapore, Malaysia etc.) in their answer.
- There is no such term as 'BOT equilibrium'. The correct term to use is 'balanced BOT'.

b) Discuss whether a balance of trade surplus is always desirable for an economy. [15]

Approach

A BOT surplus has both positive and negative effects on the economy, measured in terms of its impact on macroeconomic goals and standard of living. Thus, a 2-sided analysis would be required. Use of the AD-AS model would be helpful in explaining the impact on macroeconomic indicators such as GDP, GPL, and unemployment. To conclude, the stand should be substantiated with the use of countries with trade surpluses (such as Singapore, China, or Germany) as examples.

R1: BOT surplus can be desirable for an economy.

R2: BOT surplus can be undesirable for an economy.

Introduction

To determine if a BOT surplus is always desirable for an economy, we would need to first take a look at the impacts of a BOT surplus on the economy in terms of the impact on economic growth, employment, general price level stability and living standards. To evaluate the overall desirability, we should consider different scenarios that will affect the extent of the desirability of the BOT surplus.

Thesis: BOT surplus is desirable for an economy

[P] A BOT surplus could result in higher material SOL in the long run

[EE] A BOT surplus means that the country is a net lender, i.e. it is lending to trade partners to buy its exports. As such, over time, the country, besides getting back the principal sum that it lent, will be receiving interest payments from abroad. A BOT surplus also enables the country to engage in foreign direct investment which will yield profits over time. Earnings of interest and profits adds to the country's gross national income which leads to increase in its people's buying power and hence material living standards in the long run.

[L] Hence, a BOT surplus would be beneficial for the economy.

[P] A BOT surplus could lead to economic growth through the appreciation of domestic currency.

[EE] If the improving BOT leads to an appreciation of the exchange rate, ceteris paribus imported inputs become cheaper in terms of domestic currency. Thus, if the country was facing imported inflation, the appreciation of the forex rate would have reduced imported inflation. The imported inputs become cheaper in domestic currency. The fall in UCOP would thus lead to economic growth as GDP would increase.

[L] Hence, a BOT surplus would improve SOL through a rise in GDP.

[P] A BOT surplus could have an expansionary effect on the economy.

[EE] If the economy experienced an improvement in BOT from balanced BOT to BOT surplus, this would mean a rise in net export expenditure (X-M). This rise in (X-M) would lead to a rise in AD, which leads to an unplanned fall in inventory levels. Firms would thus hire more FOP and increase production, and GDP would increase by a multiplied amount via the multiplier process.

[L] Hence, a BOT surplus could cause a country's GDP to increase.

[Ev] This expansionary effect could be relatively more significant for countries who are dependent on rising BOT surplus for growth, such as Singapore.

[Ev] However, this effect could be reduced if the country was on a floating exchange rate system. An improving BOT position would result in an appreciation of the exchange rate, which would dampen the rise in (X-M), thus reducing the extent of rise in GDP.

Alternative explanation for expansionary effect on the economy (can be positioned as Ev, depending on how students write)

[P] A BOT surplus could have an expansionary effect on the economy.

[EE] If a country is on a managed float system, an improving BOT from a balanced BOT to BOT surplus puts pressure on the foreign exchange rate to appreciate beyond the desired range and the central bank will need to sell the domestic currency (in exchange for foreign currency) to prevent the appreciation. This act of selling the domestic currency has the effect of increasing supply of S\$ in the forex market and increasing the country's foreign reserves. Once the foreigners spend the domestic currency (purchased from the central bank) on the country's goods/ services or assets, the local currency ends up in bank accounts belonging to the country's exporters. Hence the domestic money supply will rise and this may cause AD and national income to rise, assuming the presence of excess capacity.

[L] A BOT surplus would result in higher SOL through a rise in GDP.

Anti-thesis: BOT surplus is undesirable for an economy

[P] A BOT surplus would mean that the current standard of living of a country's residents would be lower than what it could have been.

[EE] A BOT surplus would mean that the country's export revenue exceeds its import expenditure. This surplus could have been used to finance more imports to the country. This would have enabled its households to consume more.

[L] Thus, households experience a lower living standard than they should in the short run.

[P] A BOT surplus would lead to demand-pull inflation

[EE] A change from a balanced BOT to a BOT surplus which leads to a rise in AD can be a source of demand pull inflation if the economy was initially already at / very near full employment. Moreover, in a managed float system, where a BOT surplus puts upward pressure on the forex rate requiring the central bank to sell domestic currency in the forex market to prevent excessive appreciation of the forex rate, the domestic money supply will rise and this will also lead to demand-pull inflation.

[L] A BOT surplus can thus be undesirable because it could contribute to increased GPL instability in the economy.

[P] A BOT surplus might result in retaliation from trade partners.

[EE] If a country is constantly experiencing a BOT surplus, it means that its trade partners would be experiencing persistent trade deficits. If both countries were initially experiencing a balanced BOT, one country's trade surplus would mean that its trade partner is facing a trade deficit. This would mean that the trade partner is thus facing a contraction of its economy. The trade partners might choose to retaliate and impose protective measures to restrict imports. Such retaliation will result in a fall in net exports of the country experiencing surplus, hence reducing its output and employment.

[L] Hence, a BOT surplus might result in unemployment and lower output for the economy in the longer term.

[Ev] This may not be so significant for small and open economies such as Singapore. Although Singapore runs a trade surplus, the negative impact on other countries would be rather limited due to the small size of Singapore's exports relative to the GDP of its larger partners. This would explain why Singapore has not faced any form of retaliation from its trade partners.

Conclusion

[Stand] A BOT surplus may be desirable for an economy, depending largely on the nature of the economy and the size of the deficit, besides the state of the economy.

[Substantiation]

Countries such as Singapore may not be so worried about a BOT surplus due to the size of its domestic economy. Having a small domestic market means that Singapore has to depend on trade for economic growth. If the BOT surplus was due to rising export revenue, then it would have positive impact on Singapore's economy as it would bring about positive economic growth. Having a BOT surplus over the years is also good as the Singapore government has been implementing supply-side policy to generate potential growth. Together with the BOT surplus, this brings about sustained economic growth and increased employment. Furthermore, for a country like Singapore who is dependent on imported inputs, having an appreciation of the Singapore dollar would be beneficial as it helps to address imported inflation, which helps to ensure that her exports remain price competitive. This is especially important for Singapore since we have no natural resources and import a lot of factors of production.

However, for big countries like China who have also been running a persistent and big BOT surplus, it may not be so desirable for them. This is due to the retaliation measures that have been implemented by US over the years. The large BOT surplus that China had with US have always been said to be one of the main reasons for job losses in the US. The protectionist measures that have been implemented by both China and US against each other has inevitably led to job losses in both countries.

Mark Scheme

Level	Level Descriptor	Marks
L3	Well-explained 2-sided explanation of why trade surplus is desirable and undesirable	8-10
L2	Underdeveloped 2-sided explanation of why trade surplus is desirable/undesirable OR Well-developed 1-sided explanation of why trade surplus is either desirable or undesirable	5-7
L1	Mere listing of reasons why trade surplus is desirable/undesirable	1-4

E3	Makes a reasoned judgement on the overall desirability of a trade surplus (such as cause, size and duration of surplus, nature of economy). Contextualises the judgment with relevant examples.	5
E2	Some attempt to substantiate the judgement	3-4
E1	Unsubstantiated evaluative comments	1-2

Markers' Comments

Question Interpretation

- Many students interpreted the question as the impact of a BOT surplus on various economic agents and many went on to explain the impact of the surplus on firms' profits. Students should learn to read the question carefully and note that whether a BOT surplus is desirable for an *economy*, should be considered from the perspective of the government - e.g. impact on the country's macroeconomic goals. Note that although the impact on SOL can be considered as something that will affect consumers, it is an overarching macroeconomic goal for a government, and therefore, points on SOL, can be included in this essay.

Organisation of points

- Some students were alternating between 'BOT surplus is desirable' vs 'BOT surplus is undesirable' in their paragraphs. It would help in making their essays clearer if they can consider why it's desirable first, followed by why it is undesirable.

Analytical and Contextual Explanation (e.g. adequacy of rigour, choice of examples)

- Students need to understand that BOT surplus is a static situation where the country's exports revenue exceeds import expenditure. For trade balance to cause an improvement/deterioration in the macroeconomic goals (a change in the outcome), answers need to assume that there is an improvement in the BOT, e.g. BOT was initially balanced and moved to a surplus, which causes a rise in exports revenue and/or a fall in import expenditure. Without this assumption, the analysis on AD and real GDP changes are inaccurate.
- Many students did not consider the most direct and rigorous point: the improvement in BOT brings about a rise in net exports revenue. The rise in net exports revenue should be considered first when analyzing the impact on economic growth. Answers that did not bring in this point may lack rigour in analysis. Students should note that most macroeconomic essay questions require AD-AS analysis.
- A handful of students considered the indirect effects of BOT surplus on economic growth, e.g. investors have greater confidence in the economy. They expect a higher rate of return (ROR) on their investments, which will cause a rise in AD and thus, real GDP. Not only is such an argument relatively weaker, but there are gaps in the explanation. For example - why does trade surplus cause firms' to have a higher expected rate of return? Is it because the improvement in BOT will generate economic growth, or is it because countries with floating exchange rates will experience an appreciation in their domestic currencies that may improve foreign companies' expected ROR?
- Many students tried to explain how trade surplus could lead to an appreciation of the currency, but instead of linking that to cheaper imported inputs which quell inflationary pressures, they explained that the appreciation would lead to a balance of trade worsening (which is natural to revert back to BOT = 0 in a free floating exchange rate system). While this is a valid inference, this point is not very helpful to explain desirability, moreover, it potentially unravels the student's other paragraphs that work on the impacts of a BOT surplus.
- Many students explained how a BOT surplus leads to higher government revenue without appropriate explanation that BOT surplus (if driven by improvement of BOT) leads to higher real GDP via the multiplier process, and leading to higher tax revenues from income tax and GST for instance. The assertion that a BOT surplus leads to higher government revenue could imply that

the student is unable to differentiate between balance of trade and government budget balance if they skimpily explained this link.

Evaluation

- Students often give generic conclusions about the desirability of a BOT surplus. They need to realize that the use of examples would strengthen their arguments.
- Students were right to consider the initial state of the economy as a criterion for judging the desirability of a BOT surplus. However, there tended to be over generalizations that should be avoided.
 - Stating that SG tends to be a full employment. This is not accurate in recent pandemic times.
 - Stating that developed countries tend to be at full employment. This is also not accurate. Developed countries do experience business cycles where the economies alternate between booms (at Y_f) and slumps (below Y_f).

Content

- One very common mistake was the confusion between budget surplus and BOT surplus. Some students would say that “Due to a BOT surplus, the government would have more reserves to spend to stimulate the economy.” BOT surplus is enjoyed by the economy/country, and budget surplus is experienced by the government.
- The argument that a BOT surplus is undesirable because it leads to an appreciation of the forex rate which in turn causes a worsening of the BOT which then leads to a fall in AD and hence negative actual growth, is flawed. This is because it neglected the fact that a change from BOT balance to BOT surplus (which led to the appreciation of the forex rate) would have initially caused AD to rise.
- The argument that a BOT surplus is desirable because it means that the country has funds to import capital goods which can boost the country’s economic growth is flawed because if the country went ahead to use its export earnings to buy imported capital goods, then it is no longer running a BOT surplus.

2021 CT1 QP**Paper 1: CSQ (1 h 15 min)****Asian Tigers in recent years****Table 1: Trade balance of selected economies, 2015-2019 (US\$ billion)**

	2015	2016	2017	2018	2019
Singapore	84.1	83.6	86.8	106.1	103.8
South Korea	105.6	99.1	76.9	80.7	53.8
Hong Kong	7.4	7.3	3.4	- 0.8	6.2

Source: World Bank, 2020

Table 2: Consumer Price Index of Hong Kong (2010=100)

	2015	2016	2017	2018	2019
Hong Kong	122.94	125.90	127.77	130.84	134.59

Source: World Bank, 2020

Extract 1: Hong Kong enters into a recession in 2019

Hong Kong has officially plunged into a recession, suffering its first annual contraction in a decade after falling under the twin pressures of the US-China trade war and months of pro-democracy protests. 2019 is the worst for Hong Kong's economic growth since 2009 when the global financial crisis hit hard. Government data released showed that Hong Kong's Gross Domestic Product (GDP) in 2019 contracted by 1.2 per cent year-on-year while its export revenue fell by 5 per cent. The trade war between Beijing and Washington hit the export-heavy economy hard and violent protests that began in June over a proposed extradition law took a heavy toll on consumption and tourism.

Adapted from BBC News, 2019

Extract 2: Unemployment rate in Singapore edges up in 2019

Even in the midst of a global economic slowdown, National Trades Union Congress' (NTUC) assistant secretary-general Mr. Patrick Tay recently said in a Facebook post that skills and jobs mismatches continue to be the main cause of unemployment in Singapore. Some of Singapore's challenges to tackling these mismatches include our ageing population and rapid technological disruption. Due to restructuring and digitalisation of the economy, Mr. Tay believes that mature workers will require the most support from the government.

A substantial portion of the younger generation are also finding themselves unemployed for a different type of mismatch – expectations. Most students from local universities in Singapore aim for associate positions in reputable companies upon graduation. However, their lack of experience often results in employers glossing over youthful vigour and opt for seasoned hands on deck, resulting in

a long and trying job search. Fresh graduates who did not look for internships and venture into the market prior to graduation may also find it difficult to connect with the right employers.

Adapted from Channel News Asia, 2020

Extract 3: Impact of US-China trade war on South Korea

When the two largest economies enter into a trade war, the rest of the world will inevitably bear the brunt, including the former Asian Tiger - South Korea. In fact, some economists believe that the economy most affected by the trade dispute is neither the US nor China, but South Korea. In 2019, South Korea's exports to China accounted for 26 per cent of its total exports. Intermediate goods used by China to manufacture its exports make up 78.9 per cent of that. This means that when US imposes greater tariffs on Chinese imports, the decline in exports from China to US inevitably leads to a decline in exports from South Korea to China.

The result? A slash in South Korea's export sector which represented 40 per cent of its GDP. As of July 2019, export revenue fell consecutively for eight months. In addition, corporate investments fell as domestic and international companies adopt a conservative stance. Unsurprisingly, South Korea's annual economic growth rate in 2019 plunged to 2.0 per cent, its lowest level since 2009. In the first quarter of 2019, the country's quarter-on-quarter GDP fell by 1.4 per cent, the worst decline among all major Asian economies. Quarterly unemployment rate of South Korea in 2019 hovered around 3.5 per cent.

Perhaps the only silver lining of the conflict is some trade diversion effect. The United Nations released a study in Nov 2019, stating that trade are being diverted to other economies, including South Korea, to fill the vacuum left by the absence of Chinese exports to the American market. In 2019, South Korea's exports to the US accounted for 14 per cent of its total exports.

Adapted from various sources

Extract 4: Governments respond to US-China trade war

Judging from the performances of the former Asian Tigers, the US-China trade war is having a systemic impact on the regional and global economy. These economies that previously benefited from globalisation have now become victims in the trade conflict. In response, South Korea and Hong Kong have adopted expansionary policies to boost their economic performances.

In Aug 2019, South Korea's finance ministry proposed spending a record 513.5 trillion won in 2020, up 8 per cent from this year. "It would be helpful for fiscal policy to play a more active role to put the economy back on a growth track," finance minister Hong Nam-ki said at a news conference.

The proposed budget will include a 17.3 per cent increase in expenditure on research and development to help South Korea develop its key materials and parts industries as well as to invest in future growth engines such as artificial intelligence, 5G networks and bio-health services. According to World Bank, household final consumption makes up 49 per cent of South Korea's GDP while government consumption expenditure and gross capital formation makes up 17 per cent and 31 per cent respectively. While these measures are welcomed, analysts cautioned that fiscal deficits could balloon in coming decades. As it is, South Korea's debt level as a percentage of its GDP has

been rising steadily from 30 per cent in 2009 to 42 per cent in 2019, the highest it has ever been since 1990s.

Similarly, the Hong Kong authorities have announced new fiscal stimuli to help the slowing economy, including support for small medium enterprises (SMEs), further tax relief, extra social security payments, and subsidies for households. According to the Hong Kong Trade Development Council, Hong Kong's domestic consumption makes up 69 per cent of its GDP while government consumption expenditure and fixed capital formation makes up 11 per cent and 19 per cent respectively. Unlike South Korea, Hong Kong's government need not be overly concerned about financing their new measures. This is because prudent financial management has enabled an accumulation of HK\$1.1 trillion in government reserves, allowing Hong Kong the fiscal space to manoeuvre without resorting to debt financing.

Adapted from various sources

Questions

- (a) Compare the balance of trade between Singapore and South Korea from 2015 to 2019. [2]
- (b) (i) Calculate Hong Kong's inflation rate in 2019 and explain what it says about Hong Kong's general price level. [2]
- (ii) With reference to Extract 1 and observations made in b (i), account for the change in Hong Kong's balance of trade between 2018 and 2019. [4]
- (c) Using Extract 2, explain the causes of unemployment in Singapore in 2019. [4]
- (d) Discuss the effects of the US-China trade war on South Korea's economy. [8]
- (e) With reference to Extract 4, evaluate the appropriateness of the response by the South Korea and Hong Kong government to the US-China trade war. [10]

[Total: 30 marks]

Paper 2: Essays**Answer two questions.**

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

Start **each question** in this section on a **new** sheet of paper.

1. Singapore should be able to sustain growth of about 2.5 per cent for the next few years, so long as there is no global recession and no major surge in the imposition of trade barriers by USA and countries in Europe. However, ageing demographics and disruptions stemming from new technologies are threats to Singapore's future economic potential.

Adapted from In the Black, 1 August 2019,

<https://www.intheblack.com/articles/2019/08/01/singapore-economy-reinvention>

- (a) Explain the importance of sustained economic growth to an economy. [10]
 - (b) Discuss the possible factors that determine Singapore's economic growth performance over the next few years. [15]

2.
 - (a) Explain why the use of inflation data alone is not sufficient to measure the performance of an economy. [10]
 - (b) Discuss whether changes in the general price level caused by demand side reasons are more damaging to an economy than those caused by supply side reasons. [15]

3.
 - (a) Explain the causes of a rising balance of trade surplus in an economy. [10]
 - (b) Assess the impact of a persistent and rising balance of trade surplus on living standards in Singapore. [15]

2021 CT1 Suggested Answers

Paper 1: CSQ

(a)	<p>Compare the balance of trade between Singapore and South Korea from 2015 to 2019. [2]</p>
	<p>Both countries had BOT surpluses throughout the period [1] but Singapore's BOT improved (surplus increased) while Korea's BOT worsened (surplus decreased) [1].</p> <p>Markers' comments:</p> <p>Content:</p> <ul style="list-style-type: none"> • There was a lack of precision in terminology used. Many students used 'increased/ decreased' to describe changes in BOT instead of 'improved/worsened'. • Many students also compared the BOT levels between countries, which was not meaningful when surplus or deficit is not identified. • The comparison on the extent of increase / decrease is also not meaningful when the position of the BOT (i.e. surplus / deficit) was not established. <p>Skill:</p> <ul style="list-style-type: none"> • Some students did not fully address the question requirements of having to compare the trend over the entire time period (2015 - 2019) but instead broke up their analysis into different time periods. Moving forward, students should not pick up "mini trends" observed in broken up time periods as a refinement point. Students can at most bring in "reversal of trend" but that also requires them to cover the entire time period with one pivoting period where the reversal takes place. • Some students only provided one comparison; given the mark allocation, two observations were expected.
b(i)	<p>Calculate Hong Kong's inflation rate in 2019 and explain what it says about its general price level. [2]</p>
	<p> $\text{Inflation rate} = \frac{\text{CPI}_{2019} - \text{CPI}_{2018}}{\text{CPI}_{2018}} \times 100\%$ $= \frac{134.59 - 130.84}{130.84} \times 100\%$ $= 2.87\% [1]$ </p> <p>Since the inflation rate is positive, this means that general price level was rising / increased by 2.87% [1] from 2018 to 2019.</p> <p>Markers' comments:</p> <p>Content:</p> <ul style="list-style-type: none"> • The question requires the calculation of the "inflation rate in 2019". This means that the question is referring to the <i>annual</i> inflation rate. Thus, answers that worked out the % change in the CPI between 2019 and 2015 (base year) were not accepted.

	<ul style="list-style-type: none"> Some students also made the mistake of simply taking the absolute change between 2019 CPI and 2018 CPI. <p>Skill:</p> <ul style="list-style-type: none"> Since 'calculate' is the command word, students should present their workings to show how they arrived at their figures. This is in contrast with other command words for such questions like "describe" or "compare", where workings are not needed because the key focus of these command words is to interpret the data. In the same vein, the second command word is 'explain' - students thus need to clearly explain how they arrived at their conclusions regarding GPL based on the figures they have calculated i.e. inflation rate is positive, hence GPL has increased. This is in contrast with the command word "conclude", where the link between a positive inflation rate and rising GPL OR 2.87% inflation rate and GPL rising by 2.87% is not needed.
b(ii)	<p>With reference to Extract 1 and observations made in b(i), account for the change in Hong Kong's balance of trade between 2018 and 2019. [4]</p>
	<p><u>Inflation leads to worsening of BOT [2]</u></p> <p>Inflation in Hong Kong should lead to a fall in its export revenue (X) and a rise in import expenditure (M). As price of exports rises, quantity demanded by foreigners will fall. Assuming demand for Hong Kong's exports is price elastic, the fall in quantity demanded will be more than proportionate to the rise in price, leading to a fall in X. Additionally, locals will demand more foreign imports as they are now relatively cheaper compared to domestic goods. This leads to a rise in demand for imports and M. These should have resulted in worsening of BOT, ceteris paribus.</p> <p><u>Recession/Pessimistic outlook of economy leads to fall in M [2]</u></p> <p>However, Hong Kong is also suffering from a recession (Extract 1) at the same time. "Hong Kong has officially plunged into a recession... 2019 is the worst for Hong Kong's growth since 2009" (Extract 1) suggests a significant fall in Hong Kong's national income and purchasing power to buy foreign imports. As a result, Hong Kong's M would have fallen significantly.</p> <p>OR</p> <p>The pessimistic outlook of the economy due to social unrest resulting from the extradition law have dampened consumer's confidence as expectations of future income falls and households would cut back on consumption (Extract 1: "took a heavy toll on consumption"), including that of imported goods and services. Hence, M falls.</p> <p><u>Asserting that M fell more than X thus accounting for the improvement of BOT [1]</u></p> <p>If the fall in M due to the recession is significantly larger than the rise in M and fall in X due to inflation, balance of trade would have improved overall. This would have accounted for an improvement in Hong Kong's BOT in spite of an inflation.</p>

[Total 5 possible marks, but max 4]

Note: Answers that argue that X rose more than the fall in M will not be accepted as extract 1 mentions Hong Kong suffering a fall in X. Thus, answers that bring in trade diversion effect or HK having a relatively lower inflation or Hong Kong's exports being price inelastic will not be accepted.

Markers' comments:

Content:

- More precision is needed when it comes to usage of 'demand' and 'quantity demanded'. The latter is used when there is a price change, which is the case here for Hong Kong's exports since the starting point is 'inflation'.
- A worsening of BOT does not mean a BOT deficit - it depends on the starting point. Similarly, BOT improving ($\uparrow X-M$) is not the same as a BOT surplus ($X > M$).
- It is wrong to argue that export revenue (X) may have risen in spite of the inflation due to other reasons such as other countries experiencing a relatively higher inflation rate. This is because the extract clearly mentions Hong Kong's X falling. This means that explaining how inflation will lower X is enough. Students who wish to account the improvement in BOT should go on to focus on how M falls more than the fall in X.
- Many students who managed to identify recession as the reason for falling M did not go on to make an assertion that this fall in M must be greater than the fall in X in order for Hong Kong's BOT to improve. This is a crucial conclusion that students must make since both X and M are falling. Students who were able to reach this conclusion showed thorough understanding of BOT as the value of $X-M$.
- Some students asserted that Hong Kong's X would have fallen due to poorer economic outlook arising from the political riots. This does not make much sense as poorer economic outlook should not have affected foreigners' willingness and ability to consume Hong Kong's goods and services. If anything, it would have affected Hong Kong's C, I and M, not X.

