

ECONOMICS

Higher 2

Syllabus 9570

Examiner's Report
Year 6 Timed Practice 2024



ECONOMICS

Y6 H2 Common Test 2024

Paper 9570/02
Paper 1 & 2

Suggested answers

(a) Using Figure 1, compare the trends of population and water demand in Singapore. [2]

- From 1960 to 2030, there was an increase in both the population and water demand in Singapore.
- However, the extent of increase in water demand was greater / faster compared to the extent of increase in population.

Mark Scheme

- 1m for similarity and 1m for difference.

Examiner's Comments

- This question was generally not as well done as expected. This was mainly due to many students doing an absolute comparison of population and water demand, e.g., stating that water demand exceeded population in a certain year. This is incorrect, as these two pieces of data are not comparable, as both are of different units. Hence the second mark for the difference was not awarded.
- Another reason why the full marks were not awarded was the lack of a comparative term such as "however", "but", or "while".

(b) Explain why PUB pegs the price of water to the "marginal cost of producing and supplying the next drop of water" as mentioned in Extract 3. [2]

- The reason is because PUB aims to achieve allocative efficiency. [intention]
- By using this pricing approach, the value that society places on the last unit of water produced (i.e. the price) is equal to the opportunity cost of producing it (i.e. MC), thus maximising social welfare. [how it is obtained]

Mark Scheme

- 1m for explaining the intention and 1m for explaining how AE is attained.

Examiner's Comments

- Most candidates understood the purpose of PUB's policy. Most were able to identify that doing so was for the purpose of achieving allocative efficiency, but the quality of explanation was missing. Most candidates that did not obtain the second mark was due to very vague explanations. A common incomplete answer was recognising how allocative efficiency is attained but did not explain that the price represented society's valuation of the last unit of water.

(c) With the aid of a diagram, explain how the “sewage spills into rivers and coastal waters” (Extract 1) affects social welfare in UK. [5]

- Sewage spills into rivers and coastal waters are considered a negative production externality in the market for water.
- This is because of neglect or poor maintenance of the water pipes that resulted in wastewater spilling out into water bodies. This is supported in Extract 1 as the day job of maintaining the assets has been done very badly in some cases.
- The 3rd parties who are negatively affected are people who are not involved in the provision of water and fall sick when they get into contact with the contaminated water bodies, thus incurring medical bills ($MEC > 0$).