Skill:

- b(ii) is a **continuation** of b(i) and students should use their answers in b(i) to explain the impact on BOT. There are many students who did not refer to their answer in b(i) because they realised that it did not support their explanation, and some students even changed their answers in b(i) to fit their explanation for b(ii). There is a need to dissect this question carefully and recognise that it was deliberate that the data did not support theoretical explanation.
- Many scripts explained how inflation worsens BOT and concluded that Hong Kong's BOT has worsened even though table 1 showed that it has improved. This might have been avoided if students paid closer attention to the command word "account" and the specific time period "between 2018 and 2019", which point towards the use of Table 1 data even though the question did not explicitly state so.
- Students need to be mindful that they are doing a CSQ and so should not make assumptions in their analysis which are not likely to hold given the evidence in the data (e.g. assuming that M was unchanged. The reported change in consumers' outlook of the economy and the inflation experienced during that period would have impacted M).
- Answers that brought in the factor of 'a depreciation in the HK\$' which is not mentioned in the case did not meet the requirements of the question. The

	question clearly instructs the candidate to use evidence <u>from Extract 1</u> and the answer from part b(i).
(c)	Using Extract 2, explain the causes of unemployment in Singapore in 2019. [4]
	<p><u>Structural unemployment [2m]</u></p> <p>“Skills and jobs mismatches” brought by “ageing population and rapid technological disruption” (Extract 2). In today’s day and age, technology is displacing many workers as companies across all the industries are adopting more advanced and efficient methods of production. This means that workers who are retrenched and do not have the relevant information and technology (IT) skills will likely find it difficult to enter most hiring sectors and experience occupational immobility, resulting in structural unemployment. This is a significant problem for Singapore due to its ageing population. Older workers who are very used to previous methods of production might be less willing to learn these IT skills or lack the aptitude to pick them up.</p> <p><u>Frictional unemployment [2m]</u></p> <p>Imperfect information between fresh graduates and the demands of hiring companies leads to frictional unemployment. “Their lack of experience often results in employers glossing over youthful vigour and opt for seasoned hands on deck, resulting in a long and trying job search. Fresh graduates who did not look for internships and venture into the market prior to graduation may also find it difficult to connect with the right employers” (Extract 2). Fresh graduates often have unrealistically high expectations of the conditions for their first job that employers are not willing to offer due to their lack of experience. This mismatch of expectations leads to a relatively long period of unemployment before they eventually land a job that they are willing to accept. Graduates who did not manage to get some job experience or build network with employers may also find it challenging to find the right job for themselves because they do not know what they are looking for.</p> <p>Note: DD-deficient unemployment is not one of the causes of unemployment discussed in Extract 2.</p> <p>Markers’ comments:</p> <p>Content:</p> <ul style="list-style-type: none"> • For structural unemployment, students need to explain firstly that workers lose their jobs due to the need for less labour with automation and increased efficiency, followed by explaining that these workers cannot be reemployed in a sector with demand for labour due to the mismatch of skills. As far as possible, students should also use key terms such as ‘occupational immobility’. • Imperfect information leading to frictional unemployment needs to be explained from the perspective of employers and employees. • The explanation of the reason for frictional unemployment tended to be weak. Answers that attributed it to a ‘mismatch of information’ were off the mark. It should be about the unemployed (e.g. fresh graduates) lacking information about where their desired jobs are available and employers lacking information about the capabilities of fresh grads (possibly wrongly assuming they are less effective

	<p>than their older counterparts). This causes both parties to keep searching and hence unemployment occurs.</p> <ul style="list-style-type: none"> Students should be more mindful of their choice of words. Do not say that workers are 'fired' as a result of changes in the type of skills required by firms (for the case of structural unemployment). To be fired means to be dismissed from one's job due to poor work performance or unethical behaviour. The word 'retrenched' should have been used instead. <p>Skill:</p> <ul style="list-style-type: none"> Students should explain the evidence that they quote from the extracts and not assume that the quote can explain itself. e.g. There needs to be elaboration on how the "technological disruption" would lead to unemployment. Students should note that lifting from the data does not earn any credit.
(d)	<p>Discuss the effects of the US-China trade war on South Korea's economy. [8]</p> <p>Impact on AD and AS</p> <ul style="list-style-type: none"> "When US imposes greater tariffs on Chinese imports, the decline in exports from China to US inevitably leads to a decline in exports from South Korea to China" (Extract 3). Since China is South Korea's major trade partner (26% of total exports), a fall in demand for South Korea's intermediate goods by China will result in a fall in export revenue (X) for South Korea will fall. Since $AD = C + I + G + (X - M)$, a fall in X will lead to a fall in AD. "Corporate investments fell as domestic and international companies adopt a conservative stance." This could be due to poor business sentiments due to the reduced trade amidst the US-China trade tensions. A fall in I will lead to a fall in AD. A fall in I, assuming gross investment rates still higher than depreciation rate, means that capital stock is growing slower, and will allow vertical AS to shift right only marginally. <p>Impact on South Korea's economy (*link to macroeconomic impacts or SOL)</p> <ul style="list-style-type: none"> The fall in AD leads to an unplanned rise in inventories. This leads to firms cutting back on production, and hiring less labour since labour is a derived demand. This leads to an increase in demand deficient unemployment as represented by the gap between Y_{f1} and Y_2. There is also a fall in real national income from Y_1 to Y_2, which means that there is negative actual growth (Quarter-on-quarter GDP fell by 1.4 per cent). Since South Korea is operating near full employment (unemployment rate at 3.5%), the

falling AD can reduce inflationary pressures from P1 to P2. This is because as output falls, firms can now use more efficient combination of FOPs (since it is easier to find suitable resources), thus enjoying a fall in UCOP. The firms can then pass on the increased cost savings by lowering the price of their goods and services.

- The fall in investments will lead to slower potential growth, illustrated by a slower rightward shift of the vertical AS seen from AS₂ to AS₃ compared to AS₁ to AS₂ in the previous time period.
- The fall in X will lead to a worsening of BOT, which is supported by Table 1 where trade surplus was decreasing in 2019.

Evaluation:

- Fall in X is likely to be significant as China is South Korea's major trade partner (26% of total exports) and X as % of GDP is rather high (40% of GDP). This means that the trade war would likely lead to a significant fall in AD and thus real GDP.
- South Korea could have benefited from some trade diversion to U.S., cushioning the fall in X due to lesser exports to China, but this is unlikely to be significant as evident by the decline in exports for eight consecutive months (Extract 3). Also, China is a bigger importer of South Korea's exports than US (26% vs 14%).

Mark Scheme

Level	Descriptors	Marks
L2	Answers that explain the effects using AD-AS analysis, then explicitly linking and explaining the impact on the macroeconomic variables/performance or SOL.	4-6
L1	Answers that only focus on the effects on AD and/or AS, then briefly stating the impact on the macro goal(s) or SOL. If no link to macro goal/SOL, max 2m.	1-3
E	Reaches a conclusion on the overall impact i.e. significance of the trade war on the South Korea economy based on the critical analysis and the given context	1-2

Markers' comments:

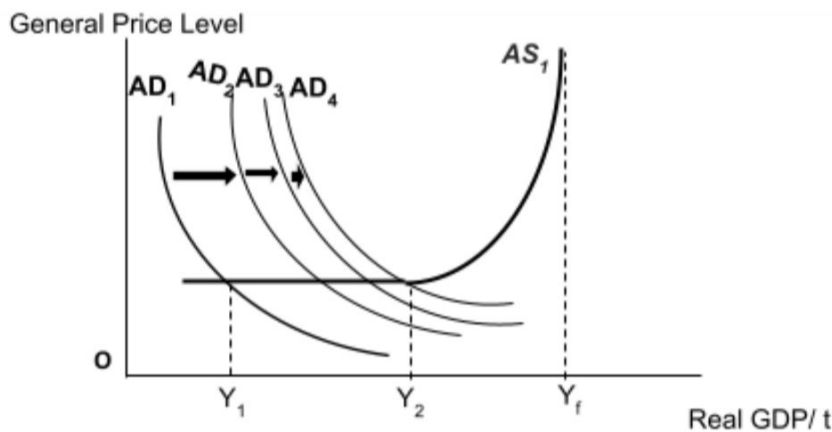
Content:

- Some students wrote at length about the various factors causing AD or AS to shift, without going on to explain the process in which these factors affect the macroeconomic goals. Hence, such responses had not fully addressed the question.
- Many students did not explain clearly why South Korea was affected by US tariffs on China, i.e. the link that South Korea export intermediate goods to manufacture China's exports and hence the decline in China's exports to US due to US tariffs will also result in a fall in demand for Korea's exports.
- When describing a contraction of a country's national output (due to falling AD), the term used should be 'negative actual growth' and not falling actual growth.
- A fall in investment expenditure does not necessarily mean AS will fall; only if gross capital formation < capital depreciation such that the quantity of capital goods decreases will AS fall.

	<ul style="list-style-type: none"> A handful of students started off with the fall in (X-M) in South Korea and went on to how it will lead to deflation, which would then improve its BOT - a circular argument. <p>Skill:</p> <ul style="list-style-type: none"> Students should recognise that the focus of the question is on the 4 macroeconomic goals and SOL, and bring in AD-AS model/diagram to aid in their explanation. Students who did not do so often lacked rigour in their analysis. Students should note that for an 8-mark question in case study, there are evaluation marks awarded. Several students did not make any attempt to bring in evaluative comments, thus losing the evaluation marks. For a question about the impact of the trade war, there was a need to explain how the event led to a fall in X and I instead of asserting that exports and investment fell simply <u>because the extract says so</u>. Some scripts lacked the rigour to explain how X and I fell, causing NY to fall. Potential growth explanation also lacks details. Most skipped the evaluation about how significant the impact is for South Korea. While it is theoretically true that the US-China trade war will lower China's X-M and thus AD and national income, causing them to import less from South Korea, this approach is less "evident" in the extract compared to the fall in export of intermediate goods.
(e)	<p>With reference to Extract 4, evaluate the appropriateness of the response by the South Korea and Hong Kong government to the US-China trade war. [10]</p>
	<p><u>Explain how fiscal policy works</u></p> <p>An expansionary fiscal policy would involve increasing government expenditure (G) eg. South Korea's government spending money on R&D in materials and parts industries (Extract 4) [Note: Students do not need to recognise that this has a supply side effect] and/or reducing direct taxes (T) e.g. Hong Kong's tax relief (Extract 4) to boost C and I, to address the problems of negative real/actual growth (recession) and demand deficient unemployment where aggregate demand falls.</p> <p>Tax relief in Hong Kong means lower income and corporate tax. With lower income taxes, households will have higher disposable income and an increase in purchasing power. Households are more likely to spend on consumer goods/services to satisfy their wants, so C increases. Lower corporate tax (which increases expected after tax profit) will increase the post-tax expected rate of returns on investment for firms. With higher returns on investment, firms are likely to demand more capital goods (e.g. machinery), leading to an increase in investment expenditure.</p> <p>The increase in G for South Korea through R&D in materials and parts industries may also improve the quality of their domestically produced goods, and if the R&D is successful, in the long term, this will increase the demand for South Korea's exports, which will spur X.</p> <p>Since AD constitutes C, I, G and X-M, these fiscal policies would increase AD and lead to a rightward shift of AD from AD₁ to AD₂ for both South Korea and Hong Kong. With AD exceeding AS at the current general price level, there will be an unplanned fall in inventories. This will lead to firms increasing production and hiring more factors of production, such as labour. As a result, households' income will increase and this increase in purchasing power will induce higher consumption of other domestic goods</p>

and services. This leads to further increases in production and more FOPs hired resulting in another cycle of spending. The national income will be higher as output increases further. This multiplier process would lead to an increase in real GDP from Y_1 to Y_2 (diagram below) that is a multiple of the initial injection. As a result, there will be actual growth and a fall in demand deficient unemployment.

With the increase in X , there will be an improvement in the balance of trade and this may help South Korea to reverse the trend of a decreasing trade surplus.



Evaluation:

Appropriateness of Hong Kong's response

Hong Kong's response is largely appropriate.

- Hong Kong is able to finance the expensive expansionary fiscal policy because of its huge amount for reserves. This means that the government does not have to resort to debt financing (Extract 4) which will affect the future SOL of its citizens.
- Hong Kong's fiscal policy is largely aimed at increasing C and I through lower direct taxes. This is appropriate because Hong Kong's C and I accounts for 69% and 19% of its GDP respectively. This means that a rise in C and I will have a significant impact on its AD , boosting its economic growth performance significantly.
- However, tax cuts may not bring about a significant increase in C and I due to continued pessimism of the economy. In addition to the trade war, Hong Kong is also experiencing social unrest due to the new extradition law. Households and firms will likely continue to develop poor consumer and business sentiments and remain unresponsive to the tax cuts. This would limit the government's ability to stimulate AD and boost economic growth performances via C and I , making its response less appropriate.

Appropriateness of South Korea's response

South Korea's response is largely less appropriate.

- South Korea's response on the other hand is less appropriate because they likely have to finance the increase in government expenditure through borrowing and this will result in unintended consequences of government spending **crowding out** private consumption and investment. When government borrow to finance the government spending, there is an increase in the demand for loanable funds, which will lead to an increase in interest rates. Higher interest rates would

increase the cost of borrowing. Households will then save more and borrow less to spend (and hence lower C). Firms will cut back on I as the rate of return on investment is lower than the interest costs with the increase in interest rate. Therefore, the increase in government spending will be offset by lower C and I.

- In addition, South Korea's fiscal policy is largely aimed at increasing G, which only constitutes 17% of South Korea's GDP. As compared to policies aimed at increasing C and I, which takes up 49% and 31% of its GDP respectively, South Korea's response will have a relatively less significant impact on its AD and economic growth performance.
- However, one should note that the increased in government spending will have a direct and immediate impact on stimulating AD. Unlike Hong Kong's tax reliefs, whose impact is highly dependent on consumers' and business sentiments, this policy can provide certain and quick relief to the economy, thus making it appropriate.

Mark Scheme

Level	Descriptors	Marks
L2	Well-elaborated explanation of how expansionary fiscal policy works. Answer draws references to case evidence.	4-7
L1	Some knowledge about how fiscal policy works. Limited reference to case evidence.	1-3
E	Evaluative conclusion on the appropriateness of the policies based on the 2 countries	1-3

Markers' comments:

Content:

- Some students explained the workings of fiscal policy correctly, with detailed explanation of the multiplier effect. However, the assumption made in the answer was that the economies were close to full employment, which is incorrect. For the multiplier effect, the **correct** assumptions made should be that there is spare capacity in the economy and that prices remain unchanged. This also means that in the diagram, the AD curves should intersect the AS curve at the horizontal portion.
- Students explain the multiplier effect as a multiplied increase in the AD instead of a **multiplied increase in the real GDP**.
- Some students incorrectly stated that both South Korea and Hong Kong increased G and reduced T. It should be noted that South Korea did not reduce T as part of their fiscal policy.
- A few students incorrectly concluded that Hong Kong gave transfer payments and that this is an increase in G. Transfer payments will increase C instead.
- Many students use the terms "government spending" (i.e. providing subsidies, paying out transfers) and "government expenditure" (G in the AD) interchangeably such that the writing/analysis becomes erroneous as a result.
- The increase in G was wrongly focused on how potential growth can be attained rather than to focus the explanation on how AD is affected. While there are supply side effects from the fiscal policy, the key impact of fiscal policy is on AD - changing AD to achieve the macroeconomic goals.

- Students inaccurately linked the tax relief to an increase in real income instead of an increase in disposable income when the focus is not about changing the real value of money (this would lead to changes in real income).
- Students must learn to answer the question contextually rather than merely regurgitate their notes. For example, the question is about the appropriateness of the measures as a response to the trade war. Students should focus on how the measures could boost AD (AD had fallen as a result of the trade war), unless they had earlier highlighted that the trade war could have lowered FDI and adversely affected the countries' potential growth. For the latter, a link to how the measures could boost AS would then be relevant.
- Crowding out effect was not well-explained. The size of government debt does not lead to the crowding out effect. It is **the borrowing that leads to the crowding out effect** because it is borrowing by the government which drives up the interest rate which in turn discourages C and I by households and firms. The government debt is the outcome of borrowing.
- There were also some students who thought that the crowding out effect will lead to government debt which then burdens the future generation. This is a conceptual error.
- Many students **mistakenly** interpreted that a large domestic sector is the same as having a large multiplier. When household consumption is a large percentage of GDP, it shows that C is a large percentage of GDP only. It does not mean MPCd is large. Thus, C being a large % of GDP does not imply that the multiplier is large for the country. Multiplier depends on size of MPW which in turn depends on MPM, MPS and MPT. These in turn depend on whether the country has a lack of natural resources, frugal saving habits and high personal income taxes or not respectively.
- Many students also stated that expected rate of returns (EROR) will decrease when interest rates increase. This is inaccurate as EROR does not depend on interest rates and only depend on future expected profits. The correct analysis is to say that EROR (Marginal benefit of investment) is lesser than the interest rate (Marginal cost of investment) and thus I will fall.

Skill:

- Many students dived straight into evaluating the appropriateness of fiscal policies in both countries without first explaining how fiscal policy works. Note that this will only contribute to the 3 evaluation marks. Even though the command word might be "evaluate", students must still **"explain"** the theoretical analysis to score L marks before "evaluating" to score E marks.
- Since the key objective is to boost actual growth, i.e. increase real NY, the multiplier effect is very relevant and should be explained.
- There is also a need to consider the key objective(s) of the policy in this context; this would have helped to focus the explanation on what is relevant i.e. increase in real NY, rather than digress into boosting potential growth in the future.
- Students must be more mindful that they are doing a CSQ and so when explaining the possible limitations, they should use arguments that are supported by evidence from the case rather than generic points like 'weak multiplier' that is unsupported by the data.

[Total: 30]

Paper 2: Essays

Question 1

Singapore should be able to sustain growth of about 2.5 per cent for the next few years, so long as there is no global recession and no major surge in the imposition of trade barriers by USA and countries in Europe. However, ageing demographics and disruptions stemming from new technologies are threats to Singapore's future economic potential.

Adapted from In the Black, 1 August 2019,

<https://www.intheblack.com/articles/2019/08/01/singapore-economy-reinvention>

- a) Explain the importance of sustained economic growth to an economy. [10]
- b) Discuss the possible factors that determine Singapore's economic growth performance over the next few years. [15]

Part (a)

R1: Explain one reason why sustained economic growth is important for the economy (e.g. achievement of other macro goals).

R2: Explain another reason why sustained economic growth is important for the economy (SOL).

Introduction

- Sustained economic growth occurs when a country's real gross domestic product (GDP) rises over the long term.
- GDP is the value of the final output of goods and services produced within the boundaries of the country during a period of time.
- Increases in real GDP means that the country is producing a higher quantity of final output over time and generating increases in real income.
- Sustained economic growth is attained when there is actual growth and potential growth.
- Sustained economic growth is important to an economy because it enables the achievement of the macroeconomic goals of full employment and general level price stability (GPL) and the overarching goal of increase in the standard of living (SOL) of its residents over time.

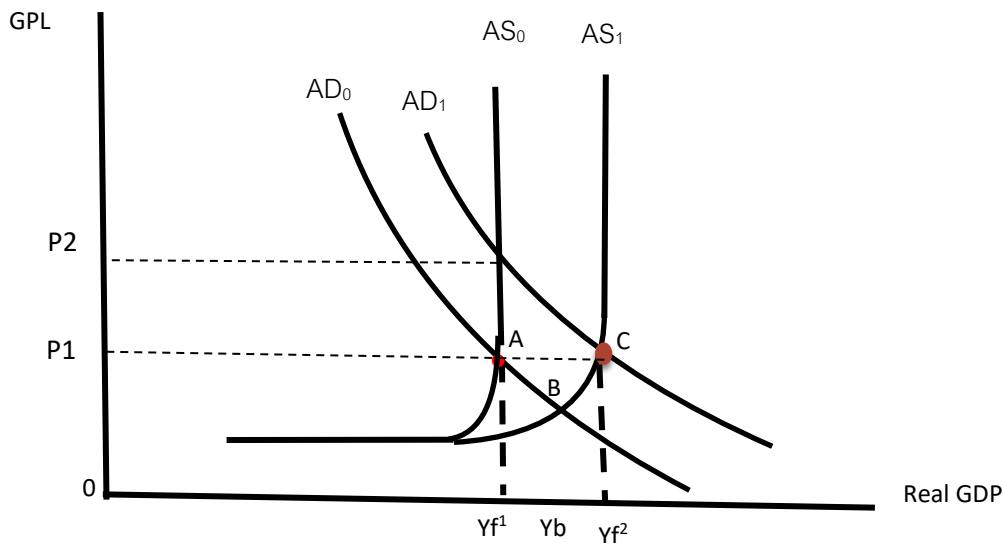
Body

[P] Sustained economic growth is important to an economy because it **aids the attainment of the macroeconomic goal of full employment.**

[E] Based on the AD-AS framework, a country achieves sustained actual economic growth when the aggregate demand (AD) for and the aggregate supply (AS) of its total final output rises over time such that increases in its equilibrium real national output can be sustained over time.

Assume that the national output of a country was initially in equilibrium at Y_{f1} . A country's population typically rises over time which means that its labour force will be rising over time. This leads to expansion in its productive capacity, as depicted by rightward shift of the AS curve to AS_1 . If AD does not keep up with the rise in AS, the country's equilibrium national output (Y_b) will lag behind its new full employment national output which has risen from Y_{f1} to Y_{f2} . This gives rise to **demand deficient** unemployment, a situation where there are not enough jobs for all who are willing and able to work. This results in economic hardship for affected households.

[L] On the other hand, when AD-led actual growth is present, then the country's equilibrium national output can keep pace with the rise in its potential output (point C), thereby leading to the attainment of the goal of full-employment.



[P] Sustained economic growth supported by potential growth is important to an economy because it aids the attainment of the macroeconomic goal of **GPL stability**.

[E] Without potential growth, continued rise in aggregate demand (AD) will lead to demand-pull inflation. With reference to the diagram above, if the economy is already at full employment and producing the highest possible output (Y_f) given its available resources and the latest technology, firms will not be able to increase output with rising AD. The rise in AD will just lead to increases in the GPL from P_1 to P_2 .

[L] On the other hand, PG, which is the sustained rise in the country's potential national output from either increases in the quantity or quality of input such that AS rises to AS_1 whilst AD rises to AD_1 , will enable the GPL to remain constant at P_1 , achieving GPL stability.

[P] Sustained economic growth is important because it is the basis for improvements in **average** material SOL over time.

[E] A country's population typically rises over time. When real economic growth is sustained and high enough to exceed the country's population growth rate, then the country's real income per head will rise over time.

[E] For example, Singapore's ability to achieve sustained economic growth over the last 55 years enabled its residents to attain GDP per capita level that is comparable or even higher than various older nations around the world.

With rising real GDP per capita over time, the purchasing power of the average resident in the country rises, enabling him to consume more goods and services to satisfy his material wants and needs, leading to improvements in his material SOL.

[L] Countries which value increases in material SOL will thus find sustained economic growth important.

[P] Sustained economic growth is important because it enables improvement in the material SOL of **all residents**.

[EE] Without economic growth, a redistribution of income to improve the SOL of one group (poor) will make another (rich) worse off. With economic growth, the government can redistribute income from the rich to the poor without the rich losing in absolute terms. This is because with economic growth, the same direct tax rates will yield higher direct tax revenue for the government. Rising income also induces increased consumption thus leading to more revenue from sales tax for the government. When the government is able to collect more tax revenue, it will be more able to spend on programs to alleviate poverty (e.g. welfare aid), increase spending on public goods (e.g. flood control) which benefits everyone due to their non-rival and non-excludable characteristics and also

on merit goods like education which increases social mobility, thereby giving the poor the opportunity to improve their SOL.

[L] Thus, with sustained economic growth, the government's ability to engage in income redistribution and provision of public and merit goods to boost the material SOL of the poor is increased and thus desired by the government (and society).

[P] Sustain economic growth could also improve both the material and **non-material** SOL over time.

[EE] Due to the disregard for the external costs created by pollution from production activities, economic growth is typically accompanied by rising pollution and a deterioration in the non-material SOL of the residents of a country. But as economic growth continues, and the government collects more and more tax revenue, it eventually reaches a stage where the government (e.g. China and India) could afford to allocate part of its budget for addressing pollution and destruction of the natural environment, i.e. embark on a path of sustainable growth.

[L] In this way, the non-material SOL rises concurrently over time.

Mark Scheme

L3	Well-developed <u>analytical explanation</u> of the reasons that account for the importance of sustained economic growth (strong in both theory and examples). Sufficient breadth and depth (at least 2 arguments with one on macroeconomic goals and another on SOL to reach L3).	8-10
L2	Underdeveloped analytical explanation or largely descriptive explanation (stronger with examples than theory) of the reasons that account for the importance of sustained economic growth.	5-7
L1	<ul style="list-style-type: none"> Shows knowledge of concepts relevant to the analysis (e.g. knows the meaning of sustained EG, GDP, AG and PG) Identifies relevant reasons that account for the importance of sustained economic growth. 	1-4

Markers' comments:

Content:

- Many students tried to link their answers to the 4 macroeconomic goals. While some of these were appropriate for this question (e.g. employment and price stability), writing that sustained growth will lead to more economic growth will bring them back to their starting point of sustained growth!
- The argument that "sustained economic growth is desired because it will boost business outlook and so boost investment" is weak because, at the end of the day, society desires a high level of investment because this boosts economic growth! The argument is thus circular (refer to the first comment above) and does not help in addressing the question which is about why economic growth is sought after.
- There was a lack of clarity about the link between AD and growth. Some candidates gave the argument that growth is important because it will boost AD. Besides this being a circular argument (like the above one), candidates should be mindful that when the AD-AS model is used, we start from a point of equilibrium national output. So, when the income level is in a state of rest, the reason for a rise in AD (shift) cannot be attributed to economic growth (rising national income).
- Some students ended up only explaining the importance of potential growth (by linking to price stability). Sustained growth includes both actual and potential growth. So the answer should discuss the benefits of potential and actual growth.
- Weak scripts focused on how sustained growth is achieved by explaining how AD and AS increase simultaneously **instead of** explaining the positive **consequences** of growth. These scripts ended up scoring L1 as they were not addressing the question.

Skill:

- This question is asking for the positive consequences of sustained growth, but some students brought in negative consequences without realising that there is no need for an alternative view in a part (a) question as no evaluation was needed. This may also be due to the inaccurate interpretation of the word “importance” which points towards positive consequences on the macroeconomic goals and SOL only. To illustrate this, let’s think of how one would answer the question “Why is studying important?” The relevant response would be to highlight the pros of studying only and leave out the cons. The same line of reasoning applies to this question. Students who brought in negative consequences of sustained growth would have answered a different question - “Explain the importance of governments to avoid sustained growth” rather than the original question. Moving forward, students must pay closer attention to key words in the questions during their question dissection and planning phase.
- Students must learn to strike balance between breadth and depth of analysis. There is a limit to how many marks the examiner can award for one point (e.g. increase in SOL) in spite of the numerous examples provided. On the other hand, by only focusing on how economic growth could help attain other macroeconomic goals, there would be serious gap in the answer since the overarching reason for wanting growth is that it is the basis for improvements in SOL.

Part (b)

R1: Explain one factor that determines SG's economic growth performance over the next few years (AD factor).

R2: Explain another factor that determines SG's economic growth performance over the next few years (AS factor).

Introduction

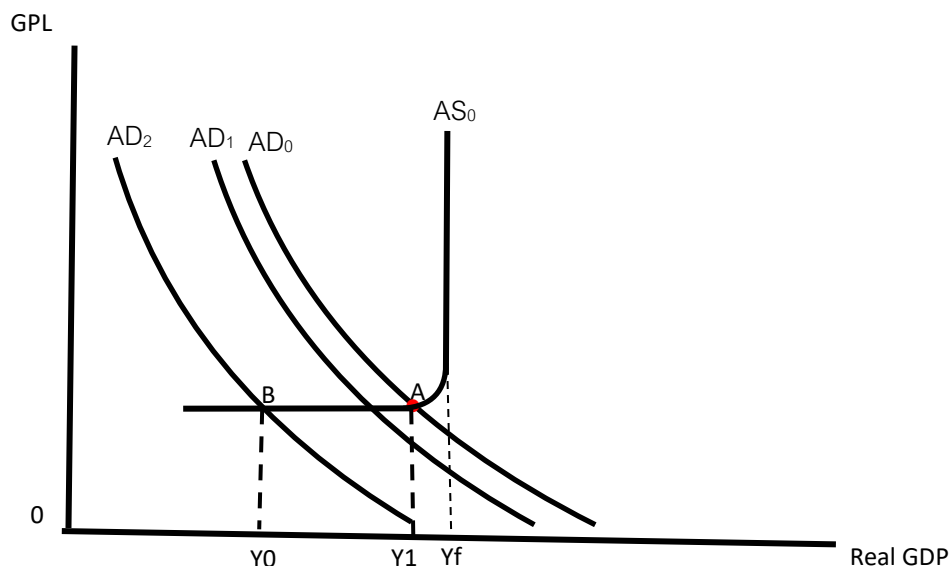
- A country's actual growth rate is determined by factors that affect the level of aggregate demand (AD) for and aggregate supply (AS) of the country's total final output.
- In judging the relative importance of the factors that determines SG's EG performance, the **nature of the economy** will be taken into consideration. SG is a small and very open economy with a fast ageing population.

Body**AD factors**

[P] A key AD factor that affects SG's EG is the **growth rate of SG's export partners**.

[EE] Export spending by foreigners is a component of AD. When there is a world recession like the current COVID19 pandemic where most countries are facing contraction of their GDP, the residents of SG's trade partners will be induced to spend less on imports by the extent of their marginal propensity to import (MPM). This translates to a fall in SG's export demand and hence a fall in AD for the exporting country.

Starting from equilibrium point A, when AD falls from AD_0 to AD_1 as a result of a fall in exports, the unplanned rise in inventories will cause exporting firms to decrease their output and reduce their demand for FOPs. The resultant fall in national income will in turn induce households to cut back on the consumption of domestically produced goods/services, besides lowering their savings, tax spending and import spending. AD falls once more. This leads to another round of build-up of inventories leading to another round of output and employment reduction. SG's real national output falls via the multiplier process until a new equilibrium is reached at Y_0 , when the total injections into the circular flow equals the total withdrawals.



[L] With the fall in the national output, SG is experiencing negative economic growth.

[Evaluation] With exports being more than 100 per cent of SG's GDP, factors that lead to changes in the level of exports significantly affects SG's EG performance. Sustained AG of the SG economy is very much conditioned on a healthy world economy.

[P] Another AD factor that affects SG's EG is the **domestic interest rate**.

[EE] A fall in interest rate decreases the opportunity cost of consumption. Thus, HHs will increase consumption and reduce saving. A fall in the interest rate also reduces the cost of loans and boosts consumption because HHs can now better afford loans to finance their big-ticket purchases.

A fall in interest rate will also lead to a rise in planned investment because when the interest rate falls below the expected rate of return of an investment, profit-motivated firms will be incentivised to increase the level of investment due to the increase in profitability of the investment.

[L] With both C and I affected by a change in interest rate, interest rate could be a key factor that determines a country's actual growth rate via affecting AD.

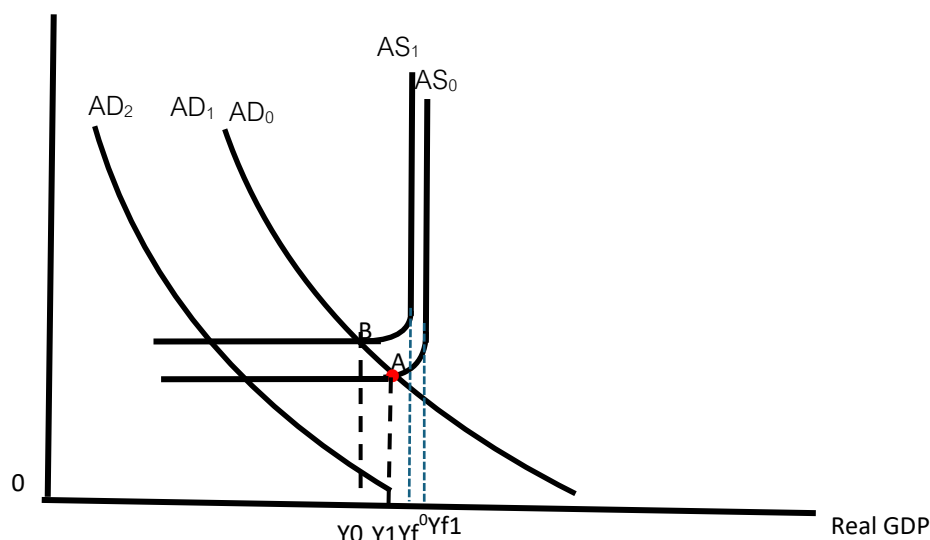
[Evaluation] While interest rate affects both C and I, it may not be a very significant factor that changes SG's AD because

1. A large % of C by HHs is actually on imported goods – e.g. cars, consumer electronics. Thus, a fall in interest rate will not boost AD by much, given the small share of consumption of *domestically* produced goods/service (Cd) in SG's AD.
2. FDI forms a large share of overall investment in SG and the interest rate is not as important a factor in MNCs' decision to invest in SG, as compared to other factors like unit cost of production.

AS factors

[P] One key AS factor that affects SG's ability to sustain its economic growth is the **age distribution of its population**.

[EE] SG has a rapidly ageing population and will soon experience a contraction in its labour force. This occurs when the number of people joining the labour force is less than the numbers who retire. Ceteris paribus, a shrinking labour force will lead to upward pressure on wage rates. If wage rates rise faster than labour productivity, then unit cost of production rises which leads to a fall in AS with AS curve shifting up. Moreover, a shrinking of the labour force leads to contraction of the country's productive capacity (represented by leftward shift of the vertical AS). Potential GDP falls from Y_{f1} to Y_{f0} .



[L] Starting from point A, the rise in unit COP will lead to contraction in SG's real national output (from Y_1 to Y_0). It also squeezes firms' profit margins and discourages them from investing. The fall in investment will lower AD and further worsen SG's actual growth performance. The fall in investment will also lower SG's PG rate because it will lead to a slower rate of expansion in the country's capital stock (assuming the lowered investment level is still higher than the level of capital depreciation).

The contraction in potential output as a result of the shrinking of the labour force will also put a brake on AD driven actual growth. With rising AD but falling AS, demand-pull inflation instead of economic growth will be setting in.

[Evaluation] It could be argued that this is not a serious limit to SG's EG performance because SG could increase its reliance of foreign labour. However, SG society's objections to an increase in the inflow of foreign labour would mean that SG's ageing population is a significant obstacle to SG's continued EG.

[P] Another AS factor that affects SG's EG performance is the rate of adoption of improved technology.

[EE]

For example, developments in ICT had led to increases in labour productivity for various office jobs, enabling the office worker to complete more tasks like data analysis in the same time period. This leads **to increases in SG's productive capacity** which will help SG sustain its EG over time. This will help overcome the obstacle to EG posed by a SG's ageing labour force. The faster firms in SG can adopt improved technology, the stronger will be SG's growth rate.

On the other hand, technological advancement **could also disrupt SG's economic growth trajectory**. For example, increased automation and the rise of artificial intelligence has created redundancies in blue collar and white collar jobs. Prolonged unemployment gives rise to discouraged workers who drop out of the labour force. This will lower SG's EG performance by constraining SG's potential growth.

[L] Technological advancement is thus an important factor that affects SG's EG performance.

Conclusion

[Stand] The health of the world economy would be the more impactful factor that affects SG's EG over the next few years.

[Substantiation]

Both AD and AS factors are important in determining SG's EG performance but the AS factors are not the likely factors that would slow down SG's economic growth in the next few years.

SG has a highly educated labour force which will aid the retraining of workers in the face of technological disruptions. A highly educated labour force also aids the adoption of more advanced technology that can boost SG's labour productivity and thus reduce cost-push pressures (created by an ageing labour force) that tends to lower investment and slow EG.

The AD factor of the health of the world economy will significantly affect SG's EG over the next few years because, besides affecting the level of export demand which is a big component of SG's AD, it affects the expected rate of return of investment of the MNCs in SG who are export-oriented and this in turn affects both AD and AS of SG. If the current COVID19 pandemic persists over the next few years and international trade and capital flows continue to be disrupted, then expected ROR of investment will be uncertain and MNCs in SG will hold back their investment. This will lower SG's actual and potential growth performance.

Alternative conclusion:

[Stand] Both AD factors and AS factors are equally important in determining SG's EG performance over the next few years. Among the AD factors, the external factor like the EG of SG's trade partners would be the more important factor than internal factors like the domestic interest rate. Among the AS factors, the rate of adoption of improved technology would be the more important factor.

[Substantiation]

- Without expansion in AD, actual growth will not occur and for continued actual growth, there needs to be expansion in AS.

- The greater importance of external factors like the growth rate of SG's trade partners is due to the high degree of openness of the SG economy as explained earlier.
- The rate of adoption of improved technology is the more important AS factor because SG's economy is fast ageing - the number of citizens in the working ages of 20 to 64 years should have declined from 2020 based on the SG government's projections. In the current pandemic which is expected to last over the next few years, the scope for relying on foreign workers is also reduced due to travel restrictions. SG thus needs to depend more on boosting labour productivity via adopting improved technology, than expanding the quantity of labour supply for AG and PG. The discovery of new technology takes time and may not happen over the next few years. But there is scope for adopting currently available improved technology over the next few years.

Mark Scheme

L3	Well-developed and accurate analytical explanation of factors that affect SG's economic growth. Sufficient breadth (i.e. both AD and AS) and depth (there is tool of analysis in explaining the factors and economic concepts are applied)	8-10
L2	Underdeveloped analytical explanation or largely descriptive explanation (more examples than theory) of the factors that affect SG's EG. Or Well-developed analytical explanation but of a narrow range of factors, e.g. only AD factors or only AS factors. Some factors might not be relevant to the SG context.	5-7
L1	Shows knowledge of factors that affect EG	1-4
E3	Judgments of the relative significance of the factors by considering the nature of the SG economy and current conditions. The judgment need not be about whether AD or AS factors are more important. It could be about which AD factor among other AD factors are more important and which AS factor among other AS factors are more important.	5
E2	Judgments of the significance of factors considered by considering the nature of the SG economy (Mainly in-body evaluative comments. No comparing)	3-4
E1	Unsubstantiated judgments	1-2

Markers' comments:

Content:

- This section was better done with most students bringing in both AD and AS factors. However, students need to note that AD factors are not the same as AD components. AD factors are the factors that affect the AD components - e.g. the level of SG's exports (component of AD) is affected by factors like the foreigners' income level.
- While this question is about growth factors, a complete explanation of a factor would explain how the factor affects the growth rate - for example, many students brought in the idea that trade barriers may be imposed on Singapore's exports but there was no explanation on how growth can be affected.
- Whenever the multiplier process (upward or downward) is brought into the analysis, students must remember to shift the AD over the horizontal segment of the AS curve. This is because in the theory of the multiplier, the GPL is constant.

Conceptual mistakes

- Many students incorrectly linked the presence of unemployment to a fall in C and hence a fall in AD. While unemployment will lead to a fall in income which leads to a fall in C, this is a change in induced C. Starting from a point of national income *equilibrium*, it is wrong to

attribute the 1st shift of the AD to a change in income because the national income is in a state of rest. Candidates should be giving factors causing autonomous shifts instead.

- To correct the above mistake, the students could have linked the rising structural unemployment to households having *expectations* of falling income due to their fear of retrenchments (which leads them to save more and so lower C). This would have led to an autonomous fall in C and hence a leftward shift of the AD.
- Some students also **incorrectly** wrote that unemployment leads to a decline in productive capacity or rise in productive inefficiency and therefore causes negative economic growth. This is not a correct explanation as unemployment is not a cause of negative EG. It is just that rising unemployment accompanies negative economic growth. Furthermore, higher unemployment just means more FOPs are not being utilised in the economy – there is no change in quantity or quality of FOP in the economy and hence productive capacity remains unchanged.
- Some students also went on to say that trade barriers will result in Singapore being unable to purchase much needed raw materials from other countries. However, trade barriers imply that other countries are not willing to trade with us. Singapore is an open economy so it won't impose trade barriers on other countries' imports.

Skill:

- Many students also brought in employment performance in this question, citing “ageing demographics and disruptions stemming from new technologies” from the preamble, when the question clearly only asks for economic growth performance. This suggests two issues. Firstly, there is a lack of question dissection. These students may have been so familiar with essay questions asking for impacts on all macroeconomic goals that they automatically assume it without paying close attention to the key words of the question. This can be potentially fatal when “non-standard” questions are tested in an examination. Secondly, there is a lack of understanding of when the preamble is binding. Even though there is nothing in the question that binds students to use the preamble, they still did, which can only suggest a lack of awareness of when to use the preamble. Moving forward, students must learn to take a bit more time and effort to dissect the questions more carefully to avoid bringing in irrelevant analysis.
- Students should also bear in mind that when the question asks for ‘possible reasons’, they are not bound by the factors stated in the preamble. There were many students who struggled to use the factors in the preamble correctly, when in fact they had the choice to bring in other factors which they could have been more confident in explaining.
- Students were able to identify the AD and AS factors but were not explicit enough in their explanation of the factors. Students have to provide **analytical explanations** (in which factors are linked to the AD-As model) rather than just mention factors such as dependent on exports, quality of FOP etc.
- Lack of evaluation for each factor; students should hinge on the Singapore context closer and also consider the time period of the question - medium term rather than long term. I would highly recommend students to revisit the CSQ and EQ found in the Growth Worksheet (Book 7) which considers the factors that impact SG's growth performance.

Question 2

- a) **Explain why the use of inflation data alone is not sufficient to measure the performance of an economy. [10]**
- b) **Discuss whether changes in general price level caused by demand side reasons are more damaging to an economy than those caused by supply side reasons. [15]**

Part (a)Approach

Answers should note that the performance of an economy is measured by the achievement of the macroeconomic goals. Answers need to make a conscious effort to interpret inflation indicator and make reference to potential links to other measures of performance such as real GDP growth rate, unemployment rate and balance of trade (BOT).

R1: Explain one reason why inflation data alone is not sufficient to measure the performance of an economy (one macro goal).

R2: Explain another reason why inflation data alone is not sufficient to measure the performance of an economy (another macro goal).

Introduction

An economy's macroeconomic performance is usually judged based on whether the country is able to achieve the following four macroeconomic goals of sustained economic growth, full employment, price stability, and a favourable BOT position. In turn, achievement of these macroeconomic goals would lead to improvement in residents' standard of living.

Inflation data is useful to measure the rate of change of the general price level (GPL) and hence whether there is price stability in an economy. However, it is insufficient for assessing the economic growth, employment or the BOT performance of an economy.

Body

[P] Inflation data alone is not sufficient to assess the economic growth of an economy.

[E, E] An indicator to measure inflation is a country's inflation rate. Changes in GPL can be used to calculate the inflation rate of a country using the formula

$$\text{Inflation Rate} = \frac{\text{Price Index}_t - \text{Price Index}_{t-1}}{\text{Price Index}_{t-1}} \times 100$$

where t and $t-1$ are 2 time periods. A commonly used price index to measure a country's inflation rate is the consumer price index which measures the changes in the price of a fixed basket of goods and services commonly purchased by the average household over time, with respect to a selected base year. With the quantity and quality of the basket held constant, the index reflects solely price changes. A low and positive inflation growth rate, for example less than 3%, indicates that there is price stability in the economy, hence achieving one of the four macroeconomic goals.

However, inflation data does not measure the economic growth of an economy directly. Instead real gross domestic product (GDP) growth rate, which measures how rapidly the country's actual national output is rising or shrinking over time, is used to measure the output performance of an economy.

Inflation will affect nominal GDP as changes in nominal GDP values reflect changes in both the quantity of output and prices. But real GDP values that have been adjusted for inflation provide a

better measure of the performance of an economy as any increase in real GDP must mean a rise in quantity of output. A positive growth rate indicates that the output level in an economy has increased, and thus actual economic growth has been achieved. A higher growth rate would then imply that actual output has increased at a greater rate. A country which has a high real GDP growth rate can be deemed to be performing well as it leads to higher incomes earned which allows for increased consumption in the economy, leading to higher material standard of living. Hence to assess the output performance of an economy, GDP data is used as inflation data alone is not sufficient.

[L] Thus, to assess the economic growth of an economy, inflation data alone is not sufficient as GDP growth rate indicator is needed.

[P] Inflation data alone is not sufficient to assess the employment level of an economy.

[E, E] Unemployment is the condition of the economy in which some factors of production are not being used in the production of goods and services. It is measured by

$$\text{Unemployment rate} = \frac{\text{No. of unemployed}}{\text{Labour force}} \times 100\%$$

where the unemployed are defined as people of working age who are without work, but are willing and able to work. An economy is assessed to perform well if its unemployment rate is low. However, it is difficult to infer an economy's employment level from its inflation data. If the inflation rate is rising, this could be due to demand side or supply side reasons. If the cause of the inflation is due to demand side reasons, for example a rise in any components of AD like C, I, G or X, it can be inferred that the economy is operating near / at full employment since demand for labour and other resources is derived from the demand for goods and services. However, if the cause is due to supply side reasons, for example a fall in AS due to rise in unit cost of production, then the output falls and unemployment rises. Hence the same inflation data can reflect either a rise or fall in employment level depending on the cause of the inflation.

[L] Thus the use of unemployment rate figure will provide a better idea of the employment level of an economy as it cannot be inferred from the inflation data alone.

[P] Inflation data alone is not sufficient to assess the balance of trade position of an economy.

[E, E] BOP data records the transactions between a country and the rest of the world. It comprises mainly of the current and capital accounts. Of these 2 accounts, the balance of trade (BOT) which is part of the current account is usually the most significant component. Inflation data may be able to explain whether BOT is improving or worsening. For e.g., if inflation rate is negative, suggesting a fall in GPL, BOT is likely to improve. This is because, assuming GPL remains constant in other countries, a fall in GPL would mean that the country's exports are relatively cheaper compared to others while its imports are relatively more expensive than domestically produced goods and services. This leads to an improvement in BOT as export revenue rises (assuming demand for the country's exports is price elastic) and domestic households switch away from imported goods to domestically produced goods, causing a fall in import expenditure. Hence, in this instance, inflation data may help to assess whether the economy's BOT is improving or not (ie the change in BOT position). An improving BOT would indicate higher foreign earnings, would may enable more consumption of goods and services.

However, inflation data alone is unable to assess whether the economy has a BOT deficit or surplus (ie the BOT position). For example, an economy's BOT deficit can result from poor quality of its exports or the expansionary policies carried out by the government to raise national income. Assuming that the country's BOT = 0 initially, this will result in a BOT deficit as consumers buy more imports due to the expansionary policies or exports fall due to its poor quality.

[L] Hence overall while inflation data can provide an indication of the change in BOT position, the data alone is insufficient to assess the BOT position of the economy.

Mark Scheme

Level	Descriptors	Marks
L3	For a well-developed answer that thoroughly analyses why inflation data alone is not sufficient to measure at least 2 aspects (internal <u>and</u> external) of the performance of an economy.	8-10
L2	For an underdeveloped answer that looks at why inflation data alone is not sufficient to measure performance of an economy. OR For a well-developed answer that looks at why inflation data alone is not sufficient to measure either the internal or external performance of an economy.	5-7
L1	For an answer that lists the reasons of why inflation data alone is not sufficient to measure the performance of an economy. Answer may contain conceptual errors.	1-4

Markers' comments:**Content:**

Answers that focused on whether the presence of inflation / deflation could adequately indicate overall good economic performance were relevant but did not fully address the question because the question was about 'inflation data' and so there is a need to first show understanding of the data - i.e. inflation rate.

Some mistakes -

- Macroeconomic performance of an economy generally refers to the 4 macroeconomic goals (economic growth, inflation, unemployment, BOT), excluding standard of living.
- Students should note that the labour force participation rate determines economic performance (potential growth) but is not a measure of economic performance.

Skill:

There is a need for careful question dissection:

- The question is about limitations of using inflation data alone to measure other macroeconomic performances; not standard of living. Hence points like Gini coefficient and population growth will be irrelevant.
- Most describe the indicators alone without much attempts to address the question by weaving in the limitations of using inflation data to assess economic performance. For example, unemployment and BOT position data were identified but there were some difficulties observed when it comes to explaining the implication of low unemployment or BOT deficit/ surplus.
- The handful of students who managed to explain the limitation of using inflation data to measure the other macroeconomic performances often lacked breadth of analysis. For example, there are students who managed to highlight that a positive inflation rate could imply either economic growth or a recession because it depends on whether it is demand-pull (caused by a rise in AD, which means the inflation is accompanied by a rise in real GDP) or cost-push (caused by a fall in AS, which means the inflation is accompanied by a fall in real GDP). Yet they end their essays there when there is potential for them to extend their analysis just a little bit more to another limitation of using inflation data to measure employment (demand-deficient) performance. Technically, such essays only cover the limitation of using inflation data to measure 1 other aspect of macroeconomic performance. This means that no matter how rigorous their analysis may be, their script will still be capped at L2. Moving forward, students must learn to balance rigour and breadth of analysis to maximise the number of marks they can score in the exam.