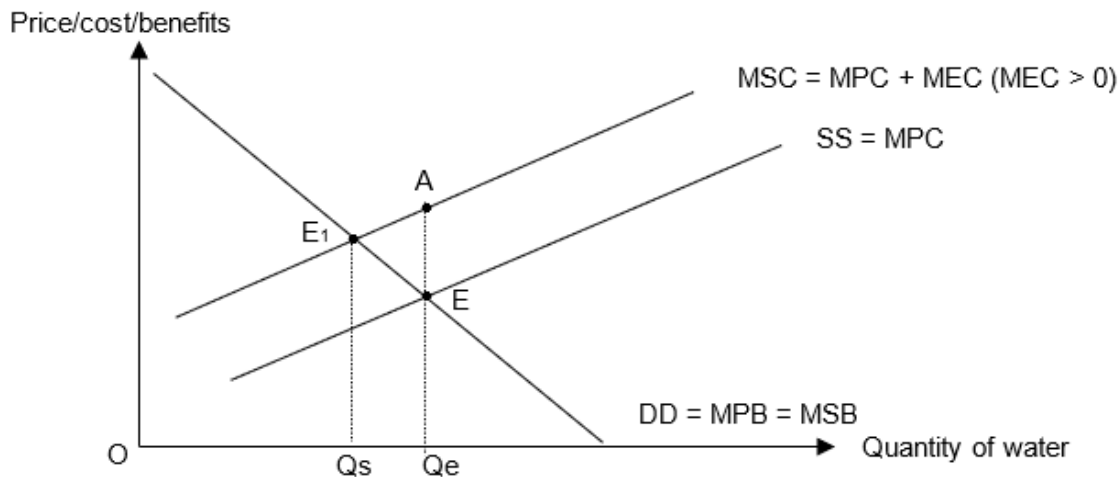


Figure 1: Negative production externality in the market for water

- In the pursuit of self-interests, water producers ignore the negative production externality, resulting in a divergence between the MPC incurred by themselves and the MSC incurred by the society in Figure 1 where MSC is greater than MPC due to $MEC > 0$.
- Assuming no other sources of market failure and a perfectly competitive market, the self-interest, profit-seeking water producers consider only its own private costs and the price they receive for providing water. Hence, the free-market output level is Q_e quantity of water where $MPB = MPC$ while the socially optimal level is at Q_s where $MSC = MSB$.
- As $Q_e > Q_s$, there is an overproduction and overconsumption of water, leading to a deadweight loss of area EE_1A because the benefits to society from the consumption of Q_e is less than the cost to society, thus social welfare is not maximised.

Mark Scheme

- 1m for identifying case evidence that the market for water generates negative production externality from Extract 1
- 2m for explaining the following
 - Explaining why the negative spillover effects are ignored à pursuit of self-interests
 - AND explaining the divergence - how that leads to a MSC being greater than MPC of production
- 1m for derivation of free market output level ($MPB = MPC$) with pursuit of self-interest by producers stated and derivation of socially desired output level ($MSB = MSC$)

- 1m for linking to free market output level being higher than AE level, thus leading to deadweight loss and social welfare not maximised.
- 1m for well labelled and well referenced diagram.

Examiner's Comments

- This question was not as well done as expected. Most students were able to correctly identify that the problem was of negative externalities but were not able to score well due to lack of detailed analysis.
- Common omissions included:
 - Not providing specific examples of 3rd parties and the specific impacts on them.
 - Not explaining how the free-market equilibrium and socially optimal level of output is derived. Many responses simply stated that they were at Q_e and Q_s respectively.
 - Not explaining what the deadweight loss area meant, rather, simply stated that there was DWL.
- For a well-drawn and well reference diagram, candidates are reminded to label their diagram with axis and curves properly.
- The x-axis should be Q of water – the good which when produced also generates the negative externalities. A handful of students labelled the x-axis as sewage spills. Do note that the x-axis cannot be labelled as the production externality itself.

(d) With reference to Extract 1, explain why a water company in a particular geographical region can be considered a natural monopoly. [3]

- High startup cost (e.g. building the water filtration plant, systems of distribution and piping etc.) à high natural barriers to entry
 - Coupled with statutory barriers to entry – each company granted a licence to provide exclusively for that area
- These costs spread over a large range of output à the LRAC curve of the natural monopoly falls continually over the entire market demand, resulting in a very large MES
- Market demand is large enough to support only one large firm operating at or near its minimum efficient scale of production (MES), other firms that enter unable to make normal profits at lower output levels

Examiner's Comments

- This question was not as well done as expected, due to lack of specificity in explanation.
- Most candidates were able to identify some form of BTE in the context, but some simply explained why it was a monopoly, rather than a natural monopoly. This would require the concept of having natural BTEs that result in a very large MES such that the market size could only support 1 large firm.

(e) In view of the crisis in the UK water industry, discuss whether the UK government should nationalise Thames Water. [8]

Introduction: Clarify key terms in the question

- Crisis in the UK water industry:
 - High water bills, prices becoming unaffordable

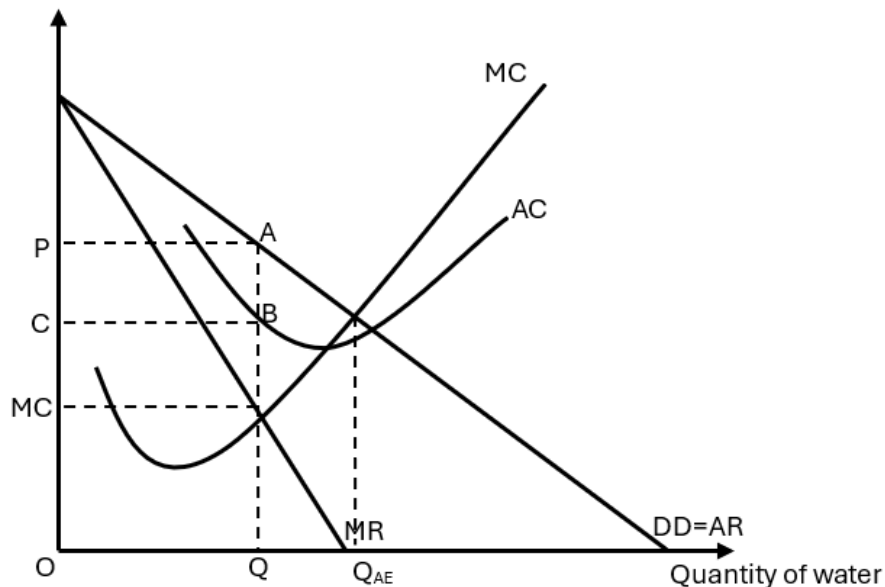
- Poor maintenance of water infrastructure resulting in sewage spills into rivers and coastal waters, leakages, etc.
- Nationalise: Transfer of ownership of the firm to the government (likely to require the government to purchase the assets and shares of the firm, i.e. government spending required)