- b) Discuss whether changes in general price level caused by demand side reasons are more damaging to an economy than those caused by supply side reasons. [15]**

Approach

An analysis on the impacts due to the different causes of inflation / deflation on the macroeconomic goals of an economy have to be examined. The extent of damage on the economy depends on the cause and extent of the changes in GPL.

R1: Explain how changes in GPL caused by DD-side reasons are damaging to an economy.

R2: Explain how changes in GPL caused by SS-side reasons are damaging to an economy.

Introduction

Changes in general price level can either be positive or negative. A negative change refers to deflation, which is a sustained decrease in the general price level. This could be caused by either an increase in aggregate supply or a decrease in aggregate demand. On the other hand, a positive change refers to inflation, which is a sustained increase in the general price level. This could be caused by either a decrease in aggregate supply or an increase in aggregate demand. To decide whether impacts from demand side reasons are more damaging to an economy than those caused by supply side reasons, there is a need to consider the causes and extent of the deflation / inflation.

Body

Changes in general price level caused by demand side reasons are damaging to an economy

Thesis:

[P] Demand-side deflation has a negative impact on economic growth and unemployment

[E, E] A demand-side deflation (caused by AD falling from AD_0 to AD_1) is usually a sign of poor economic performance. Profit margins tend to fall because prices of goods and services are likely to be falling faster than the firms' costs of production. If firms expect this to be prolonged, business outlook will be pessimistic and firms will expect a lower expected rate of return. The marginal benefit of each additional unit of investment falls and if it is less than the marginal cost of investment, investment spending is discouraged. The fall in investments will lower AD (AD_1 to AD_2) and this may trigger the downward multiplier process and cause real GDP to fall. When AD falls, firms face an unplanned rise in inventory levels and therefore would cut production. They will retrench workers and income of these workers would decrease, triggering another round of cut in spending. This causes national income to fall by a multiplied amount from Y_1 to Y_2 (Fig 1) and thus results in negative actual growth. In addition, the fall in I will also cause AS to increase more slowly from AS_0 to AS_1 instead of to AS_2 (Fig 1) as the rate of capital accumulation falls. This will lower potential growth, assuming the gross investments exceed capital depreciation. Therefore the full employment level of national income would increase more slowly from Y_f to Y_f instead of to Y_f .

As firms face unplanned rise in inventories from the fall in AD, they decrease output by retrenching workers since labour is derived from demand for the product. As demand for labour falls, there is downward pressure on wages and the new equilibrium wage lies below the initial wage. However, as wages are downwards inflexible, the labour market is unable to reach this new equilibrium and there is a surplus of workers at the initial wage. This results in a rise in demand deficient unemployment.

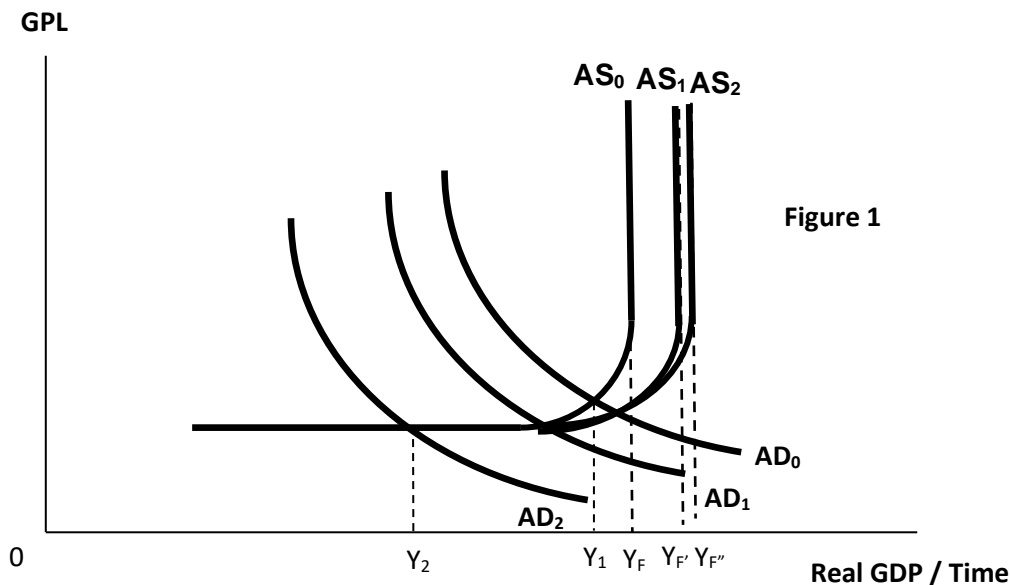


Figure 1

[L] Demand-side deflation is thus damaging to an economy as both economic growth and unemployment are adversely affected.

[Ev]

[P] Demand-side inflation has a positive impact on economic growth and employment

[E&E] A low and stable inflation that is demand-pull in nature encourages investment as it signals healthy demand in an economy and higher profitability for firms. This is because prices of goods and services tend to rise faster than unit costs leading to higher profit margins in the short run. The rise in C and I and hence AD leads to a rise in national output, which implies actual economic growth. The rise in investments also promotes potential growth as more capital stock is available in the economy, thus increasing productive capacity (i.e. AS rises shown by vertical AS shifting to the right). This is desirable for a country as it keeps the inflation rate low and hence provides the basis for sustained economic growth. In addition, there is rise in employment as there is actual growth.

[Ev] While a low and stable demand-pull inflation is desirable, however, if this is not managed properly and the inflation escalates, this will not be desirable for the economy even if it is demand-pull in nature. If the inflation is high and rising, investment will be discouraged instead. High levels of inflation increases the uncertainty of investment decisions, making it difficult for firms to predict their costs and revenues since inflation distorts price signals i.e. expected rate of returns are volatile. Thus, investment will be discouraged. This will lead to a fall in AD and a slower increase in AS. Also, if the economy is already operating at full employment level, there will be a persistent rise in the GPL but no increase in real output at all.

Changes in general price level caused by supply side reasons are damaging to an economy

Thesis:

[P] Supply-side inflation has a negative impact on economic growth and employment

[E, E] When inflation is predominantly cost-push, firms may hold back investment as profitability is likely to be lowered. The reduction in investment will lead to decreases in AD and slower increases in AS over time, thus adversely affecting the country's actual and potential growth performance. In addition, if the cost-push inflation pressure keeps persisting and the causes of the cost-push inflation are local in origin (e.g. shrinking labour force that is not compensated by adequate increases in factor productivity), domestic firms and foreign firms which have direct investment in the country may relocate their production processes to other countries. Such divestment will lead to a reduction in potential national output (negative potential growth).

[Ev]

[P] Supply-side deflation has a positive impact on material standard of living

[E, E] Deflation is a sustained fall in GPL. Assuming nominal income remains constant, this will result in a rise in real income and hence a rise in households' purchasing power to buy goods and services. In the case of supply-side deflation, this assumption is likely to hold. For example, if the deflation is caused by process innovation, it can cause the unit cost of production to decrease if the method of production is made more efficient through technological advancements. AS increases, reflected by horizontal portion of AS shifting down from AS_0 to AS_1 . With excess AS, firms will cut prices to stimulate spending and so reduce the excess supply. The GPL falls from P_0 to P_1 whilst real national income rises (Y_0 to Y_1) via the international substitution effect and real balances effect. This would further increase the material standard of living of consumers as in addition to the rise in purchasing power from a fall in price level, purchasing power further increases from a rise in nominal income. As households buy and consume more goods and services, fulfilling their material needs, material standard of living will increase.

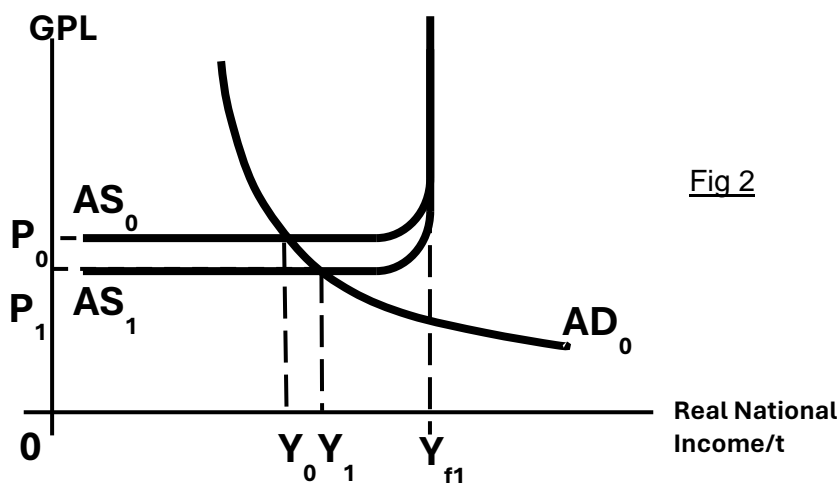


Fig 2

[L] Supply-side deflation is thus desirable since it helps to improve material standard of living.

Conclusion:

[Stand] Whether price changes caused by demand side or supply side is more damaging to an economy depends on whether it is a case of inflation or deflation, as well as the degree of price changes and how prolonged it is.

[Substantiation]

If price change caused by supply side is deflation, for example, due to extended period of technological progress, the effect on the macroeconomy is likely to be desirable. It can be argued that supply side deflation could lead to increases in real interest rate which discourages consumption and investment and if deflation is prolonged, expectations of further fall in prices may lead households to defer consumption plans (which will cause AD and thus real NY to fall). However, since the national output / income is also rising in periods of supply-led deflation, consumer and business sentiments are likely to be buoyant thus supporting actual and potential growth.

Similarly, if price change caused by demand side is inflation, it is likely to have positive effects on the macroeconomy. However, this hinges on the assumption that the inflation is mild. If it is severe, although real i/r is falling rapidly, investment is discouraged due to the uncertainty of investment decisions. This will lead to adverse effect on growth and hence damaging effects on an economy.

Thus, while deflation caused by demand-side could be more damaging than if caused by supply side and inflation caused by supply-side is more damaging than if caused by demand side, the extent of damage also depends on the degree and duration of the changes in general price level.

Mark Scheme

Level	Descriptors	Marks
L3	For a well-developed answer that analyses the impacts caused by changes in general price level due to both demand side and supply side reasons.	8-10
L2	For an under-developed answer that looks at the impacts caused by changes in general price level due to demand side and supply side reasons. OR For a well-developed 1-sided answer that looks at the impacts caused by changes in general price level due to either demand side or supply side reasons. Answer may be descriptive.	5-7
L1	For an answer that lists the impacts due to changes in GPL. Answer contains conceptual errors.	1-4
E3	In-body evaluative comments are made and are backed by economic analysis. Arguments are synthesized and presented in a well-reasoned manner.	5
E2	Some evaluative comments/attempts at making judgements that is somewhat explained using economic analysis.	3-4
E1	An evaluative statement/Evaluative statements that are not justified by economic analysis.	1-2

Markers' comments:**Content:**

- One mistake was the focus on how changes in AD / AS impacts the equilibrium national output instead of how the **changes in GPL** (that was due to changes in AD / AS) affects the equilibrium national output.
- The argument that supply-side inflation was more damaging because the government cannot control global input prices is not acceptable. You should recall that the central bank could use exchange rate policy to manage imported inflation.

Skill:

- Many students misinterpreted the question. Many scripts focused on causes of inflation / deflation and evaluated which causes are more significant rather than looking at the **consequences** of inflation / deflation. This could be due to students making the association that consequences of inflation/deflation are the same as consequences of a change in AD/AS, thus giving answers that were irrelevant and inaccurate. This association can be seen as a gap in logic and here is an analogy to illustrate this. If A leads to B and C, it is illogical to argue that C is a consequence of B because B is a consequence of A. Now substitute A as "a rise in AD", B as "demand-pull inflation" and C as "economic growth". Many students inaccurately argue that a consequence of demand-pull inflation (B) is economic growth (C) because when AD rises (A), there is economic growth (C). This line of reasoning is not only inaccurate, it is also irrelevant because the question is asking for the consequences of demand-pull inflation for example, better economic outlook (D). Students should be explaining how B leads to D instead of how A leads to C. Moving forward, students must really spend more time dissecting the question and planning their answer very carefully.
- While it makes sense to show some understanding of what is meant by demand-side and supply side causes of GPL changes, students must not lose focus of the question which is about the effects of GPL changes. Spending two thirds of the answer on the causes of GPL changes is a pure waste of time, earning the student at best some L1 marks only.
- Sometimes, there can be more than 1 way inflation / deflation can lead to certain impacts e.g. how DD-pull inflation can encourage investments either by sending signals of strong demand in the economy or by reducing real interest rates. There is no need to explain both reasons for the same impact; there would be better scope in the essay if different impacts were brought in instead.

Question 3

- a) Explain the causes of a rising balance of trade surplus in an economy. [10]
- b) Assess the impact of a persistent and rising balance of trade surplus on living standards in Singapore. [15]

a) Explain the causes of a rising balance of trade surplus in an economy. [10]

Approach:

There is a wide variety of possible answers depending on which economy students have chosen to consider. While only 3 well explained factors are needed to score, students need to focus on the rigour of their explanations as well as provide apt examples to score well.

R1: Explain one cause of a rising BOT surplus in an economy.

R2: Explain another cause of a rising BOT surplus in an economy.

Note: Ensure sufficient scope across your causes i.e. internal and external.

Introduction:

The balance of trade (BOT) is given by the value of Export Revenue (X) – Import Expenditure (M) of an economy. This revenue and expenditure are calculated from the buying and selling of both goods and services. A trade surplus is when the value of $[X - M] > 0$ and this essay will explain 3 factors leading to a rising or improving trade surplus – depreciation of the economy's currency, rise in incomes of trading partners, and a fall in an economy's general price level (GPL).

Body:

[P] To begin, depreciation of an economy's currency can cause a rising trade surplus.

[E] For instance, the British pound sterling depreciated against the United States Dollar (USD) due to the uncertainties of Brexit back in 2016. Overnight after the referendum, the pound sterling lost almost 10% of its original value.

[E] With the depreciation of the pound against the USD, prices of UK's exports in USD are now lower, even though the prices of UK's exports in pounds did not change. This means that at the same prices of UK's exports in pounds, demand for UK's exports from USA has risen. This leads to a rise in UK's export revenue.

At the same time, prices of US products (which are UK's imports) have risen in pounds due to the weaker pound. Hence, the quantity demanded of imports from the USA by the UK residents falls more than proportionately, assuming demand for imports from USA by UK residents is price elastic. This leads to a fall in import expenditure M for UK. If demand for imports were price inelastic, expenditure on imports (in S\$) will rise. However, if the rise in export revenue outweighs the rise in import expenditure, balance of trade will still improve. This outcome will be observed so long as the Marshall-Lerner condition holds i.e. $|PED_x + PED_m| > 1$.

Overall, $(X-M)$ rises and if the BOT was originally in surplus ($X-M > 0$), the rise in value of $(X-M)$ will lead to a rising trade surplus for UK.

[L] Hence, depreciation of an economy's currency will improve $(X-M)$, and can lead to a rising trade surplus if BOT was originally in surplus.

[P] In addition, rise in incomes of trading partners can also cause a rising trade surplus.

[E] China has enjoyed fast growth over the past decade, with growth rates averaging about 7% a year. This means that the incomes of Chinese residents have increased over the past few years.

[E] The increase in incomes of Chinese residents means that they now have higher purchasing power to purchase more goods and services. This will also include imports from Singapore, in terms of buying Singapore products or even travelling to Singapore as a tourist. Hence, Chinese residents increase their consumption of imports, which in turn will increase Singapore's export revenue due to increase in demand for Singapore's exports by Chinese residents. This is especially so since China is the biggest buyer of Singapore's exports, buying up close to 13% of all Singapore's exports. With

a rise in X , this will lead to a rise in $(X-M)$ assuming M stays constant. With a rise in $(X-M)$, assuming that originally BOT in surplus ($X-M > 0$), a rise in value of $(X-M)$ will lead to a rising BOT surplus.

[L] Hence, a rise in incomes of trading partners will increase $(X-M)$ for an economy, leading to a rising trade surplus if BOT was originally in surplus.

[P] A fall in an economy's general price level i.e. deflation can lead to a rising trade surplus assuming that the GPL of other trading partners remain constant.

[E] Japan suffered from deflation from the years 1991 to 2001, popularly termed as the "Lost Decade", where inflation rates were negative throughout.

[E] With a fall in GPL in Japan, assuming GPL in other trading partner (such as South Korea) economies stay the same, this causes the prices of Japan's exports to decrease. As a result, there will be a more than proportionate rise in quantity demanded for Japanese exports by South Koreans assuming that demand for Japan's exports by South Koreans is price elastic. Hence, as a result Japan's export revenue X will rise.

At the same time, with the fall in GPL in Japan, domestically produced goods and services will be relatively more price competitive for Japanese residents, compared to imports from South Korea. Even without a change in prices of South Korea goods in Japanese Yen, the Japanese will demand less imports from South Korea, and hence the import expenditure of Japan will fall.

With a rise in X and a fall in M , $(X-M)$ will rise and if Japan's BOT was originally in surplus ($X-M > 0$), a rise in the value of $(X-M)$ will lead to a rising trade surplus.

[L] Hence, a fall in an economy's GPL can improve the value of $(X-M)$ and can lead to a rising trade surplus if BOT was originally in surplus.

Other possible points:

Government policies that lead to contraction of economy, gain in export non-price competitiveness, rise in foreign price levels

Level	Descriptors	Marks
L1	Demonstrates knowledge about the BOT and factors leading to a rising surplus. Answer may be vague or ridden with conceptual errors.	1-4
L2	Descriptive explanation of at least 2 factors contributing to a rising trade surplus. Answer contain some errors.	5-7
L3	Analytical and developed explanation of at least 2 factors with clear and accurate distinction made in terms of the impact to export revenue and import expenditure in the factors. Provided examples that reflect real world context.	8-10

Markers' comments:**Content:**

- The definition of 'rising trade surplus' tends to be weak. It is not sufficient to define it as a situation where export revenue exceeded import spending. This only means BOT surplus. The sloppier and hence unacceptable answers merely used the term 'export' / 'import' to define BOT surplus. Generally, there is a need for more precision in the usage of terms.
- A number of students assume that the initial BOT position to be 0 and went on to explain the causes that resulted in a rise in export revenue and fall in import expenditure. This merely shows a BOT surplus and thus has not addressed the question fully.
- There were a handful of students who used the abbreviations X and M wrongly - to denote quantity or demand of exports or imports, instead of them being the monetary value i.e. export **revenue** (X) and import **expenditure** (M).
- Students often still make mistakes when using 'demand' or 'quantity demanded' of exports/imports when explaining the effect on export revenue or import expenditure.
- There is also a gap in explaining the assumption of price elasticity. Many students **merely stated** the assumption, without going on to explain that when price changes, quantity demanded will change more than proportionately, hence resulting in the subsequent change in export revenue or import expenditure.
- There is also **erroneous** use of the assumptions. For example, in the event of a fall in the price of exports, quantity demanded for exports will increase. However, whether export revenue will increase or fall depends on the price elasticity of demand for exports. That is why the assumption that $|PED_x| > 1$ needs to hold for export revenue to increase. Some students wrongly wrote that if $|PED_x| > 1$, quantity demanded for exports will increase, or that export revenue will increase more significantly.
- Often when students bring in the point about fall in GPL, the concepts are inaccurate. Instead of explaining how quantity demanded for exports rises and linking to change in total revenue through applying the PED concept, they interpreted it as a rise in demand for exports. One way to ensure that the explanation is clearer when there is a fall in GPL, is by assuming the GPL of other countries stays constant. Thus this relates to how the price of exports will fall relative to other countries' goods and services, making it a price change by itself.
- In explaining causes like depreciation or deflation, it is important to include the concept of "relative" price change. Consumers switch from one good to another due to relative price changes; not absolute price levels.
- Students should note that acquiring 'comparative advantage' is not about improvements in the quality of exports. It is about being able to produce a good/services at lower opportunity cost than another country. This could affect the price competitiveness of the export. On the other hand, quality improvement is about non-price competitiveness. Students often did not link the rise in quality to rising demand. It is not sufficient to say that when quality improves, more exports are sold overseas. Students are required to link to rising demand for exports and falling demand for imports.

Skill:

- Students should learn to provide a good scope of factors behind a rising BOT surplus. Instead of just price factors, students should bring in the non-price factor and income factor as well.
- Examples may be present but students may want to bring in real events and weave in the explanation for the full score.
- Some factors, such as depreciation of currency and deflation in the economy, impact **both** export revenue and import expenditure. For a complete and rigorous explanation of the factor, you will need to explain both the impact on X and M.

b) Assess the impact of a persistent and rising balance of trade surplus on living standards in Singapore. [15]

R1: Explain positive impact of persistent and rising BOT surplus on SOL.

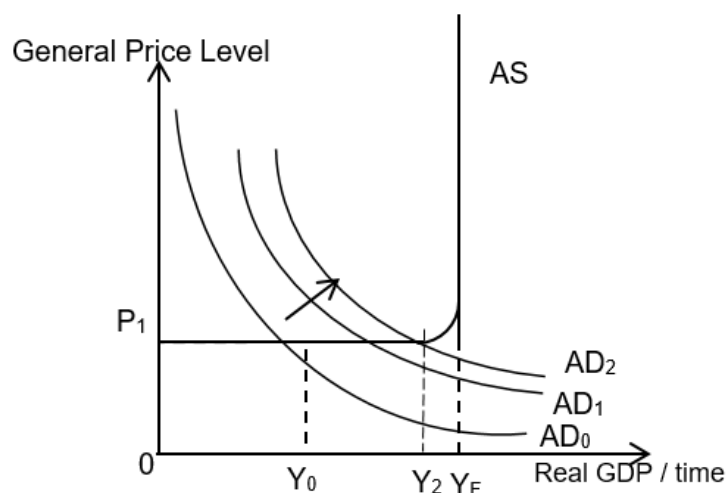
R2: Explain negative impact of persistent and rising BOT surplus on SOL.

Introduction: A rising trade surplus itself can create employment and economic growth in Singapore thus standard of living may rise, but having a persistent and rising trade surplus may in turn lead to higher prices in Singapore, affecting material standard of living. Having a rising trade surplus may also not be a good thing for a non-material standard of living. To assess the extent of impact on Singapore's living standards, factors such as causes of the surplus, the state and nature of the economy have to be considered.

Thesis: Having a rising trade surplus is beneficial in achieving higher level of material SOL

[P] Having a rising BOT surplus helps the economy to achieve growth and lower unemployment thus a higher material SOL.

[E, E] With a rising BOT surplus, this suggests a rise in net exports, resulting in a rise in AD. Assuming the economy has spare capacity, there would be a multiplied increase in national income. When AD increases, the resulting unplanned fall in inventories will result in firms increasing production. As firms hire more factors of production, national income rises and the further rise in consumption will trigger further rounds of increases in income as households receive higher income and spend in other parts of the economy. This multiplier process will stop only when change in injections = change in withdrawals, finally resulting in a multiplied rise in national income from Y_0 to Y_2 . Cyclical unemployment will also fall as labour is a derived demand. As firms increase production to replenish the unplanned fall in inventories, they hire more labour as a result. This rise in demand for labour will lead to higher employment and hence a fall in cyclical unemployment. This fall in cyclical unemployment is reflected by the smaller gap between equilibrium national income and full employment output i.e. from $(Y_F - Y_0)$ to $(Y_F - Y_2)$. [L] The increase in national income and fall in unemployment leads to a higher purchasing power for households and increase the amount of goods and services consumed including imports, achieving a higher material SOL.



[Ev] More significant for small and open economy such as SG as export revenue X constitutes about 170% of GDP, which is large and any increase in X will lead to a large increase in AD. Hence having a rising trade surplus is indicative of a positive economic growth as this allows Singapore to enjoy a significant increase in AD and NY, employment and material SOL.