Thesis: Reasons for nationalisation (address the inefficiencies of Thames Water)

Reason #1: Address the high water bills

- Thames Water operating like a private monopoly: charging consumers high prices, paying large amounts of dividends to shareholders
- Private monopoly faces a downward sloping AR curve as it has 100% market share, and is subject to the law of demand → profit-maximising firm produces up to the point where $MC = MR$, at output level Q
 - However, given the downward sloping AR curve, the profit-maximising level of output for the monopoly results in $P > MC$ - the value that consumers place on the next unit of water is higher than what it costs to produce it → there is underproduction of water
 - As the government's motive is not to profit-max, but to maximise social welfare and improve consumer welfare, The nationalised Thames Water can directly produce at Q_{AE} where $P = MC$, directly addressing the allocative inefficiency of the private monopoly, and prices can be further reduced.

Price/Revenue/Cost



Reason #2: Address the poor maintenance of water infrastructure

- Due to Thames profit-maximising objective, its focus was on redistributing profits to private investors rather than investing in the necessary infrastructure upgrading required for water system.
- Since government's objective is in maximising social welfare, nationalisation will result in government expenditure in the relevant upgrading of water pipes.
- With proper water pipings, this will lead to the reduction of the marginal external cost arising from the sewage spillage problem arising from Thame's self-interest of maximising profits.

Antithesis: Reasons against nationalisation (problems of nationalisation)

- High opportunity costs incurred in nationalising Thames Water as a large amount of funds are required to purchase the firm, and the necessary upgrading costs à could be used in other areas such as the healthcare system / skills upgrading plus may result in higher taxes in future à negative impact on material and non-material SOL / economic growth etc.
- Possibility of government inefficiencies such as bureaucratic red tapes and lack of profit motive may lead to higher than necessary costs from overstaffing, i.e. X-inefficiency - translates into higher MC in the long run - consumers may still face higher prices
 - Similarly, the lack of profit motive means that the government does not have the incentive to be dynamic efficient (particularly process innovation) as any rise in cost can be simply covered through government funding - consumers may still suffer the higher prices and poor service quality
- Possible lower levels of necessary investment towards water infrastructure if the government is not able to finance this investment expenditure for reasons such as poor fiscal position.

Evaluation & Conclusion

- Prior to the privatisation of Thames Water in the 1980s, the firm was nationalised – did not solve the problems of infrastructure upgrading – privatisation did not solve the problem either
- Hence perhaps the question is not whether it should be nationalised or privatised, but how can either economic agent be incentivised to provide the necessary investment in the infrastructure
- Given UK's significant public debt – government may not have the ability to nationalise Thames Water, nor upgrade the water and sewage system in the short run – hence the government may have no choice but to opt for a less aggressive approach for now, to consider ways to better regulate the firm. This could take the form of certain performance standard that have to be met, restrictions on the amount of dividends that can be distributed per year, or even minimum levels of investment in infrastructure upgrading per year. This approach may yield even better benefits that nationalising the firm – if the government is able to find the political will to enact such regulatory / legislative changes

Knowledge, application / understanding and analysis		
L1	• Smattering of points not directly linked to question • Descriptive without the use of an analytical framework • Conceptual inaccuracies • No use of case material • 1 sided response with only thesis or antithesis covered	1-3
L2	• Good scope and balanced argument in explaining the reasons for and against the nationalisation of Thames Water • Good application of case evidence • Well-developed explanation supported by diagrammatic analysis	4-6
Evaluation		
E1	• One evaluative point explained	1
E2	• One evaluative point explained, AND a recommendation or insight explained	2

Examiner's Comments

- Most candidates were able to do reasonably well for this question, as most recognised the crisis faced by the water industry, and recognised that nationalisation was one way to solve the market failure.
- However, many candidates did not start their response by clarifying the specific problems of this crisis – high water bills and poor water infrastructure. It is important to specify issues before proposing policies to address these issues.
- There were some conceptual errors, such as confusion about what nationalisation meant.
- Some responses started suggesting, analysing and discussing in detail other policies such as taxes or subsidies. Do re-read the question and understand that the discussion of alternative policies is not the focus.
- A handful of candidates also misread the question and thought the question was about nationalising the whole water industry in the UK when it was only a nationalisation decision for one firm which is Thames Water. As such, arguments such as reaping iEOS are not valid.
- Some other minor errors include:
 - Suggesting that nationalisation meant that the government would shift supply leftwards towards MSC. While this is possible, this would not be the best approach, as this would mean that prices would increase, when bills are already becoming unaffordable.
 - Identifying that the government could make supernormal profits from taking over the ownership of the firm. This is incorrect identified as this goes against the objectives of the government. Hence this was not accepted as a benefit of nationalisation.
 - Suggesting that nationalisation would mean a lack of competition, and hence would result in dynamic and productive inefficiency. While nationalisation may result in such inefficiencies, it is not because of the lack of competition - even without nationalisation, there was already no competition for Thames Water, so there is no change there! Instead, the correct reasoning should be that the government lacks a profit motive.

(f) Given the expected future water shortages in Singapore, discuss whether the government policy of raising the price of water is the only appropriate way to address this. [10]

Introduction

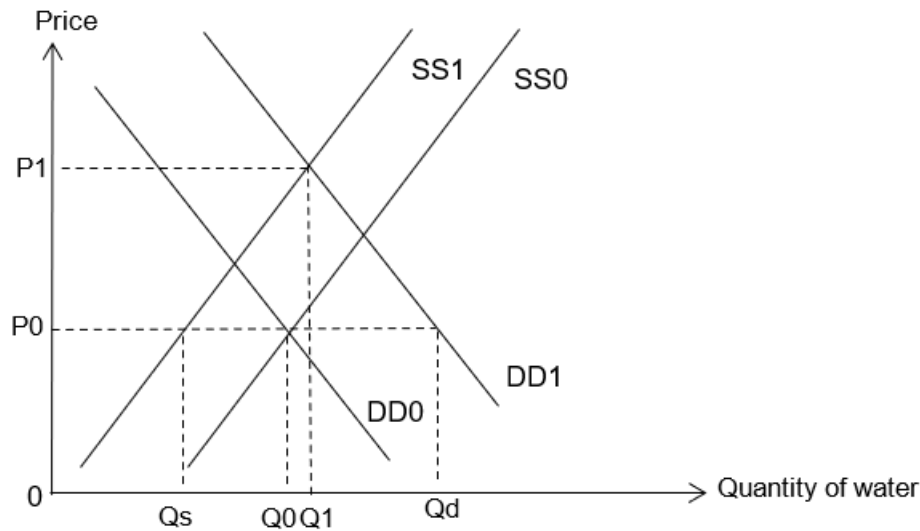
- Extract 2: With the expected doubling of water demand over the next 30 years and possible decrease in water supply due to unpredictability from extreme weather, water demand rises and supply falls
- Water shortages whereby quantity demanded outweighs quantity supplied at the original price level are expected to happen
- Increasing the price of water as stated in Extract 3 is indeed one of the appropriate policies that can be used by Singapore to overcome water shortages. However, the government also needs to consider other policies that either increases the supply or reduces the demand of water in Singapore.

Body

Thesis: How raising the price of water can overcome future water shortages

- When faced with expected water shortages whereby quantity demanded exceeds quantity supplied at a given price P_0 , PUB can increase the price of water from P_0 to P_1 to eliminate the water shortage. This is also reflected by PUB's approach to set at $P=MC$ which helps to attain

allocative efficiency through the market adjustment process, as the supply curve reflects the marginal cost of production in the market.