[P] A rising trade surplus may help to boost investor's confidence in the economy and thus spurs growth and higher material living standard.

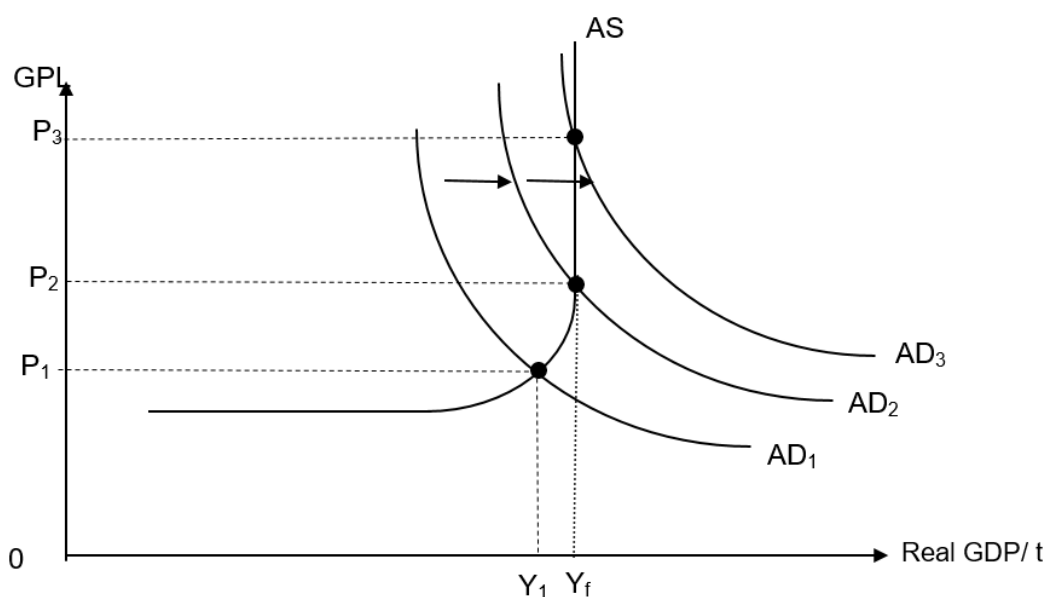
[E, E] The rising trade surplus may boost confidence among investors as the SGD\$ is likely to remain strong. With a trade surplus that is rising, it is likely to lead to an appreciation of the SGD, assuming no intervention from the MAS. A rising trade surplus from a rise in X and fall in M suggests that there is an increase in demand for SGD by foreigners to buy exports, and also a fall in supply of SGD by Singaporeans in the foreign exchange market as they buy less imports. The appreciation of the SGD can potentially attract foreign firms to invest and set up their production in Singapore since the profits earned in Singapore Dollars will be worth more in foreign currency with the expected appreciation of the SGD. In addition, a stronger SGD will also mean that imported inputs are cheaper in SGD, which also increases profit margins. With a rise in foreign direct investment, AD will rise and lead to a multiplied rise in national income as explained earlier. In addition, rise in foreign domestic investment also increases quantity of capital, which will increase the productive capacity of the economy, leading to potential growth. [L] This will boost a higher material living standard in Singapore in the current and future time periods.

[Ev] This is likely to significantly impact living standards in Singapore due to the heavy dependence of foreign direct investment for growth as compared to other countries with big domestic sector where domestic investment takes up a large proportion compared to foreign investment.

Anti-thesis: Having a persistent and rising trade surplus may not be beneficial in achieving higher level of material SOL

[P] Having a persistently large trade surplus may lead to demand pull inflation which may reduce material SOL.

[E, E] Assuming that the economy is nearing full employment and that the rise in $(X-M)$ is not due to changes in GPL , the rise in $(X-M)$ from a rising trade surplus may create inflationary pressures. As AD rises, there will be an unplanned fall in inventories and firms will hire more factors of production to replenish the inventories. However, when real GDP is already near or at Y_f , there is little spare capacity left in the economy, which means that firms will have to rely on increasingly less efficient factor combinations with the limited factors of production left unused in the economy. Hence, this will lead to an increase in unit cost of production (movement along AS) which they will pass on to consumers in the form of higher prices, leading to a rise in GPL . As seen in the diagram, as AD continues to rise from a rising $(X-M)$, GPL rises from P_1 to P_3 , causing demand pull inflation. If nominal incomes of households remain constant and GPL rises quickly, real incomes actually fall and [L] hence it will result in lower material SOL as they can now consume a smaller quantity of goods and services with the same nominal income.



[Ev] This may significantly impact Singapore as the economy is likely to operate near full employment level hence inflationary pressure may set in with persistent rising trade surplus, affecting the real income of households.

[P] Having a persistently rising trade surplus, on the other hand may lower material SOL in the short run.

[E, E] If the rising trade surplus is persistent, it could mean the Singapore economy is producing more goods and services than it is consuming. A rise in trade surplus that stems from a rise in exports could mean the income generated from export is not spent on imports but rather saved. This would mean that in the short run, living standards may be lowered due to the saved surplus earnings.

[L] The savings could have been spent on imports, which would mean more abundant goods and services for households and hence higher material SOL.

[Ev] In the long term, however, Singapore being a creditor nation will start to have more factor income from abroad flowing back into the economy, this will help increase the purchasing power of households. Material SOL may increase instead.

[P] Having a persistent and large trade surplus may not necessarily improve living standards in the long run.

[E] If the rising trade surplus is due to a smaller import of capital goods, this will not lead to higher future material SOL as the economy may not be able to produce more goods and services in the long run, as there may be slower potential growth and slower growth in productive capacity as investment in capital goods is reduced (but still at a higher rate than capital depreciation). [L] Living standards thus may not rise in the long term.

[Ev] This may not be significant for Singapore as the rising trade surplus is likely not due to a fall in imported capital goods but rather a much greater rise in exports due to increasing export non-price competitiveness rather than a smaller import of capital goods.

[P] Having a persistent and rising trade surplus may lower non-material SOL

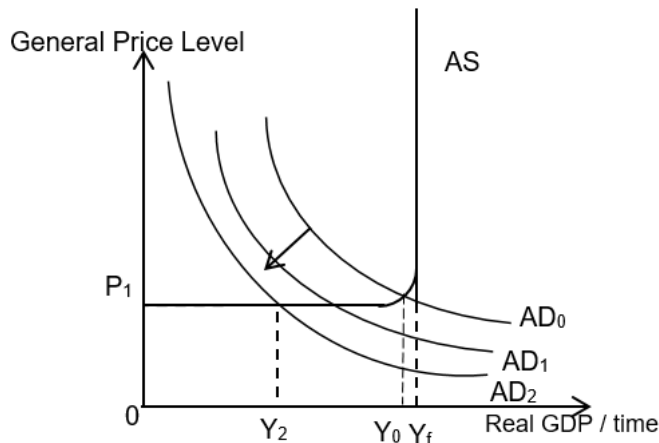
[E, E] Focusing on external sources of growth via trade though will help to achieve healthy BOT, but it might be harmful to attaining a clean and liveable environment. While material living standards may rise due to export driven growth, it can come at a heavy price in terms of higher levels of pollution from factories and motor vehicles and hence this growth in material SOL may not be sustainable. Non-material SOL in fact decreases if citizens of Singapore have to suffer from increased air pollution as trade surplus increases, as they may experience health problems from breathing in polluted air and as a result their quality of life will fall. [L] Even with a rise in economic growth with the rising trade surplus, it may not lead to a better quality of life in terms of non-material aspects.

[Ev] The Tuas area where most of our petrochemical industries are located in Singapore is known to emit heavy smells of chemicals and more susceptible to fires, but since it is all the way isolated in the far West of Singapore away from residential areas, non-material SOL of Singaporeans may not be affected significantly. Furthermore, it depends on the type of goods and services exported. For Singapore, if exports are mainly service oriented, the level of pollution generated may not necessarily go up.

[P] Having a persistent and rising trade surplus may invite retaliation from other countries, resulting in a fall in economic growth and a rise in unemployment.

[E, E] With Singapore experiencing a persistent and rising trade surplus, this likely means that our trading partners are experiencing growing trade deficits, since they are the ones buying up Singapore's exports and Singapore is buying less imports than she is selling exports. As such, trading partners may retaliate by imposing tariffs on Singapore's exports, resulting in a fall in Singapore's export revenue and thus AD. This will lead to a multiplied fall in national income, as firms will see an unplanned rise in inventories. As such, they will cut down on the factors of production they hire since they already have excess stocks to clear. This will mean that incomes received by households will fall, triggering lower consumption. AD will continue to fall through the multiplier process, finally stopping when change in injections = change in withdrawals. [L] This would mean that there is a fall in real GDP, which means a lower material SOL.

[E, E] In addition, this also causes higher cyclical unemployment as labour is a derived demand. The increase in output gap from $(Y_f - Y_0)$ to $(Y_f - Y_2)$ reflects lower output, and thus the demand for labour also falls. With wages being downward sticky, this will cause more unemployment as firms cut back on labour rather than decrease wages. [L] With more cyclical unemployment, there will also be a fall in material SOL of households.



Overall synthesis

[Stand] Having a persistent and rising trade surplus does generally improve the overall living standards for Singapore, mainly because of the dependence on trade for growth and thus material standard of living. Whether overall living standards does improve depends on many factors, and two factors are whether we take a short term/long term view and the state of the economy (An addition point also can be on retaliation – explained below) whether trade partners will retaliate since Singapore enjoying a persistent and rising trade surplus likely means trading partners are suffering from worsening BOT.

[Substantiation] Having a persistent rising trade surplus may have repercussions on the cost of living as well as trading off with current living standards if more of the surplus earnings are saved. Nonetheless, Singapore's rising trade surplus provides a strong indication of a rising economic growth and the benefits towards increasing material living standard will outweigh the cost, since Singapore's productive capacity is likely to keep growing to keep demand pull inflation in check and our polluting factories are situated far from residential areas. Trade has become a more important engine of growth for most small economies, especially for Singapore. In the long term, the improvement in SOL can be sustainable if the government is aware of the trade-offs made when deciding its growth strategies – between material and non-material SOL – and devise policies to prevent or mitigate such negative side effects such as situating polluting factories far from residential areas.

In addition, Singapore's state of the economy matters as the positive impact on economic growth from the rise in $(X-M)$ on AD assumes that there is spare capacity in Singapore's economy. Given that Singapore has low unemployment rates, Singapore is likely to be operating near full employment, and the rise in $(X-M)$ may result in inflationary pressures. Thus, material SOL may fall if nominal incomes stay the same or grow less slowly than GPL rises. However, given that Singapore operates on a managed float exchange rate, there is a certain level of business confidence arising from the exchange rate stability. This will encourage investment and eventually potential growth that may mitigate the inflationary pressure.

Furthermore, whether Singapore can enjoy the benefits of the rising trade surplus also depends on whether trading partners retaliate. So far there hasn't been much outright retaliation from trading partners yet in the form of tariffs and trade wars as Singapore signs many FTAs with many countries and is on a friendly term with these trade partners. Given Singapore's small size, the magnitude of

Singapore's trade surplus in absolute terms may not be too significant from the perspective of the GDP figures of the whole world. However, Singapore was placed on the currency manipulator watch list in 2019 by the USA, which means there are trading partners who are monitoring Singapore's trade surplus and there could be retaliation in the future.

Level	Descriptors	Marks
L3	Well-explained answer that demonstrates understanding of how persistent and rising trade surplus results in both positive and negative effects on material and non-material SOL. Answer demonstrates a well-balanced argument.	8 – 10
L2	Descriptive and one sided explanation of how persistent and rising trade surplus has positive or negative effects on material and non-material SOL OR Descriptive answer with both sides of the explanation, covering both positive and negative impact but with gaps in the explanation or just cover on material SOL without non-material SOL.	5 – 7
L1	Mere mention of the impact of a persistent and rising trade surplus in affecting SOL, with little or no explanation; answer contains conceptual errors.	1 – 4
E3	Makes substantiated judgements on the type and state of economy that affects the view of whether the impact is more likely to be positive or negative for both material and non-material SOL.	5
E2	Attempted to have substantiated judgements of the extent of impact on material/non- material SOL	3 – 4
E1	Unsubstantiated judgement of the extent to which the answer agrees/disagrees with the view.	1 – 2

Markers' comments:

Content:

- There were students who mentioned that trade surplus will improve government budget balance. Students should recognise that trade balance (X-M) and budget balance (T-G) are **not** the same thing!
- Following the previous point, many students assert that when there is a rising trade surplus, it means that the government is saving more money than it is spending. This suggests a misconception that trade surplus means government budget surplus. Trade surplus means $X > M$. If one claims that the government budget is in surplus simply because there is a trade surplus, does it mean that all the imports and exports in the country are bought and sold by the government alone? Clearly that is not true. When there is a trade surplus, one can imply that households in the country (and not the government) are saving more than they are spending. Do note that it is possible that a rising trade surplus can lead to an improved government budget. For example, when real GDP rises due to a rise in (X-M) and AD, the government can collect more tax revenue as national income rises. But, they are not synonymous with each other. More elaboration is needed to establish this relationship in the analysis.

Skill:

- Many students did not even bring in the most straightforward and rigorous point, which is a rise in (X-M) leads to a rise in AD, thereby achieving economic growth. Scripts that did not bring this point in inevitably lack rigour of analysis, which limits the amount of L marks they score in the exam. Moving forward, students must really think very hard on what rigorous points they can bring in to answer a question, especially a HOT question. Most macroeconomic essay questions require students to bring in AD-AS analysis in one way or another.

- Stronger answers seen are the ones which brought in how rising net X led to the rise in national income through a clear multiplier explanation. The link to purchasing power was also clear as to how material SOL increases.
- There were some scripts with too much focus on non-material SOL stemming from how more production leads to pollution and more stress. Such points though valid can be value added by specifying the type of industries that are more export oriented and therefore chances of generating pollution may be present. Without clarification, even economic growth itself will lead to such issues, hence it need not be rising BOT surplus that can lead to this.
- Students should pay attention to their choice of points. While a rising trade surplus could well be due to falling import spending, the latter is not likely to be relevant to the SG context unless the economy was in a recession such that *falling* income induced a fall in import spending by households for example. But then, this latter point is not congruent with a state of rising BOT surplus, for which, starting from a point of national income equilibrium, a rising BOT surplus would have led to growth and hence rising income.
- Many students stated that rising BOT surplus meant that more money is available for spending and that future SOL will be higher. This is a weak point as it is not properly explained. It may be better to add that as a nation, we are consuming less than we are selling so perhaps the savings will increase.

2020 CT1 QP

Paper 1: CSQ**Question 1: Impact of US policies on the US and Singapore economies****Table 1: Singapore Dollar per US Dollar, 2014 - 2018**

	2014	2015	2016	2017	2018
Exchange Rate	1.27	1.32	1.41	1.34	1.36

Source: Monetary Authority of Singapore

Chart 1: US Trade in Goods with Singapore (US\$ millions)

Source: United States Census Bureau

Table 2: Gross Domestic Product (GDP) and its components in selected economies, 2018

	US	Singapore
Total GDP (US\$ billion) 2018	20,580.2	364.2
Composition	%	%
Private Consumption	68	37
Government Consumption	14	10
Gross Fixed Investment	21	26
Exports of goods and services	12	184
Imports of goods and services	15	157

Source: OECD and SingStat

Extract 1: US Economic Growth

The US economy grew 2.3 per cent in 2017, an acceleration from the 1.5 per cent in 2016. Economists expect annual GDP growth to hit the government's 3 per cent target in 2018, spurred in part by a weak dollar, rising oil prices and strengthening global economy.

Consumer spending, which accounts for more than two-thirds of U.S. economic activity, increased at a 3.8 per cent rate in the fourth quarter. Consumer spending is likely to remain supported by rising household wealth, thanks to the stock market rally and higher house prices, income and corporate tax cuts and steady wage growth as companies compete for workers and some states raise the minimum wage.

With consumer spending accelerating, inflation perked up in the fourth quarter. Signs of rising inflation together with a tightening labour market could put the Federal Reserve on a more aggressive path of interest rate increases than is currently being anticipated, economists say. The unemployment rate dropped to a 17-year low of 4.1 per cent. The U.S. central bank has forecast three rate hikes this year, the same number as in 2017.

Source: *Reuters*, 26 January 2018

Extract 2: IMF says tax overhaul will help boost US and global growth ... for now

The International Monetary Fund (IMF) has revised its growth forecasts for 2018 and 2019 upwards, saying the revision is partly in view of the recently approved overhaul of the US tax system. Under the Tax Cuts and Jobs Act signed by President Donald Trump in December 2017, corporate tax rate was slashed from 35 per cent to 21 per cent, standard tax deductions were doubled, and income taxes for households have also been lowered.

Maury Obstfeld, economic counsellor and research department director at the IMF cautions that while there was a broad cyclical upswing in the world economy, many of the factors driving growth were temporary in nature. "We like what we're seeing in the short term but the long term picture hasn't changed, the stresses are there. Part of what has supported this recovery since the crisis has been fiscal policy, so we have much higher government debt than we had before, where is the room for governments to do fiscal expansion in a renewed downturn?"

Source: *CNBC*, 28 January 2018

Extract 3: U.S. Fiscal Stimulus Raising Risks to Global Economy: IMF

US tax cuts and public-spending hikes are increasing risks to the global economy by boosting debt, potentially stoking inflation and pushing the dollar higher, the IMF warned. "Fiscal stimulus backed by the Trump administration will give a short-term boost to the US and many of its trading partners, but adding fiscal measures at a time when the economy is growing will elevate the risks to the US and the global economy," said the Washington-based Fund. The loosening of the purse strings in Washington raises the risk of an "inflation surprise" for markets, adding that a rapid rise in price pressures would force the Federal Reserve to hike interest rates faster than expected.

Source: *Bloomberg*, 14 June 2018

Extract 4: Faster US rate hikes to have mixed impact on Singapore

The United States Federal Reserve's decision to step up the pace of interest rate increases signals its optimism about the economy but will likely have a mixed impact on Singapore and Asia. On the one hand, a stronger US economy spells good news for regional exporters. However, higher rates will push up borrowing costs in Singapore and the region.

"It's a double-edged sword (for Singapore)," said Maybank Kim Eng economist Chua Hak Bin. "The hikes come on the back of stronger growth, which is positive. But as a result Singapore's short-term interest rates are going to climb, which could impact property market sentiment as well as companies that are highly-indebted."

Still, the impact of higher interest rates on Singapore's growth is likely to be limited for now, Dr Chua noted. "Rates are still relatively low and not likely to bite that much. When the Fed funds rate approaches 3 per cent in late-2019, Singaporeans might feel it a bit more."

Another concern for Singapore and the region is the prospect of investment funds flowing out. Higher rates prompt investors to move money out of emerging markets into US dollar-denominated assets, putting pressure on Asian currencies and asset markets. Something similar happened in 2013, when the Fed announced that it would wind down its policy of pumping money into the financial system through aggressive bond purchases. Many investors pulled money out of Asian economies, resulting in what has been called the "taper tantrum".

Source: *The Business Times*, 15 June 2018

Questions

- (a) (i) State what happened to the value of the US dollar against the Singapore dollar between 2014 and 2018. [2]
- (ii) With reference to Chart 1, compare the US's trade balance in goods with Singapore in 2014 and 2018. [2]
- (b) Explain how a change in the external value of the US dollar would affect the US balance of trade. [4]
- (c) With reference to Table 2, comment on the likely relative size of the multiplier for the US and Singapore. [4]
- (d) Discuss whether the tax cuts implemented in the US are appropriate. [8]
- (e) Assess the impact of the US Federal Reserve's interest rate hikes on the Singapore economy. [10]

[Total: 30]

Paper 2: Essays**Answer two questions.**

1. In 2019, Singapore's real GDP is expected to grow only by 0.5 to 1.0%. The unemployment rate remained steady at 2.3% as the total population expanded by 1.2%. Economic restructuring and an improving trade balance remained the key drivers for the economy.

(a) Explain the possible reasons for unemployment in Singapore. [10]

(b) Discuss whether the above economic statistics suggest that Singapore residents experienced a higher standard of living in 2019. [15]

2. (a) Explain why governments aim for a low and stable inflation rate. [10]

(b) Discuss whether inflation in Singapore is more likely to be an internally or externally driven phenomenon. [15]

3. In August 2018, the Turkish Lira underwent a massive depreciation against the US dollar, going from 4.98 to a low of 6.90 Lira to the dollar.

Discuss the effects of a depreciation of a country's currency on its households, firms and government. [25]

Note: There are no more single-stem 25m EQs in your syllabus; however, the content in this question is still relevant to you.

2020 CT1 Suggested Answers

Paper 1: CSQ

(a)	(i)	<p>State what happened to the value of the US dollar against the Singapore dollar between 2014 and 2018.</p> <p>[2]</p>
		<p>Overall trend [1m] + refinement [1m] US dollar appreciated against the Singapore dollar from 2014 to 2018 (1), except for 2016-2017 where it depreciated (1).</p> <p><u>Other acceptable answers</u></p> <ul style="list-style-type: none"> US dollar has strengthened / weakened against the Singapore dollar. The value of the US dollar against the Singapore dollar has increased / decreased. <p><u>Not accepted</u></p> <ul style="list-style-type: none"> The value of the currency has appreciated / depreciated against the Singapore dollar. <p><u>Markers' Comments</u></p> <p><u>Content</u></p> <ul style="list-style-type: none"> Proper terminology must be used - USD appreciated / strengthened against the SGD, or the value of the USD has increased against the SGD. <p><u>Skills</u></p> <ul style="list-style-type: none"> Some students only gave 1 description, the overall change. There is a need to take reference from the number of marks to get an indication of how much to write. Some students did not read the data carefully - the US dollar depreciated against the SGD from 2016 to <u>2017</u>, not 2018.
	(ii)	<p>With reference to Chart 1, compare the US's trade balance in goods with Singapore in 2014 and 2018.</p> <p>[2]</p>
		<p>Identify trade deficit or surplus [1m] + state whether BOT has improved or worsened [1m] US ran a balance of trade surplus in goods with Singapore in both 2014 and 2018 (1) but the trade surplus is smaller in 2018 than in 2014 which shows that trade balance has worsened (1).</p> <ul style="list-style-type: none"> Answer has to clearly point out BOT surplus in both 2014 and 2018 No marks awarded if answer is phrased in terms of a trend analysis No marks awarded if answer states that trade balance has decreased (strictly worsened / improved when referring to trade balance)

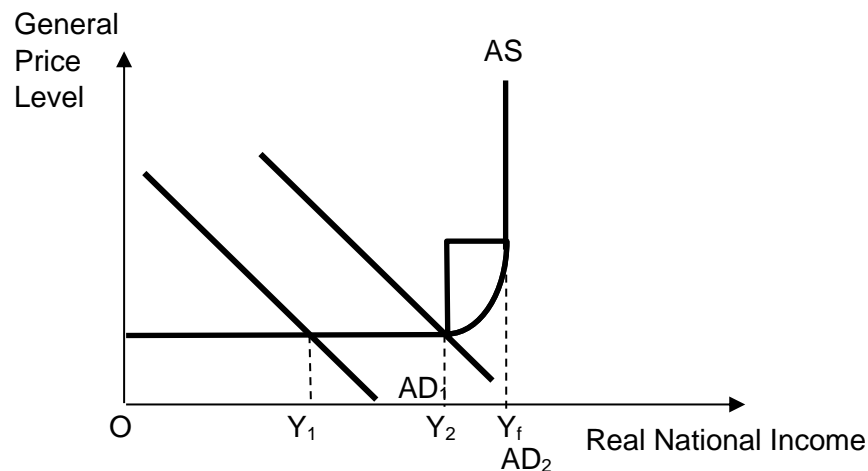
		<p><u>Markers' Comments</u></p> <p><u>Content</u></p> <ul style="list-style-type: none"> • Correct terminology must be used - the trade balance in goods is in surplus, and the trade balance worsened or the trade surplus is smaller. • The question and data specify that it is the balance of trade <u>in goods</u>, not the overall balance of trade. Answers should have been careful with this specification. <p><u>Skills</u></p> <ul style="list-style-type: none"> • The command word is compare, so students need to explicitly compare by stating similarity or difference, not merely describing the two observations separately. As the question is worth 2 marks, 2 comparisons should be made. Some students only gave 1. • The question asked to compare observations of the trade balance in goods at two specific years, not the change over a period. Students should thus not be using the phrase "from 2014 to 2018" which imply description of a trend. • The question specifically asked to compare the <u>trade balance</u>, which is NOT the same thing as comparing exports revenue and import expenditure. 	
(b)		<p>Explain how a change in the external value of the US dollar would affect the US balance of trade.</p>	[4]
		<p>An appreciation of the US dollar is likely to cause the US BOT to worsen.</p> <p>Explain what happens to export revenue [2m] An appreciation of the US dollar against foreign currencies will make US exports relatively more expensive in foreign currency terms. (1) Foreigners will buy less exports from US and switch to buying domestic products or other cheaper substitutes. Demand for US exports is likely to fall, resulting in a fall in export revenue (X). (1)</p> <p>Explain what happens to import expenditure [2m] At the same time, US buyers will find foreign imports cheaper in US dollar. (1) Assuming demand for imports is price elastic, quantity demanded for imports will rise more than proportionately to the fall in import prices, leading to a rise in import expenditure (M). (1)</p> <p>The fall in X and rise in M will cause US BOT (given by X-M) to worsen, as long as the Marshall-Lerner condition holds i.e. $PED_x + PED_m > 1$.</p> <p><u>Note:</u></p> <ul style="list-style-type: none"> • For each of the X or M explanation, 1m for recognition of price change in either foreign or domestic currencies + 1m for clear and thorough explanation (including accurate use of terminologies and assumptions where relevant) • Cap at 3m if answer does not link back to impact on BOT 	