- The increase in price disincentivises consumers from buying more units of water as the utility of consuming these units is less than the price. There is a fall in their ability and willingness to consume water due to the income effect (increase in price reduces affordability and purchasing power of consumers) and substitution effect (some consumers may choose to re-use water such as using water for washing vegetables to water plants or rainwater to wash cars), quantity demanded decreases from Q_d to Q_1 .
- The increase in price incentivises producers to increase water production because previously unprofitable units are now profitable, hence they are more able and willing to increase quantity supplied from Q_s to Q_1 .
- Thus, when the price of water is raised to the new equilibrium from P_0 to P_1 , quantity demanded equals to quantity supplied at Q_1 , removing the water shortage effectively.

Anti-thesis: Limitations of raising the price of water

- Given the relatively price inelastic demand and supply of water, it is necessary to increase the price of water by a substantial amount to reach the equilibrium price.
 - This is because water has is an essential good in our daily lives and in the production of goods and services à no close substitute. Hence, PED of water is less than 1. An increase in price will only reduce Q_d less than proportionately. On the other hand, given that Singapore has a limited land space, there is a limit to how much Singapore can further increase its supply of water from catchment areas, suggesting a lack of spare capacity. Thus, PES of water is less than 1. An increase in price will only increase Q_s less than proportionately. Hence, the increase in price of water has to be raised significantly higher in order to reduce the quantity demanded and increase the quantity supplied of water sufficiently to resolve the shortage.
 - However, by raising the price of water significantly, this can lead to serious inequity issues as water is a necessity to all households and a much higher price of water will adversely affect the lower income households as they may be unable to pay for enough water for

their daily living. On the other hand, higher income households may only reduce their consumption of water marginally as the higher price of water still constitutes a relatively smaller percentage of their incomes.

- Moreover, since water is a factor input of production for various goods such as manufacturing goods, this increases the cost of production for producers, reducing their supply and hence increasing the price of their products as they pass on the higher costs to consumers. This reduces consumer welfare, and the higher cost of living may reduce their material standard of living, assuming the percentage rise in prices outpaces households' wage growth rates.
(Note to students: It is possible to link to adverse impact on macroeconomic goals since water is a key factor input of production in a country.)

Anti-thesis: discuss 1 contextualised demand OR supply policy

Policies to reduce demand of water

- As mentioned in Extract 3, since 2019, PUB only allowed water fittings with a minimum water efficiency rating of two ticks to be installed in new premises and those undergoing renovation. This legislation forces households to purchase more water efficient water fittings such as washing machines and thus reduce water usage. For example, less water is used for each wash cycle.
- This reduces the demand of water, assuming a modest decrease, this reduces the gap between quantity demanded and quantity supplied at the original price level, thus reducing the water shortage.
(Note to students: The other contextualised demand policy is the use of public education and behavioural nudges from showing average water usage and deploying smart water meters.)

Limitations of PUB legislation regarding water fittings installation

- PUB may incur a high administrative cost in enforcing this legislation. This may include conducting checks and surveillances on both physical premises supplying water fittings and online portals. This cost may be significant given the numerous water fittings retailers to monitor.
- Although the water fittings are more water efficient, this may not reduce overall water consumption for certain households due to behavioural changes, causing a perverse effect. For example, if water appliances like showerheads use less water, people may feel less guilty about showering more frequently or for longer periods, thus water demand may not fall significantly.

Policies to increase supply of water

- PUB can conduct research and development (R&D) to improve the efficiency of the desalination process. From Extract 3, PUB has been trialling the use of different types of membranes to improve the efficiency of the desalination process. Assuming this process innovation is eventually successful, the increased efficiency lowers the unit cost of production, increasing profitability and thus increasing supply of water.
- This reduces the gap between quantity demanded and quantity supplied at the original price level, hence reducing the water shortage.
(Note to students: Other contextualised supply policies could include investing in more water reclamation or desalination plants.)