		<p><u>Markers' Comments</u></p> <p><u>Content</u></p> <ul style="list-style-type: none"> Some answers did not reflect the price of exports expressed in foreign currencies and/or the price of imports in local currency. There were also incorrect expressions like Qd of exports (should be demand) when it is a non-price factor (exchange rate change) and demand of imports (should be Qd) since it's a price factor. Many answers did not explain why assuming that the demand for imports is price elastic would lead to a rise in import expenditure. This is important as import expenditure would have fallen if the $PED < 1$. It is evident that some students do not know why they are applying PED (which is responsiveness of change in <u>Qd</u> as a result of a change in <u>price</u> of the good, ceteris paribus), as seen from the inaccurate use of the assumption. These are examples of incorrect use: <ul style="list-style-type: none"> "When demand for exports falls, export revenue falls assuming $PED > 1$". PED is not required here as demand has change. "When imports become cheaper in US\$ terms, assuming demand for imports is price elastic, the quantity demanded for imports falls." Here, the fall in price of imports will result in a <u>more than proportionate rise</u> in Qd. <p><u>Skills</u></p> <ul style="list-style-type: none"> From a(i), the USD has appreciated against the SGD, so the right way to approach this question would be to explain how the USD appreciation would affect export revenue, import expenditure and the net effect on BOT. There is no merit in repeating the explanation by considering a depreciation of the USD against the SGD as the answers will just be a reverse of what happens when there is a currency appreciation. 	
(c)		With reference to Table 2, comment on the likely relative size of the multiplier for the US and Singapore.	[4]
		<p>Definition of multiplier [1m]</p> <p>The size of the multiplier refers to the number of times by which the rise in equilibrium national income exceeds the rise in autonomous expenditure. It is given by the inverse of the marginal propensity to withdraw (MPW), which is given by the sum of the marginal propensities to save, tax and import ($MPS + MPT + MPM$).</p> <p>Evidence + Explanation [2m]</p> <p>Comparing the imports of goods and services as a proportion of GDP (157% for Singapore as compared to just 15% for US), Singapore is the more open economy and has a higher degree of leakages from the circular flow through imports. (1)</p> <p>Thus, for a given increase in autonomous expenditure, there will be higher leakages out of the circular flow i.e. less is passed on in the circular flow to</p>	

	<p>induce further consumption and create increased income for others in the Singapore economy, as compared to the US economy. (1)</p> <p>Conclusion [1m] Hence, the multiplier size for Singapore is likely to be smaller compared to that of the US due to high leakages through imports.</p> <p><u>Markers' Comments</u></p> <p><u>Content</u></p> <ul style="list-style-type: none"> • The implication of why a larger/smaller marginal propensity would affect the size of the multiplier was often not explained - leading to more/less leakages. • The data provided is the component expenditure as a % of GDP. It is <u>NOT</u> marginal propensities. At best, the data can only be used to <u>infer</u> marginal propensities. • Consumption (C) is not the same as consumption of domestically produced goods (Cd). The data given is C as a % of GDP (i.e. % of national income consisting of consumption expenditure which included domestically produced goods and imports) whereas the multiplier size is dependent on marginal propensity to consume <u>domestically produced goods</u> (MPCd, i.e. how much of the <u>increase</u> in Y is spent on <u>additional</u> consumption of domestically produced goods) and not MPC or C. • Having a high C as % of GDP just suggests that the economy is more reliant on the domestic sector rather than external. It does not mean that there is lower MPS. • A number of students incorrectly stated that the multiplier size is dependent on the size of the domestic sector. The size of the domestic sector only affects how much AD would change by when there is a change in domestic expenditure; it does not affect the size of the multiplier. <p><u>Skills</u></p> <ul style="list-style-type: none"> • The question asked to comment on the likely <u>relative</u> size of the multiplier - this means explicit comparison is required, not merely to state the likely multiplier size for each country separately. • The question asked to refer to the data in Table 2, and not for a student's own prior knowledge on why the MPM/MPS values may be high or low. There is no need to explain this (e.g. SG high MPS due to CPF). • Some students only used abbreviations e.g. MPW, MPT, MPS without stating that it was the "marginal propensity to withdraw", etc.) 	
(d)	Discuss whether the tax cuts implemented in the US are appropriate.	[8]
	<p>Tax cuts are intended to boost economic growth via increases in consumption and investment expenditures.</p> <p>Thesis: Tax cuts may be appropriate as it could address problems associated with demand-deficiency</p> <p>[P] The tax cuts includes both reduction in corporate tax and lowering of personal income taxes for households.</p>	

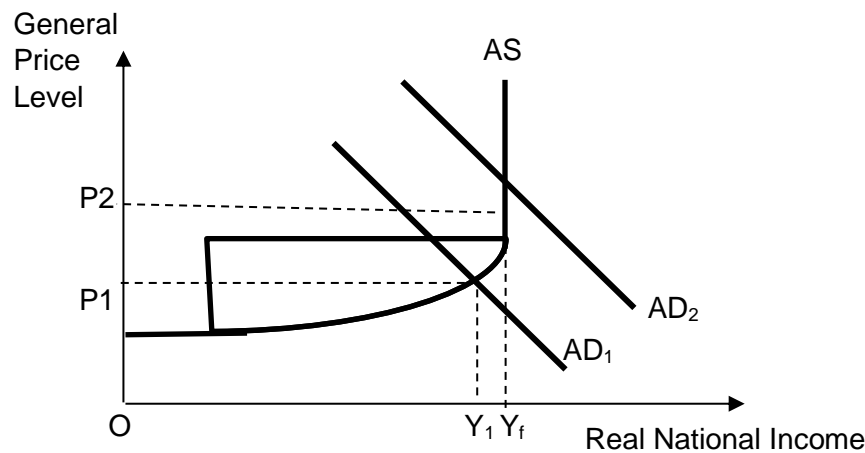
[EE] A reduction in corporate tax rate will increase the expected after-tax profits, making the marginal benefits of investment (expected rate of return) to be higher than the marginal cost (interest rate), thus encouraging firms to increase investment expenditure (I).

Lower income taxes will increase the disposable income of households, increasing their purchasing power and ability to purchase goods and services. This is likely to lead to an increase in consumption expenditure (C).



[EE] With a rise in I and C, aggregate demand (AD) for goods and services will increase from AD1 to AD2. Assuming that the US economy is not at full employment, a rise in AD leads to a fall in unplanned inventories. Firms increase production by hiring more factors of production, including labour. As a result, households' income increases and this increase in purchasing power will induce higher consumption of other domestic goods and services. Hence, national income rises as output rises via the multiplier effect. [L] The output gap also shrinks from $(Y_f - Y_1)$ to $(Y_f - Y_2)$, which reflects a fall in demand-deficient unemployment.

Anti-thesis: Tax cuts may not be appropriate as it may lead to other unintended consequences such as demand-pull inflation and worsening budget balance.



[P] However, if the economy is already near or full employment, any further increases in AD will lead to inflationary pressures with little to no change in the actual output.

[EE] According to Extract 1, unemployment rate is at a record low of 4.1%, which indicates that the economy is likely to be operating near full employment. The lack of spare capacity means that fewer suitable factors of production are available for hire. As firms increase output to meet the rising AD, they hire less suitable FOP resulting in a fall in efficiency and rising unit cost of production. Firms then pass on the increase in unit cost of production in the form of higher prices to households. [L] This will result in an increase in the general price level from P1 to P2.

[EE] Moreover, tax cuts would also mean that the total tax revenue collected by the government falls, thus worsening the government budget position. If the government runs a budget deficit, it may have to finance this budget deficit through borrowing, which increases government debt (Extract 2). The holding of large government debt may limit the government's ability to enact fiscal policies in the future when the economy is hit with a recession.

Conclusion

[Stand] Whether the tax cuts implemented in the US are appropriate or not depends primarily on the state of the economy. In this case, tax cuts is likely to be inappropriate.

[Substantiation] Given that US is currently enjoying stable and positive economic growth and unemployment is low, it is highly likely that the tax cuts would exert inflationary pressures on the US economy, with minimal increase in output and thus, minimal impact on reducing demand-deficient unemployment.

Mark Scheme

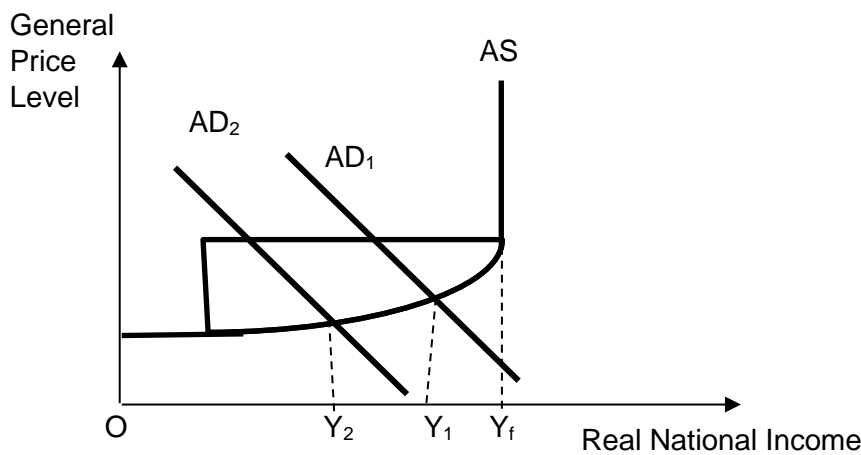
Level	Descriptors	Marks
L2	Clear and balanced analysis on the appropriateness and unintended consequences of implementing tax cuts in the given context	4-6
L1	One-sided answer that focuses only on why implementing tax cuts in the given context is appropriate or inappropriate Under-developed explanation of how tax cuts works	1-3
E	Substantiated judgement on whether the tax cuts implemented in the US are appropriate, based on case evidence	1-2

Markers' Comments**Content**

- Corporate tax cuts work by increasing the expected post-tax profits, which encourages investment leading to a rise in AD. Some students incorrectly wrote that corporate tax cuts reduce the unit COP - it is indirect taxes like GST that affect the unit COP of firms.
- Many students who brought up rising government debt did not explain the implications of this debt, and answers ended up looking like mere lifting of case evidence or statements.
- Some students wrote that tax cuts are appropriate in the short term as it stimulates growth, but inappropriate in the long term as it causes inflation. This is not a short term vs long term consideration; this is a consideration of the state of economy. If the economy is near/at Yf, then inflation sets in now, not in the long term.

Skills

- Despite the command word being "Discuss", some students gave one-sided answers that the tax cuts are either appropriate or not appropriate only.
- A good number of students still did not explain the links between rising AD to the impact on macro goals with theoretical rigour. 6 out of 8 marks are awarded for content - there is a need to demonstrate a good understanding of economic concepts.
- Answers should be focused on the effects of tax cuts and whether it is appropriate. Some students ended up explaining effects of other phenomenon in the case evidence that are not effects of the tax cuts.
- Some students made no reference to the extracts at all - for e.g. in choice of limitations - they explained several theoretical explanations including for e.g. there could be demand pull inflation without explicitly pointing out that this was indeed the case as the economy was approaching full employment..
- Evaluation skill

		<ul style="list-style-type: none"> - Needs to substantiate the stand on the appropriateness of the tax cuts based on the case context. - Evaluation about how lower tax is very effective due to the large C component in the US is not quite addressing the question. The question is not asking whether tax cuts is the best policy to stimulate growth, it is asking whether the tax cuts in itself is appropriate given the current situation. 	
(e)		Assess the impact of the US Federal Reserve's interest rate hikes on the Singapore economy.	[10]
		<p>The US and Singapore economy are connected through trade and investments ties. Both economies also allow for free capital flows.</p> <p>Negative Impact</p> <p>[P] The rise in the interest rates in the US will have a contractionary effect on the US economy, resulting in a fall in the demand for foreign imports, including Singapore's exports.</p> <p>[EE] With higher interest rates, the cost of borrowing in the US will rise and the opportunity cost of consumption will also rise. US households will thus cut back on their consumption spending. In addition, consumers will receive higher returns to their savings from banks, and hence consumption will be discouraged. The higher borrowing costs will also make some units of investment not profitable, thus firms reduce investment expenditure (I). The fall in autonomous C and I leads to a fall in AD which has a contractionary effect on the US economy. As national income falls, US households have lower purchasing power, causing demand for foreign imports, including Singapore's exports, to also fall. [L] This leads to a fall in export revenue for Singapore.</p>  <p>The fall in AD via fall in X, C and I results in an unplanned rise in inventories, with firms cutting production and reducing hiring of factors of production including labour, a derived demand. The resultant fall in national income, induced C will result in a downward multiplier effect. Thus there will be negative economic growth and rise in demand-deficient unemployment.</p>	

[P] The rise in the interest rates in the US will lead to hot money outflow from Singapore to the US, leading to a depreciation of the Singapore dollar against the US dollar.

[EE] A rise in the interest rates in the US relative to that in Singapore would give investors a higher returns on US assets, making US assets more attractive. As pointed out in Extract 4, this leads to short-term capital outflow, leading to downward pressure on the Singapore dollar exchange rate as supply of Singapore dollar rises in the forex market, thus causing the Singapore dollar to depreciate against the US dollar.

[EE] The depreciation of the Singapore dollar, in turn, causes the price of imports from the US in local currency (SGD) to rise. Firms that are heavily reliant on imported inputs from the US will experience a rise in unit cost of production and may then pass on the higher costs to consumers in the form of higher prices causing cost-push inflationary pressure. However, if they are unable to pass on the higher costs to consumers, firms may experience a fall in profitability and cut back on investment expenditures, which will again have a contractionary effect on AD.

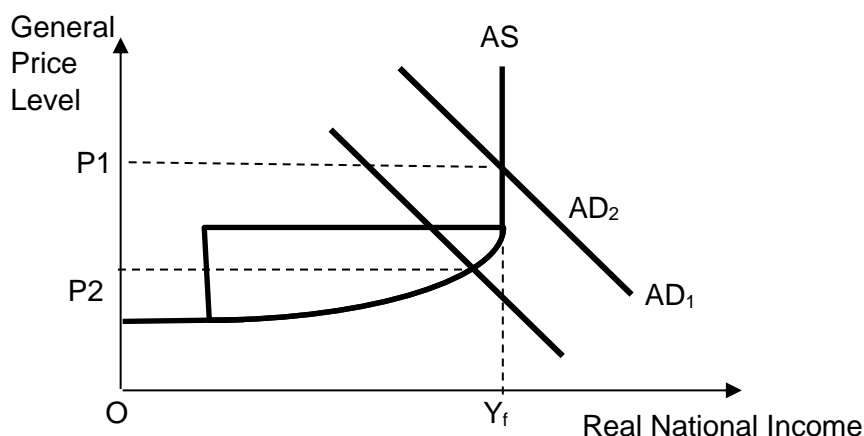
[P] In addition, since Singapore is an interest-rate taker (MAS chooses to manage the exchange rate due to the openness of the economy to trade and allowing capital flows), the rise in interest rate in the US may also cause the domestic interest rates offered by commercial banks in Singapore to rise (Extract 4).

[EE] This raises the cost of borrowing in Singapore, which leads to a further contractionary effect on the Singapore economy via reduction in the C and I component of Singapore's AD.

Positive Impact

[P] However, if the Singapore economy is already at full employment, then a fall in AD due to the fall in X, C and I would help to reduce inflationary pressures.

[EE] As AD falls, firms are able to use more efficient factor combinations, leading to a fall in unit cost of production. Firms pass on these cost savings in the form of lower prices, resulting in a fall in the general price level.



	<p>[P] Depreciation of the Singapore dollar helps to boost price competitiveness of Singapore's exports.</p> <p>[EE] At the same time, weakening of the Singapore dollar would also improve the price-competitiveness of Singapore's exports to the US. Therefore, demand for Singapore's exports could rise, resulting in an increase in export revenue (X), which could offset the rise in import expenditure and mitigate any negative impact on the economy as a result of the depreciation of the Singapore dollar against the US dollar.</p> <p><u>Conclusion</u></p> <p>[Stand] Overall, the impact of the interest rate hikes by the US Federal Reserve is unlikely to be harmful to the Singapore economy at this time.</p> <p>[Substantiation]</p> <p>Given the context of strong growth in US, it is likely that US citizens will be unresponsive to the interest rates hikes and are unlikely to cut back on their consumption and investment spending excessively in the short term. Furthermore, continued economic growth in the US means higher incomes and purchasing power for US households, resulting in continued strong demand for Singapore's exports.</p> <p>The impact of rising interest rates in Singapore is also likely to be minimal, as interest rates are still low and so households may not be as responsive in reducing borrowing and spending (Extract 4). However, should interest rates continue to rise, the negative impact of rising interest rates in the US is likely to grow in significance and could ultimately dampen economic growth in Singapore.</p> <p>In addition, since Singapore operates on a managed float exchange rate system and holds sufficient foreign reserves, should there be any signs of weakening of the exchange rate, the central bank is likely to intervene by buying Singapore dollar in the forex market so as to induce an appreciation and prevent the exchange from falling below the lower limit. As such, the negative impact on the Singapore economy due to a weaker Singapore dollar is likely to be minimal.</p> <p>Mark Scheme</p> <table border="1"> <thead> <tr> <th>Level</th><th>Descriptors</th><th>Marks</th></tr> </thead> <tbody> <tr> <td>L2</td><td> <p>Clear and balanced analysis on the impact (both positive and negative) of interest rates hikes in the US on the Singapore economy</p> <p>Cap at L2-6m for an answer that is purely theoretical, with no reference to case material</p> </td><td>4-7</td></tr> </tbody> </table>	Level	Descriptors	Marks	L2	<p>Clear and balanced analysis on the impact (both positive and negative) of interest rates hikes in the US on the Singapore economy</p> <p>Cap at L2-6m for an answer that is purely theoretical, with no reference to case material</p>	4-7	
Level	Descriptors	Marks						
L2	<p>Clear and balanced analysis on the impact (both positive and negative) of interest rates hikes in the US on the Singapore economy</p> <p>Cap at L2-6m for an answer that is purely theoretical, with no reference to case material</p>	4-7						

L1	Under-developed answer of how the Singapore economy may be impacted by interest rates hikes in the US	1-3
	E	Reaches a conclusion on the overall impact on the Singapore economy based on the critical analysis and the given context
<p><u>Markers' Comments</u></p> <p><u>Content</u></p> <ul style="list-style-type: none"> The direct impact of the interest rate hikes in the US on C, I as components of AD that resulted in the fall in NY should have been explained. This in turn will affect the demand for Singapore's exports thereby causing a contractionary impact on the Singapore economy. Many students instead explained the strong US economy and its impact on the Singapore economy which is not the intent of the question. The strong US economy could have been used as an evaluative comment on the overall impact of the interest rate hike on the Singapore economy. Misconceptions in many scripts that refer to the capital outflow as FDI. The funds that flow out of Singapore to take advantage of the higher interest rate in the US are invested in financial assets and NOT FDI (investment in real assets like factories). The link between the US interest rate hike and the rise in Singapore interest rate was not clearly explained The question asks for impact on the Singapore economy, which means macro goals. Answers cannot stop halfway (e.g. AD falls, or S\$ depreciating against the US\$), but instead need to go on to explain the implications on macro goals for Singapore. Some students are confused between supply in the forex market, supply in loanable funds mkt and money supply. Supply in forex market comes from parties who are willing & able to sell the currency. Supply in loanable funds market comes from savings, as savings are loaned out. Money supply refers to the total amount of money circulating in an economy; it is changed when the central bank injects or takes money out of circulation. Some answers went on to say that a depreciation of the S\$ would mean intervention by MAS to buy S\$ in the forex market and hence the impact is that foreign reserves will be depleted (or worse, cause the government budget balance to worsen - the government is not the central bank). First, it is an assumption that the S\$ will depreciate below the lower limit. Second, the question asked for impacts on the Singapore <u>economy</u>, and not on specific agents like the govt/central bank. Some students said that higher interest rate in the US would mean less borrowing to buy Singapore's exports. It is unlikely that buyers in the US borrow to buy big ticket items from Singapore. <p><u>Skills</u></p> <ul style="list-style-type: none"> The command word 'Assess' requires a discussion of various perspectives - this includes positive and negative effects on the SG economy, and effects via different channels. Answers to this question were often either out of point or not thorough, probably a reflection of weak grasp of the interconnections between the MP in US and its effect on the SG economy and/or poor time management. 		

		<ul style="list-style-type: none"> • Rather than give the usual theoretical evaluative comments, students should look to case evidence to get a better understanding of the context to make judgements. 	
--	--	--	--

Paper 2: Essays**Essay Question 1**

In 2019, Singapore's real GDP is expected to grow only by 0.5 to 1.0%. The unemployment rate remained steady at 2.3% as the total population expanded by 1.2%. Economic restructuring and an improving trade balance remained the key drivers for the economy.

- (a) Explain the possible reasons for unemployment in Singapore. [10]
- (b) Discuss whether the above economic statistics suggest that Singapore residents experienced a higher standard of living in 2019. [15]

Suggested answer for part (a)

Candidates are expected to provide reasons for a lack of demand (demand deficient unemployment), factor immobility (structural unemployment) and imperfect information (frictional unemployment) in the context of Singapore.

R1: Explain one reason for unemployment in SG (DD-side cause).

R2: Explain another reason for unemployment in SG (structural UN).

Introduction

Unemployment is the condition of the economy in which some factors of production are not being used in the production of goods and services. We can relate this under-utilisation to the labour market. The unemployed are defined as people of working age who are able and willing but are unable to find work.

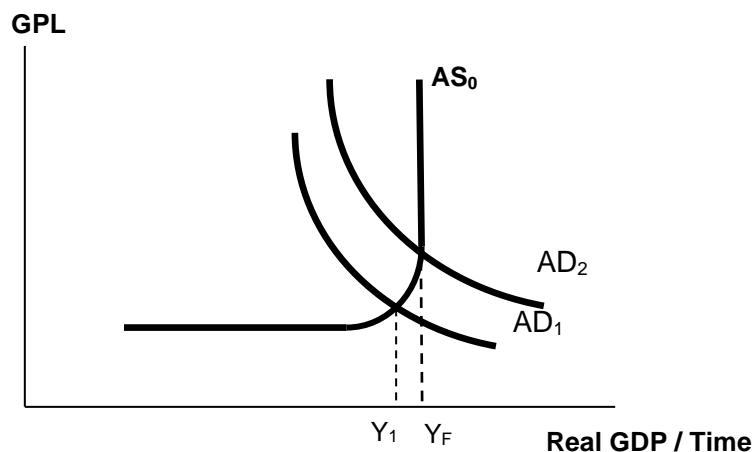
In Singapore, there are 3 possible reasons for unemployment. It could be due to a lack of demand in the economy, factor immobility and imperfect information on job opportunities.

Body

Explain how a lack in demand leads to demand-deficient unemployment

[P] The lack of demand for in an economy would lead to demand deficient unemployment.

[E/E] This lack of demand may be a result of low levels of export given Singapore's small and open nature. This results in an output gap which measures the difference between the actual output of an economy, Y_1 and its potential output, Y_F . This gap indicates that there is unemployment in the economy.



As seen in the diagram above, Y_F indicates the potential output of the economy when all its resources are fully used in production. Y_1 indicates the actual output that the economy is currently producing at. This implies that there is spare capacity in the economy that is not fully used, resulting in demand deficient unemployment.

[NOTE: This explanation shows why there is RISING demand deficient unemployment but not why there IS demand deficient unemployment]

This could be due a fall in any of the components in the Singapore's aggregate demand (AD). For example, when there is economic slowdown in Singapore's major trading partners, the fall in income in these economies will lead to a fall in Singapore's export revenues. As a result AD will fall, holding all the other components unchanged.

This leads to a leftward shift in the AD curve from AD1 to AD3. [In this case, there will be another AD3 curve in the diagram above that is to the left of AD1]. The increase in unplanned inventories will lead to firms cutting down on production. Since labour demand is derived from the production needs, there will be a fall in demand for labour. The fall in national income due to the initial fall in AD will trigger cuts in consumer spending due to the multiplier effect which causes AD to fall further until a new equilibrium is achieved. The output gap measures the difference between the actual output of an economy and its potential output. This gap indicates that unemployment has increased. Thus, the lack of demand for Singapore's goods and services have resulted in demand deficient unemployment.

Explain how factor (occupational) immobility leads to structural unemployment

[P] Factor immobility occurs when there are barriers to the mobility of factors of production between different industries that leads caused these factors of production to remain unemployed.

[E/E] There are two main types of factor immobility – occupational and geographical immobility.

One of the main causes of unemployment is that workers lack the skills required by changing industries in the economy. For example, when the economy switches from an industrial-based economy toward a knowledge-based driven economy, workers without this skill-set will be displaced. This form of occupational immobility occurs when workers in one particular type of industry decline or close down over time, but these displaced workers do not possess the requisite skill-set that is needed to operate in a new industry that is growing and has jobs available. For example, when Singapore lost its comparative advantage in the manufacturing of hard disks to her neighbouring countries, the displaced workers in this manufacturing industry were not able to find jobs because they did not possess the required skills to take on jobs that are more knowledge-intensive such as wafer-fabrication where clean-room environment and highly sophisticated equipment and skills are needed in Singapore.

Geographical immobility of labour occurs when there are barriers to people moving from one area to another to find work. This could be due to vast differences in housing prices that makes it difficult to relocate and purchase a home in another region where the jobs are. For example, the worker in Singapore who lost their jobs in hard disk manufacturing may not be able to relocate to Malaysia because of the higher home prices that foreigners have to pay in the country. This results in structural unemployment due to geographical immobility.

Explain how imperfect information lead to frictional unemployment

[P] Imperfect information is a barrier to job seekers looking for new job opportunities, causing them to remain unemployed.

[E/E] Imperfect information such as those related to workers' lack of information about available jobs, the nature of jobs or even employers' information about the quality of applicants could result in frictional unemployment. Frictional unemployment occurs when workers leave their jobs and are unemployed for a period of time while they are searching for a new job. They may not get the first job they apply for despite the vacancy as prospective employers search for their desired candidate. With imperfect information, job seekers may take a longer time in order to find their desired job. At the same time, the imperfect information may result in job seekers having the wrong impression of the job that they wish to undertake. As a result, they may resign soon after and have to look for another job. From the prospective employers, the imperfect information may also result in them getting workers that may not fully fit their requirements.

Conclusion

Hence, the reasons for unemployment in Singapore may be due to a lack of demand, factor immobility or imperfect information. The lack of demand for goods and services produced by Singapore leads to demand deficient unemployment while factor immobility causes structural unemployment. Frictional unemployment is the result of imperfect information in the jobs market. With the advent of technology and better transparency in job advertisements, the problem of imperfect information may become less significant in Singapore.

Mark scheme for part (a)

Level	Descriptors	Marks
L3	Well-explained answer that demonstrates understanding of different causes of unemployment. Cap: 8m without contextual examples	8 – 10
L2	A good and thorough theoretical explanation of TWO type of unemployment OR Under-developed and theoretical answer with gaps in the explanation. Max: 6m if only demand deficient unemployment is well-explained	5 – 7
L1	Mere stating of definitions and reasons for unemployment with little or no explanation or contain conceptual errors.	1 – 4

Markers' Comments for part (a)

Content

- Occupational immobility was not well-explained. Firstly, economic restructuring per se does not cause occupational immobility. Secondly, occupational immobility means that workers cannot instantly pick up different skills required or possess the requisite skills for another job, because it takes time to retrain or because they lack the abilities. Hence, economic restructuring that results in certain workers to lose their jobs coupled with occupational immobility that results in structural unemployment.
- It is not sufficient to say that workers lose their jobs and hence they are structurally unemployed. The crux of structural unemployment is that these workers are unable to take up new jobs because they lack the skills and there is occupational immobility.
- Some students explained that with the increased emphasis on Research and Development, technology is replacing humans/ workers that caused structural unemployment. Instead, they should explain that workers who lack the relevant skills needed to operate these machines are left redundant and therefore this leads to structural unemployment.

- Structural unemployment cannot be illustrated with either the AD-AS or labour market diagram. Students ought to use the relevant technical terms and concepts to explain how it results.
- The AD-AS diagram illustrates the output gap, which implies that there are unused resources, including labour. Thus, it shows that there is demand deficient unemployment.
- In the explanation for frictional unemployment, some students said that workers in Singapore took a long time to find jobs due to high unemployment benefits - that is untrue as there is no unemployment benefits in Singapore.
- When referencing unemployment on the AD-AS diagram, students ought to refer to the output gap $Y_e - Y_f$ as opposed to merely referring to equilibrium real GDP which strictly denotes real output not employment. In addition, students should explain the relationship between real output and employment clearly.

Skills

- Question dissection was a problem that caught many students off. The question asked for reasons for unemployment, not rising unemployment. Answers thus should not have explained demand-deficient unemployment through a fall in AD. Thus, when diagrammatic analysis is used, students should reference equilibrium output Y_e to the full employment output Y_f in order to illustrate how demand deficient unemployment results as opposed to rising unemployment.
- The command word is “Explain”, meaning students just need to explain the likely reasons for unemployment in Singapore. There was no need to evaluate which cause of unemployment would be more likely or significant.
- The question also specifically stated the context of Singapore, which means that answers should provide examples that are relevant to Singapore’s case.

Suggested answer for part (b)

Candidates are expected to analyse the data given the preamble to justify the material standard of living for Singapore residents in 2019. Knowledge of non-material standard of living in addition to understanding the limitations of data given should also be included in the answers.

R1: Explain how the above statistics indicate higher SOL for SG residents in 2019.

R2: Explain how the above statistics may not indicate higher SOL for SG residents in 2019 (whether limitations of above statistics in preamble, or other statistics needed).

Introduction

A country’s standard of living refers to the well-being of its residents which comprises two aspects: material and non-material well-being. Material well-being stems from the consumption of goods and services while the non-material aspects of well-being stems from intangibles. Given the above statistics, only the material aspects of well-being may be interpreted.

Body

Explain how rise in real GDP indicates higher material well-being for Singapore residents

[P] The expected rise in real GDP by 0.5 to 1.0% for Singapore in 2019 suggests that there should be a rise in the material Sol for Singapore residents.

[E/E] This means that the rise in national income will be higher than the inflation rate for 2019. Hence, this rise in real income indicates that there is a rise in the purchasing power of households in Singapore which allows for a higher level of consumption compared to 2018. As such, Singapore residents should have a higher SOL in 2019.

[Ev] However, the statistics also mentioned that the total population rose by 1.2% which suggests that it is rising faster than the rise in real GDP. Hence, the distribution of this rise in real income for an average Singapore resident (real GDP per capita) would have actually fallen.

[Ev] However, if the GDP growth was driven by rising exports, the GDP statistics could have overstated the improvements in material well-being for residents in Singapore. This is because the goods and services produced in the current year were not consumed by residents in Singapore.

[Ev] Even if there was a rise in import expenditure, these imports would have to be in terms of final goods and services in order for the material well-being of Singapore residents to have risen in 2019.

Explain how unemployment rate may affect material well-being of Singapore residents

[P] The steady unemployment rate of 2.3% in 2019 suggests that there are untapped labour in the economy.

[E/E] The statistics above showed that while there was real GDP growth as well as population growth, the unemployment rate remained at 2.3%. This suggests that while there was an increase in AD (shifting it rightwards) leading to higher output and employment, there was also an increase in the potential of the economy (vertical AS shifting rightwards) due to expanded labour force with larger population. Some residents who gained employment due to jobs created by actual growth would now earn income and be able to afford greater consumption, thus they enjoy higher material SOL. However, some residents remain unemployed and are less able to consume due to a lack of income. Overall, given the steady unemployment rate, the material SOL of residents may not have risen. Thus, the material SOL of the average Singapore resident may not have risen.

[Ev] However, this is likely the result of the economic restructuring that has taken place. This means that while the short term material SOL may not have risen, the increased productive capacity would allow for more room for economic growth going forward. Given time to reskill, workers are able to take up new jobs. This would then raise the material SOL in the future.

Explain what other indicators would be needed to reflect non-material aspects of SOL

[P] There should be other non-material aspects of well-being that needs to be considered in order to ascertain whether Singapore residents enjoyed a higher standard of living in 2019.

[E/E] If Singapore residents had to work much longer hours compared to 2018 in order to achieve the higher real national income, the improvement in material well-being may be overstated. This is because there is now less time for Singapore workers' leisure and may affect their health and happiness. As such, the trade-off between material well-being and non-material well-being needs to be taken into account.

[E/E] If there was a higher levels of pollution or stress levels in 2019, the non-material well-being of Singapore residents may also be overstated by the rise in real national income. The health of Singapore residents may be affected by the pollution level or suffer from anxiety issues as a result of the higher stress at work. Thus, this trade-off will affect the stated SOL based on the statistics alone.

[Ev] As such, other composite index such as the Human Development Index may be a better indicator of the overall SOL of Singapore residents in 2019. This index would take into account both the material well-being as well as non-material well-being aspects in the measurement of SOL.

Conclusion

[Stand] Given the limitations of the data provided and the absence of the data on the non-material aspects, it is not conclusive that Singapore residents experienced a higher standard of living in 2019.

[Substantiation]

The accuracy of data provided is important in order to measure the rise in the real purchasing power for the change in material well-being. While the Singapore economy has strong and reliable institutions in place to ensure that income statistics are accurately captured, the real GDP growth given was only a projection.

In addition, real GDP per capita only provides the distribution of real national income for the average Singapore resident. In order for the SOL to be accurately measured, the Gini coefficient could provide a better measure of the distribution. In recent years, the Gini Coefficient suggests that the income gap between the rich and the poor have improved. Thus, it would be likely that the material well-being of Singapore residents should have improved.

Lastly, the non-material aspects of well-being could offset any rise in the material well-being of Singapore residents. Rising stress level and longer working hours could erode any rise in consumption of Singapore residents.

Mark Scheme for part (b)

Level	Descriptors	Marks
L3	Well-explained answer that demonstrates understanding of SOL in terms of material and non-material well-being. Answer demonstrates knowledge of limitations and insufficiency of data provided.	8 – 10
L2	A good and thorough explanation of how statistics provided indicates material well-being of Singapore residents OR Under-developed answer with gaps in the explanation of how the statistics indicate/ not indicate both material and non-material well-being. Max: 7m if only GDP statistics is used Max: 7m if only material well-being is explained	5 – 7
L1	Mere interpretation of data given with little or no explanation; contain conceptual errors.	1 – 4
E3	Makes substantiated judgements on whether Singapore residents are more likely or not to enjoy higher SOL in 2019 by examining the context of country and data provided.	5
E2	Substantiated judgements about whether given data shows a rise in SOL for Singapore residents.	3 – 4
E1	Unsubstantiated judgement of the extent to which answer agrees/disagree with the view.	1 – 2

Markers' Comments for part (b)**Content**

- Some answers claimed that since Singapore's trade balance improved, it meant that import expenditure (M) fell and hence households consumed less imports or there's less variety of imports, resulting in a fall in the material SOL. Firstly, an improving trade balance does not necessarily mean M fell; since it could have been a case of rise in X is greater than the rise in M. Secondly, even if M did fall, it does not mean less variety of imports were available. Thirdly, even if households did consume less imports, it may have been because they switched to consume domestically produced goods instead. Hence, material SOL may not have fallen.
- Some students said that with a steady unemployment rate and growing population, it meant that more people are employed / unemployed, and thus SOL rise / fall. Logically, if population

rose leading to labour force expanding, and yet the unemployment rate remained the same, it must mean that there has been an increase in both the number employed and number unemployed.

- When students explained that real GDP per capita fell according to the data, a handful of students explained that the fall in real GDP per capita caused a rise in non-material SOL because with lower production, industries in Singapore will generate less pollution. This is inaccurate, just because real GDP per capita decreased, it does not mean that the overall production level has decreased. Students should just consider that there was real GDP growth in 2019 and this means that there was a rise in national output level and it is possible that with greater economic activity, there could be higher levels of pollution.
- This is an impact on SOL question where there is no need to involve the AD-AS tool of analysis. A number of answers repeatedly used the tool inappropriately or unnecessarily; e.g. there was no need to explain how actual growth came about.
- When linking unemployment to SOL, a good consideration is equity as opposed to consumption ability. The latter is generally better addressed using GDP statistics. Greater unemployment when faced with a certain level of national income could indicate poorer income distribution especially when the Gini Coefficient is not available. Also more severe structural unemployment also points to inequitable distribution of income since workers who suffer from this tend to be more lowly educated and belong to the lower income group in Singapore.

Skills

- The question specifically asked to look at the given economic statistics, and yet many answers did not closely refer to the given statistics. For a strong answer, there should be a larger range of statistics used in the analysis instead of merely looking at the real GDP growth alone.
- Weak answers merely explain whether real GDP is a good indicator of SOL. This answer approach clearly shows poor question dissection and mere memorisation & regurgitation.
- Some students explained real GDP and inflation rate separately, showing a lack of understanding that real GDP meant that the prices are kept constant and hence the inflation rate has already been considered.
- Other weak answers went on to explain what caused the GDP to rise, or made random claims about other factors happening that caused the observed phenomenon in the statistics before going on to analyse the impact of these other factors on SOL. The question did not ask for the reasons for the given statistics. This shows, yet again, poor question interpretation and dissection.
- Weak answers did not even mention that in addition to the limitations of the statistics given, non-material indicators would also be needed to ascertain the claim on SOL. Some mentioned the non-material indicators but did not explain how it affects the non-material standard of living.
- When explaining limitations of GDP figures, it is good to use the terms 'overstate SOL' or 'understate SOL' in relation to the limitation highlighted. This allows more specific analysis. For example, since workers could be working harder to generate the higher level of national output, the fact that leisure hours are not accounted for could mean that the GDP figures overstated the level of SOL.

Essay Question 2

- (a) Explain why governments aim for a low and stable inflation rate. [10]
- (b) Discuss whether inflation in Singapore is more likely to be an internally or externally driven phenomenon. [15]

Suggested Answer for part (a)

R1: Explain one reason why governments aim for a low and stable inflation rate.

R2: Explain another reason why governments aim for a low and stable inflation rate.

Note: Ensure sufficient scope in your answer e.g. macro vs micro.

Introduction

Inflation is a situation where there is a sustained increase in the General Price Levels (GPL) of an economy. Governments usually target for a stable inflation rate of 2-3%.

Body

[P] Governments aim for a low and stable inflation rate in order to maintain the SOL of its citizens/prevent the SOL of its citizens from falling and prevent an arbitrary and inequitable redistribution of income.

[E/E] Inflation reduces the internal value of money. When inflation is high, as long as nominal wages remains constant or rises less than the inflation rate, the purchasing power of workers and hence households will fall as they are able to purchase less goods and services with the incomes they receive. This reduces their material SOL.

[E/E] While in reality, some workers may be fully compensated for the effects of inflation through wage increases which equate to the inflation rate, these are likely to be a minority – those with strong individual bargaining power such as those who possess unique skills e.g. specialized surgeon working for a private hospital, or workers who are represented by strong trade unions e.g. pilots. It may be perceived by society as inequitable that only the wages of a few keep pace with inflation.

[E/E] In addition, owners of factors of production in the form of land and capital, or assets do not lose or may even gain. For example landlords are able to adjust their rents charged to tenants once contracts expire, and when inflation is rising such that it is unpredictable, they may charge rents which are higher than the inflation rate such that they actually gain. Hence there is an arbitrary and inequitable redistribution of wealth from workers to owners of capital and land.

[P] Governments aim for a low and stable inflation rate in order to allow the market to allocate resources efficiently such that society's welfare can be maximised.

[E/E] When inflation becomes too high and/or rising, prices no longer change in a predictable manner. When the price of a good increases a producer is unable to clearly determine if the price increase is indeed due to an underlying increase in consumer preference and hence demand for that product. He may choose to allocate more resources to the production of that good, but it may be the case that consumer demand has not increased.

Due to scarcity, it is important that resources be allocated in a way which maximises society's welfare, i.e. one whereby allocative efficiency is attained. In a market economy, price signals play are the mechanism by which it is attained – higher prices indicate rising consumer preference for the good – and hence resources should be allocated to fulfill consumers desire for the good, just as falling prices signal to producers to allocate less resources to the good. Hence with the distortion of the price mechanism as a result of high and rising inflation, society's welfare will not be maximised.

[P] Governments aim for a low and stable inflation rate as price stability enables business certainty that encourages investments and prevents the economy from experiencing a deflationary spiral.

[E/E] In order for firms to undertake investments, they need to be assured of the profitability of their investments, which would entail them being able to accurately forecast their expected revenues and cost incurred in producing goods and services and hence profits. This would only take place if prices are changing at a stable rate, for e.g. 2% annually. Investments increases AD which leads to a multiplied increase in real NY via the multiplier effect but also leads to potential growth in the economy, assuming that the rate of capital accumulation exceeds the capital depreciation rate. This enables the actual growth experienced by the economy to be sustained into the long run. Such an increase in investment is especially likely if the economy is experiencing demand-pull inflation – inflation then indicates that the economy is doing well as real output is increasing and if such a phenomenon has been happening for a period of time, firms optimism and hence expected returns on investments would increase.

[E/E] By contrast, if inflation is negative, consumers may begin to withhold consumption in anticipation of further falls in prices. This then leads to AD falling and real GPL to fall further which then results in consumers holding back C further such that a deflationary spiral results. As such to prevent this possibility governments aim for a low and stable inflation rate of at around 2-3%.

Mark Scheme for part (a)

Level	Descriptor	Marks
L1	Answer is largely irrelevant and/or erroneous and merely states a few valid points without much explanation.	1-4
L2	For a response which attempts to answer the question but does not explain in sufficient detail and/or is lacking in economic analysis Cap at 7 – Answers which respond to the question “Why is high inflation bad” with no attempt to link response back to the question – i.e. why do governments aim for low and stable inflation.	5-7
L3	Answer addresses the question fully, i.e. why inflation cannot be high and why prices must be stable. Economic analysis is rigorously done.	8-10

Markers' Comments

Content

- Only a small minority of students mentioned the part on efficient allocation of resources. Out of those who mentioned it, only a small number were able to explain it properly
- For impact on households, students tend to leave out the point on preserving purchasing power of households. If it was mentioned, it was also not well explained (e.g. no link to real wages)
- When it comes to analysing the impact on firms, students often do not link it to the ability to accurately forecast costs, revenue and thus profits accurately. It was usually phrased as “Firms will feel more confident about the economy” which is way too vague. Others explained that that real i/r falls is actually an effect of inflation, but does not address “low and stable”.
- The link to investment is one of the critical points for this question. In particular, students ought to prioritise the benefit of a low and stable inflation rate offering greater predictability in estimating revenue and costs. This lowers risk and offers a higher expected rate of return in the investment decision. This is superior to arguing about real interest rates since higher inflation would mean an even lower real interest rate which detracts from the intent of the question.
- When utilising the AD-AS tool of analysis, students ought not to gloss over the explanation. A well referenced and explained diagram is one of the easiest ways to demonstrate rigour of analysis.

- When explaining that keeping inflation low helps ensure price competitiveness against foreign goods, students should not say that “exports would be relatively cheaper in foreign currency terms”. The phrase in “foreign/domestic currency terms” is only used when there is a change in exchange rate as this would create a difference in the price of the good in local or foreign currency terms. This is not the case with inflation as a higher domestic price of goods to be exported would translate into a higher price of the good regardless of whichever currency, *ceteris paribus* (which includes holding the exchange rate constant).

Skills

- Some students also examined the cause of low and stable inflation, which does not address the question directly
- The question is about consequences. There were a number of answers that spent quite a significant portion on analysing the causes of inflation unnecessarily.
- Answers ought to be phrased as the benefits of a low and stable inflation rate as opposed to the negative consequences of high inflation in order to address the question explicitly.
- Almost all answers did not address the benefits of both the magnitude (‘low’) and volatility (‘stable’).

Suggested answer for part (b)

R1: Explain how inflation in SG can be an internally-driven phenomenon.

R2: Explain how inflation in SG can be an externally-driven phenomenon.

Introduction

Demand pull inflation results from a continuous increase in AD when the economy is near or at full employment; cost-push inflation results from a continual increase in unit cost of producing goods and services which are not caused by an increase in AD.

Body

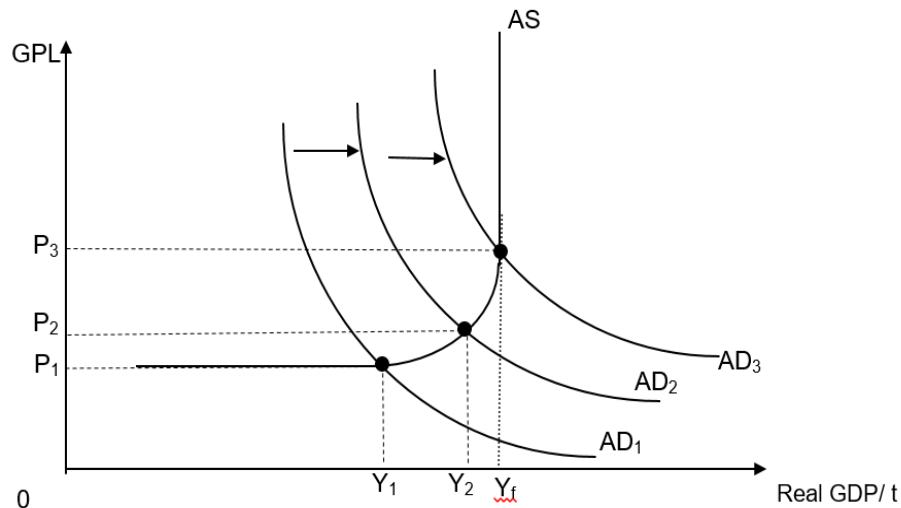
Thesis: Inflation in Singapore can be a domestically driven phenomenon

[P] Demand-pull inflation in Singapore can be a domestically driven phenomenon.

[EE] A continuous increase in AD due to an increase in domestic consumption, investment or government expenditure such that AD is rising faster than the AS/productive capacity of the economy can trigger demand-pull inflation. This would occur when, for example, there is an improvement in consumer sentiments due a period of continuous growth, such that consumers expect that they will receive pay rises or additional bonuses from their employers as the economy continues to expand. They would hence reduce their savings and spend more, for example on domestic services such as dining.

[EE] It could also occur when Government needs to undertake infrastructure projects and especially large ones – for e.g. construction of new HDB estates to meet the desires of Singaporeans who intend to get married and desire a home of their own, construction of new hospitals to meet needs to an ageing population or new MRT lines to cope with increased public transport ridership.

Figure 1: Demand-pull inflation



[EE] With reference to Figure 1 above, with an increase in AD, from AD_1 to AD_2 and AD_3 , profit-motivated firms respond by increasing production as they face an unplanned fall in inventories. However, as firms increase output and operate closer to full employment levels of output (Y_f), they have to resort to using less and less suitable factor inputs as more suitable factors had been used up. Hence, increasingly larger amounts of labour and other inputs are required per additional unit of output produced, resulting in higher unit costs of production which are passed on to consumers in the form of higher prices and hence GPL increases.

[Ev] While any component of AD can theoretically cause an increase in AD, an increase in C will not lead to significant increase in AD for Singapore due to the small size of the domestic market and C is not a significant component of AD.

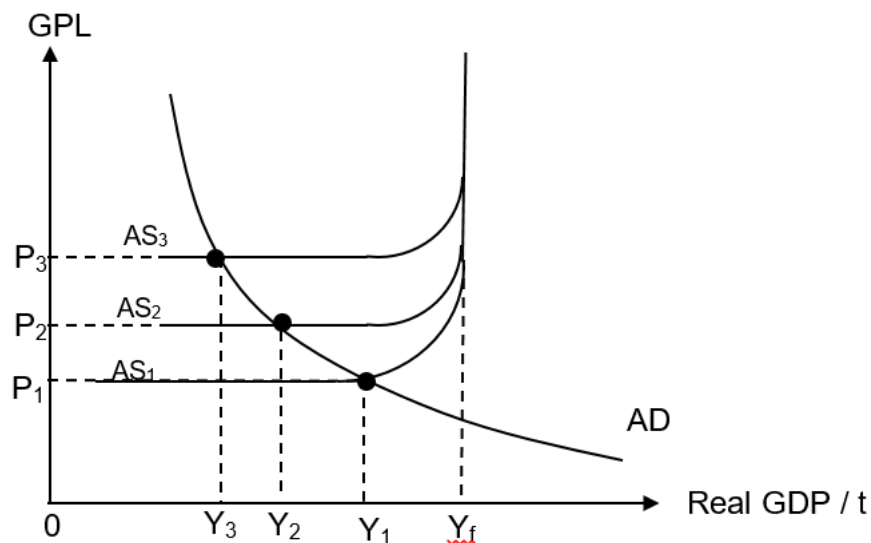
Similarly, the size of the government sector is small compared to other countries. Furthermore, in reality because the government in Singapore often plans ahead for the future, it is often able to defer major infrastructure projects if the economy shows signs of overheating.

[P] Cost-push inflation in Singapore can be a domestically driven phenomenon

[E] A fall in the AS due to an increase in unit cost of production stemming from increase in cost of domestic factor inputs can trigger cost-push inflation.

[E] For example, there could be wage-push inflation as a result of government policies to tighten the inflow of foreign labour. As foreign labour is used to supplement the domestic labour force especially in sectors such as manufacturing, retail and construction, a reduction in foreign labour inflow would reduce the overall labour supply and drive up wage rates. Assuming wage rates increase more than growth in labour productivity there will be an increase in the unit labour cost of production.

Figure 2: Cost-push inflation



[EE] With reference to Figure 2 above, when there is a rise in unit cost of production (profit motivated firms will be willing to continue producing the same output level only if they receive higher prices, i.e. pass on the rise in unit cost of production to consumers. Hence AS falls, as shown by an upward shift of the horizontal portion of the AS curve from AS_1 to AS_2 to to AS_{3s} . This causes the equilibrium GPL to rise from P_1 to P_2 to P_{32} while the equilibrium national output drops from Y_1 to Y_2 to Y_3 .

[Ev] In reality, the government carefully calibrates policies to ensure that macroeconomic stability is not threatened. In this case the government has chosen to reduce foreign labour inflows in a gradual way while at the same up providing more assistance to firms to increase their productivity through grants to help defer cost of purchasing labour saving technology as well as technical help through Enterprise Singapore.

Anti-Thesis: Inflation in Singapore can be an externally driven phenomenon

[P] Demand-pull inflation in Singapore can be an externally driven phenomenon

[E] A continuous increase in AD due to an external factor in the form of an increase in net exports (X-M) can also result in inflation in Singapore.

[E] This can occur, for example when there is a rise in income levels driven by economic growth in countries which buy Singapore's exports such as China, UK, EU, the US, or more generally major economies since Singapore produces a lot of intermediate goods such as high end semiconductor chips which make their way into various electronic gadgets. When income in other economies rise, there will be a rise in demand for these various final products which results in increased demand for these intermediate goods which Singapore produces.

[E] With a small domestic market, Singapore has pursued made export and engine of growth such that Singapore exports to markets much larger than itself. As such X-M is a major contributor to Singapore's AD and the value of exports is 175% of Singapore's GDP.

[Ev] While X-M is part of the external sector of the Singapore economy, the underlying reason could still be domestic. For example, increase in the quality of products produced by Singapore due to efforts by the Government to promote research and development could lead to greater demand for products from Singapore.

[Ev] In addition, demand-pull inflation occurs only when there is lack of spare capacity in the economy, government policies - i.e. a domestic factor in the form of supply side policies which increase the productive capacity of the economy is able to prevent demand-pull inflation from occurring in the first instance.

[P] Cost-push inflation in Singapore can be an externally driven phenomenon

[E] A fall in the AS could be due to an increase in price of imported raw material or components which are used to manufacture goods.

[E] This can occur as a result of an increase in global price of crude oil and/or other important commodities used in a wide range of industrial processes such as aluminum or intermediate products such as steel. The continued rise in global crude oil prices in the 2000s for example resulted in significant inflationary pressures in Singapore.

[E] Since Singapore lacks any natural resources but has a strong industrial base, producing a wide range of goods ranging from petrochemicals to semiconductors, Singapore is reliant on, and is dependent on the import of large quantities of commodities, making it susceptible to imported inflation.

Conclusion

[Stand] Inflation in Singapore is likely to be more an externally driven phenomenon.

[Substantiation]

Given the export-oriented nature of the Singapore economy, small domestic market, and dependence on imports of commodities for manufacturing goods, inflation is more likely to be an external phenomenon brought about by an increase in net exports leading to demand pull inflation, and imported cost-push inflation.

Furthermore, effective government policies ensure that domestic factors including government expenditure or government policies such as that to reduce dependence on foreign labour do not significantly contribute to inflation.

Mark scheme for part (b)

Level	Descriptor	Marks
L1	Answer is largely irrelevant and/or erroneous and merely states a few valid points without much explanation.	1-4
L2	Some correct attempt is made to explain both the domestic and external causes of inflation in Singapore from both a demand-pull and cost-push perspective. However answer does not have any application to context at all or there is insufficient economic analysis <u>OR</u> Answer is one-sided, covering either only internal <u>OR</u> external reasons; or cost-push <u>OR</u> demand-pull inflation	5-7
L3	An excellent response to explain the both the domestic and external causes of inflation in Singapore from both from a demand-pull and cost-push perspective. Economic analysis is rigorously demonstrated, as is a good understanding of the characteristics of the Singapore economy. Note: There is no need to have for different permutations; as long as mention is made of external/internal; and demand-pull/cost-push.	8-10
E1	An evaluative statement/Evaluative statements that are not justified by economic analysis	1-2
E2	Some evaluative comments/attempts at making judgements that is somewhat explained using economic analysis	3-4
E3	Evaluative comments are made throughout the essays and are backed by economic analysis. An attempt is made to synthesise all the arguments presented in a well-reasoned manner.	5

Markers' Comments

Content

- Students tend to leave out the mechanism that explains why a rise in AD would lead to a rise in general price level. They would state the assumption of the economy operating at near full employment and the next line would be a rise in GPL. The next part of the explanation that follows on 'increasingly inefficient resources employed' is often missing.
- When explaining the cause of inflation, students should avoid bringing in the multiplier effect as it is not relevant, as the multiplier effect is usually used to explain why a final increase in real NY is greater than the initial increase in initial component of AD that had increased. However, the underlying idea that any initial increase in AD would trigger an increase in induced consumption and hence subsequent increases in C should still be brought in as part of economic analysis.
- When explaining the cause of demand pull inflation in Singapore, answers cannot start with a rise in real GDP because this leads to a rise in induced consumption and not autonomous consumption – i.e. it is not the initial trigger of the change. Induced consumption does not trigger the shift in AD; only autonomous consumption does. So it needs to for e.g. start with a rise in X-M due to rise in income levels of trade partners.
- The explanation on the internal reasons that caused Singapore to experience cost push inflation was poorly done. Arguments that hinged on trade unions bargaining for higher wages are irrelevant in the context of Singapore. Very few students were able to point out that the rise in unit cost causing cost push inflation could possibly be due to wages rising greater than productivity levels due to for example, tightening of manpower policies on foreign labour.

Skills

- Some students chose to structure their answer according to demand-pull and cost-push. That is acceptable but students need to then explicitly state that the trigger factor is domestic or external. **The question needs to be directly addressed.** As much as it may be obvious, one must still explicitly say that a rise in X-M due to a rise in foreign income levels is an external factor.
- Some students only gave internal or external causes of inflation. This may have been due to a lack of time but doing so caused them to not be able to give a conclusion that addresses the question requirements.
- Some students didn't provide the factor that causes the change in the components of the AD or AS, resulting in the demand-pull or cost-push inflation. Rigorous economic analysis is a chain of complete cause-effect analysis, i.e. starting point needs to be very clearly identified.
- Referencing of AD-AS diagrams can be strengthened. It is important for students to reference the diagram variables to explain the shift of the respective curves and the change in the end variable which is GPL.

Essay Question 3

In August 2018, the Turkish Lira underwent a massive depreciation against the US dollar, going from 4.98 to a low of 6.90 Lira to the dollar.

Discuss the effects of a depreciation of a country's currency on its households, firms and government. [25]

Intro

The foreign exchange rate is the rate at which one currency can be exchanged for another in the foreign exchange market, which is determined by the demand and supply of the currency. The weaker external value of the currency would have different effects on households, firms, and the government. The analysis of the impact on the different economic agents would be based on standard of living for households, profits for firms, and macroeconomic goals, budget position and foreign reserves for the government.

Body

With a depreciation of the currency, exports become cheaper in foreign currency terms, as less foreign currency is required to exchange for a given amount of domestic currency for foreigners to buy the home country's exports. Imports become more expensive in domestic currency terms, as more domestic currency has to be used to exchange for a given amount of foreign currency to buy foreign products.

Impact on Households

[P] Households' material standard of living might fall due to a rise in import prices.

[E/E] A depreciation would cause imported consumer goods to become more expensive in domestic currency terms. With higher import prices, assuming that import goods are now relatively more expensive than domestically produced goods, households will experience lower purchasing power and thus consume less goods & services. This leads to a worsening in their material standard of living. For example, the depreciation of the Turkish Lira has led to a fall in the ability of Turkish residents to buy foreign products and to go for holidays in other countries.

[Ev] The extent of this effect depends on the proportion of imports is in total consumption. The greater the proportion of imports is in total consumption, the more the Turkish will suffer a fall in purchasing power, causing their material standard of living to fall more. If products consumed by households are largely domestically produced, then the negative impact on material standard of living would be smaller.

[P] Households' standard of living might rise due to a fall in demand-deficient unemployment.

[E/E] A depreciation of the domestic currency would result in an improvement in the balance of trade of the home country, and cause AD to rise (explained below). This will also lead to a fall in demand-deficient unemployment. As more factors of production are employed to increase output, households will see a rise in income, which increases their purchasing power, thus increasing their material standard of living as households are more able to consume goods & services.

[Ev] The extent of this impact depends on the industries that the households are working in. The ones who will directly benefit the most will be those who are working in the exports sector and the sectors that compete with imports.

Impact on Firms

[P] Firms' profits may rise with a depreciation of the domestic currency.

[E/E] With lower export prices in terms of foreign currencies, the goods produced by domestic firms for exporting will become more price competitive compared to their trade competitors producing

substitutes. This can cause a rise in demand for domestic firms that export, and hence a rise in the total revenue earned by the firms, increasing their profits. For example, a depreciation of the Turkish Lira would make Turkish exports to Europe cheaper in terms of the Euro. Turkish firms that export to Europe would then experience a rise in revenue and profits.

[E/E] In addition, domestic firms that compete with imported goods may stand to gain. With a depreciation, imports become more expensive in domestic currency terms. Products produced by domestic firms in the domestic market would thus become relatively more price competitive than imported products. These domestic firms that compete with imports would then experience a rise in demand for their products, allowing them to enjoy higher total revenue and hence higher profits. For example, a depreciation of the Turkish Lira would make Chinese imports into Turkey more expensive in Lira terms. Turkish-made products would become relatively more price competitive than imported Chinese products, hence these Turkish firms would enjoy higher revenue and profits.

[Ev] The extent of this impact depends on the degree of substitutability between domestically produced and foreign products. The more substitutable they are for each other, the greater the benefit on domestic firms when the domestic currency depreciates.

[P] Firms' profits may fall with a depreciation of the domestic currency.

[E/E] For firms that are very dependent on imported factor inputs, a depreciation of its own currency would cause its unit cost of production to increase. This is due to a rise in the price of imported inputs in domestic currency terms. As unit cost of production rises, there will be a shrinking profit margin for these firms, assuming that price of their products remains constant. For example, Turkish firms that import raw materials and component parts from Russia would face a higher cost of imported inputs. This would cause their unit cost of production to rise, and profit margins to be compressed.

[Ev] If these firms are able to pass on the rise in unit cost to consumers in the form of higher prices, revenue would increase if demand for their product is price inelastic and overall profits might not fall.

Impact on Government

[P] Depreciation of the domestic currency may lead to a balance of trade improvement.

[E/E] As a currency depreciates, this would lead to a fall in export price of its good in foreign currencies. Hence, there will be a rise in demand for exports from the home country, and a corresponding increase in export revenue. It would also lead to a rise in import prices in domestic currency. Assuming that demand for imports is price elastic, it would lead to a fall in import expenditure as quantity demanded will fall more than proportionately. With exports revenue increasing and imports expenditure decreasing, the balance of trade (BOT) would improve. That said, as long as the Marshall-Lerner condition holds ($|PED_x + PED_m| > 1$), $(X-M)$ will increase and the BOT will improve.

[P] Depreciation of the domestic currency would lead to an expansionary effect on the economy.

[E/E] As explained above, a depreciation of the home currency would lead to an improvement in the balance of trade $(X-M)$. Hence aggregate demand (AD) will increase as $(X-M)$ is a component of AD, from AD_0 to AD_1 as shown in Fig 1. Planned expenditure becomes more than actual output, and this leads to an unplanned fall in the inventory levels of firms. Firms will respond by hiring more factors of production (which includes labour) and produce more goods and services. Through the multiplier effect, this has an expansionary effect on the economy as GDP increases from Y_0 to Y_1 and demand-deficient unemployment is reduced.

[Ev] The extent of this impact would depend on the nature of the economy. For an economy that is export-oriented, there would be a greater rise in AD and hence larger increase in GDP and fall in unemployment. For a more domestic-oriented economy, the impact would be smaller.

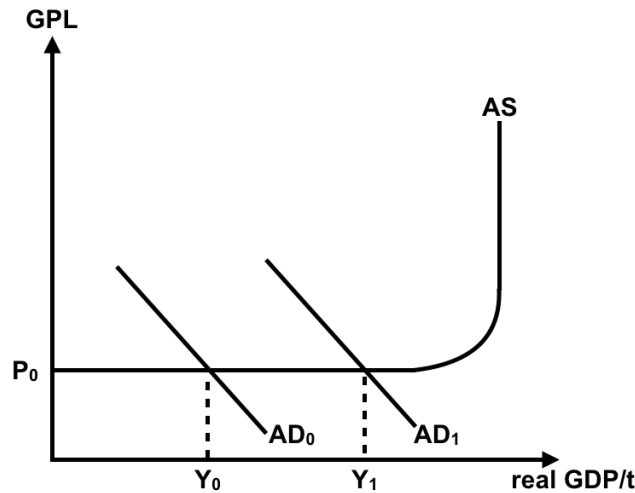


Fig 1: Expansionary effect on economy with depreciation

[P] The depreciation of the country's currency may cause both demand-pull and cost-push inflation.

[E/E] With a rise in $(X-M)$, it would cause a rise in AD from AD_0 to AD_1 as shown in Fig 2. Assuming that the economy is producing near the full employment level of output, it could result in demand-pull inflation. When AD rises, firms use resources that are increasingly less efficient in the production of goods and services as less suitable factors of production remain available. With falling efficiency in production, the unit cost of production rises. Faced with higher unit costs, firms would only be willing & able to produce at higher prices, thus the rise in unit cost is then passed onto the consumers in the form of higher prices, represented by a rise in GPL from P_0 to P_1 .

[E/E] Also, with imported factors of production becoming more expensive in domestic currency terms, this would result in a higher unit cost of production, and firms would only be willing & able to produce if they sell their products at higher prices. This results in a fall in AS, represented by an upward shift of the AS curve from AS_0 to AS_1 as shown in Fig 2. The fall in AS translates into a rise in GPL from P_1 to P_2 as the producers pass on the higher unit cost to consumers in the form of higher prices.

[Ev] The likelihood of demand-pull inflation occurring would depend on the state of the economy, whether the economy is near full employment or if there is ample spare capacity. The extent of cost-push inflation occurring depends on how reliant the country is on imported factors of production – the more reliant an economy is on imported inputs, the greater the extent of cost-push inflation, and vice versa.

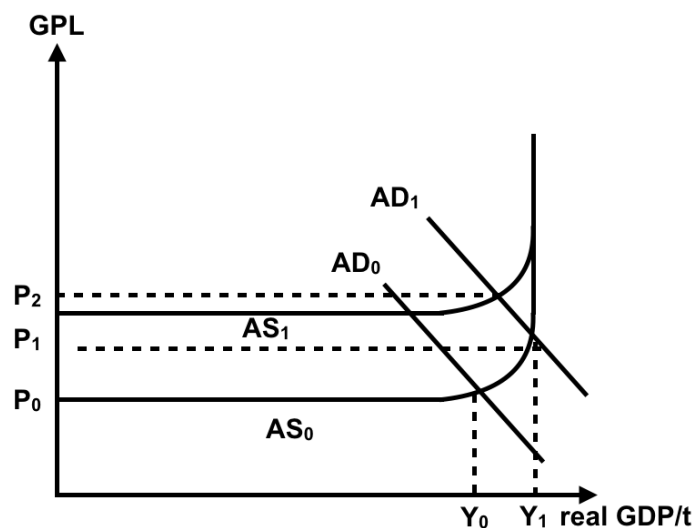


Fig 2: DD-pull & Cost-push inflation caused by depreciation

[P] Depreciation of the domestic currency might cause an contractionary effect on the economy through hot money flows affecting interest rate.

[E/E] Since there was a massive depreciation, investors may form expectations of further future depreciation of the currency. Expectation of further depreciation would cause an outflow of hot money as the expected future returns from financial assets denominated in the domestic currency has fallen. This results in a fall in the supply of loanable funds in the domestic economy and a rise in interest rates. As interest rates rise, the cost of borrowing is higher, leading to a higher marginal cost of domestic investments. The higher MC of investments makes less units of investment profitable, causing firms to decrease investment, leading to a fall in AD. The higher cost of borrowing would also cause households to decrease their borrowing to purchasing big ticket items, leading to a fall in C. Higher interest rates would also mean higher returns on savings, and a higher opportunity cost of consumption. This incenitises households to save more consume less, leading to a fall in C. As C and I falls, AD falls, which may lead to a fall in GDP and rise in demand-deficient unemployment via the multiplier effect.

[P] With a depreciation of the domestic currency, the government may experience a change in its budget position.

[E/E] With a rise in GDP and fall in unemployment, the government budget position would improve. With a rise in income, the tax revenue collected from income taxes would increase. There would also be an increase in the amount of tax generated from indirect tax as consumers consume more goods and services. Furthermore, there would be a fall in the expenditure incurred on social welfare spending and unemployment benefits as households incomes rise and unemployment rates fall.

[E/E] However, when the government buys good and services from overseas, it would have to pay more in domestic currency and that could worsen the government budget position. For example, as Turkey buys military equipment from the US, the cost of these equipment would be higher in Lira terms when the Lira depreciates, causing the Turkish government to increase their expenditure and worsen the government budget position.

[P] When the domestic currency depreciates by a large extent, the central bank may experience a fall in its foreign reserves if it adopts a managed float exchange rate system.

[E/E] If the external value of the currency falls below the lower limit, the central bank would have to intervene in the foreign exchange market. In order to prevent the currency from falling below the lower limit, the central bank would have to intervene in the forex market by buying back the domestic currency to raise the demand. This buying back of the domestic currency would entail selling their foreign reserves in exchange for domestic currency. This would reduce the central bank's ability to intervene in the future to prevent a depreciation.

Conclusion

[Stand] The effects on the different economic agents would be different, depending on the specific party and context that we are looking at.

[Substantiation] For households, it depends on the type of industry they're working in. For firms, it would depend on whether they are export-dependent and their dependency on imported inputs. For the government, it would depend on the extent of depreciation and the nature of the economy.

As explained above, the extent of the impacts depends on the nature of the economy, the degree of reliance on imported consumer products and factor inputs, the state of economy, the duration of the depreciation, and the exchange rate system adopted.

In addition, the extent of the impacts of depreciation also further depends on the extent of depreciation - the larger the extent of the depreciation, the more pronounced the effects would be on the different agents.

Furthermore, it must also be considered whether the depreciation is against a particular currency or across the board against many currencies. If the depreciation is across the board against many currencies, the impacts would be more keenly felt. If the depreciation is just against one particular foreign currency, then the extent of impact would depend on how important a trading partner that other country is. If that trading partner is not a significant export destination or source of imported inputs / consumer products, then the effects of a depreciation of the domestic currency would be smaller.

Mark Scheme

Level	Descriptor	Marks
L1	Mere stating / listing of the effects of a depreciation on the various economic agents with little or no explanation.	1-8
L2	A developed answer that covers only 1 economic agent OR An underdeveloped answer that covers 2 economic agents – only positive OR negative effects.	9-11
	A developed answer that covers 2 economic agents OR An underdeveloped answer that covers 3 economic agents, but lacks rigour in analysis or scope of possible different impacts.	12-14
L3	A developed answer that discusses the impact of a depreciation on the 3 economic agents, but with some gaps in analysis or scope of impacts.	15-17
	A thorough discussion of the impact of a depreciation on the 3 economic agents with clear rigorous analysis that covers both positive and negative effects for all 3 agents.	18-20
	Cap at 18m if effects on 2 parties done well (both positive and negative)	
E1	An unsubstantiated judgement about the effects of a depreciation.	1-2
E2	Judgement(s) made with some attempt to substantiate, but evaluation may be lacking in depth or scope.	3-4
E3	Well-substantiated judgements about the effects of a depreciation, with clear criteria to assess the impacts on the 3 economic agents.	5

Markers' Comments

Content

- When explaining consequences, the start and end variable should not be the same. In this case, students should not be explaining how change in the value of the currency ultimately leads to a change in the value of the same currency. Focus on the impact on other goals or economic variables.
- Avoid non-theoretical links. For example, a number of answers made a cursory link that a depreciation of the currency implies or leads to a poor economic outlook. Subsequently, they focused on the impact of a poor economic outlook. Secondly, every body paragraph should start with the original factor in the question. Stop and move on to a separate impact once you reach a macroeconomic goal. Avoid over-extending the analysis and digressing from direct impacts of the original factor.
- The term 'purchasing power' is used with respect to income. Thus students ought to avoid making the connection from price change unless they first address change in real income.
- When discussing impact on firms, be wary not to utilise terms associated with the economy. There were a number of answers that made reference to cost-push inflation or productive capacity of firms. Since the key variable is profits, there is also typically no need to utilise the AD-AS framework. Students should be using the Profits = TR-TC relationship instead.

- When evaluating, students should provide relevant contextual examples. For example, students can reference specific industries when discussing firms that are more reliant on imported inputs or are export driven. Likewise, students can provide a representative example when discussing countries with a small or large multiplier, etc. This will help to prevent the answer from being merely a theoretical one and helps in the construct of a more robust answer.

Skills

- Some students did not give answers that demonstrated a thorough discussion (e.g. only positive effects or did not cover 3 parties). This is critical to scoring well for this question as it is the question requirement.
- Weak answers were one-sided and provided only the benefits or costs of a weak Lira on the various stakeholders. The command word “discuss”, clearly suggests that there could be both positive and negative effects as well; or certain assumptions may need to be present in order for the analysis to be such. For example, the impact on firms may be dependent on whether the goods are exported or not; or whether the firms needed to import raw materials for their production.
- Students were not able to give a conclusion that sums up what the essay was about. Some scripts were merely summarising/rehashing what was already mentioned in the body of the essay. The lack of a stand in the conclusion resulted in the students not answering the question directly. Judgment made should address the question, i.e. the factors affecting the effects of the 3 economic agents.
- Other weak answers provided only explanations without any evaluation; while others kept repeating their explanations. For example, on how the weaker Lira benefited the trade balance for Turkey was repeated in the explanation for households and again for impact on AD.
- A few students changed the question to focus only on Singapore. This significantly narrowed the scope of their answers and conclusion.