Limitations of supply policies

- R&D projects are long term in nature with no guarantee of success. The outcomes are often unpredictable, and the results may not yield practical or scalable solutions.
- There are high R&D costs incurred by the Singapore government when it comes to researching, developing and testing of the new desalination technologies. This may pose a heavy strain on the government's budget and this incurs an opportunity cost whereby the R&D monetary sum could have been used to improve Singapore's healthcare system to cope with a rapidly ageing population, assuming this is the next best alternative.

Evaluation & Conclusion

- In conclusion, given the rise in demand and fall in supply of water globally, raising the price of is necessary to achieve market equilibrium. The rise in the equilibrium price of water is also necessary to reflect its increasing scarcity, in line with PUB's approach of MC-pricing.
- However, simply passively increasing prices in response to global market forces is not the only option. In the longer term, it is crucial to address the root causes of the fall in supply and rise in demand to maintain the affordability of water which is a necessity.
- Due to the expected doubling of the demand of water in Singapore over the next 30 years, demand policies to reduce water usage are pertinent. By providing financial assistance to purchase the costlier water efficient water appliances through schemes like the Climate Friendly Households Programme whereby \$300 is given to each HDB household for such purchases, this helps to ensure all segments of society can contribute to and benefit from water conservation efforts.
- However, there may be limits to how much demand can be reduced further, as many policies have been put in place for many years to conserve water, which have seen some results. The rise in water demand in Singapore is a reflection of our growing population and industrial production, which should not be sacrificed simply for the sake of reducing water demand.
- Hence the key has to be increasing the supply of water. The supply of water is likely to reduce in the future due to the expiry of the water agreement between Singapore and Malaysia in 2061. Furthermore, global climate changes may lead to the amount of rainwater collected by the catchment areas to fluctuate greatly, leading to periods of low rainwater. Hence, it is also important that the Singapore government aims to increase its supply of water and improve the resiliency of our water supply sources through R&D efforts.
 - The breakthrough technology of desalination is one such outcome of R&D – Singapore should leverage on its achievements in this area, and continue to improve the efficiency of this technology.
- Overall, a combination of appropriate pricing, demand and/or supply policies is the most appropriate and holistic approach to resolve the expected future water shortages.

Knowledge, application / understanding and analysis		
L1	• Smattering of points not directly linked to question • Descriptive without the use of an analytical framework • Conceptual inaccuracies • No use of case material • 1 sided response with only thesis or antithesis covered	1-3

L2	• Good scope and balanced argument in explaining why raising the price of water is an appropriate policy PLUS (either a demand reducing or water increasing policy) • Good application of case evidence • Well-developed explanation supported by diagrammatic analysis	4-7
Evaluation		
E1	• One evaluative point explained	1
E2	• Two evaluative points explained, AND a recommendation explained	2-3

Examiner's Comments

- This question was generally poorly done, possibly due to time management issues, which resulted in candidates lacking time to sufficiently analyse the question. This resulted in many responses which were poorly thought out. Such responses made errors including:
 - Copying and quoting extensively from the case, without proper economic analysis. Candidates are reminded that it is better to analyse with sufficient details for each policy rather than smattering many policies with scant details. It is also crucial to make the final link to DD/SS concepts and explain how shortage is reduce/resolved when analysing the alternative policies as there was a considerable number of candidates who just wrote reduce overconsumption of water or produce more water as their ending point.
 - Not explaining how the rise in price affected the market, and simply explaining alternative policies. Candidates who utilised this approached did not realise the importance of the market adjustment process in resolving future shortages.
 - Merely explaining the policies without discussing their limitations
 - Making basic conceptual errors such as a change in price results in a shift in demand or supply. It should be quantity demanded / quantity supplied instead
 - Confusing PUB's approach, which is MC-pricing, with that of a price floor or price ceiling.
- There was a distinct lack of precision in using certain economic terms such as PED or PES. Common examples include demand is inelastic or water is price inelastic. Another example is writing demand as quantity demanded and vice versa, these two terms are not interchangeable as they represent different concepts as explained earlier.

Paper 2: Essay

- 1 a) Explain how a rise in interest rates may affect internal and external demand in an economy. [10]
- b) Discuss whether conflict between macroeconomic aims may arise when addressing the problem of high inflation and why fiscal policy might be an appropriate macroeconomic policy to achieve price stability. [15]

Part (a)

Suggested answer:

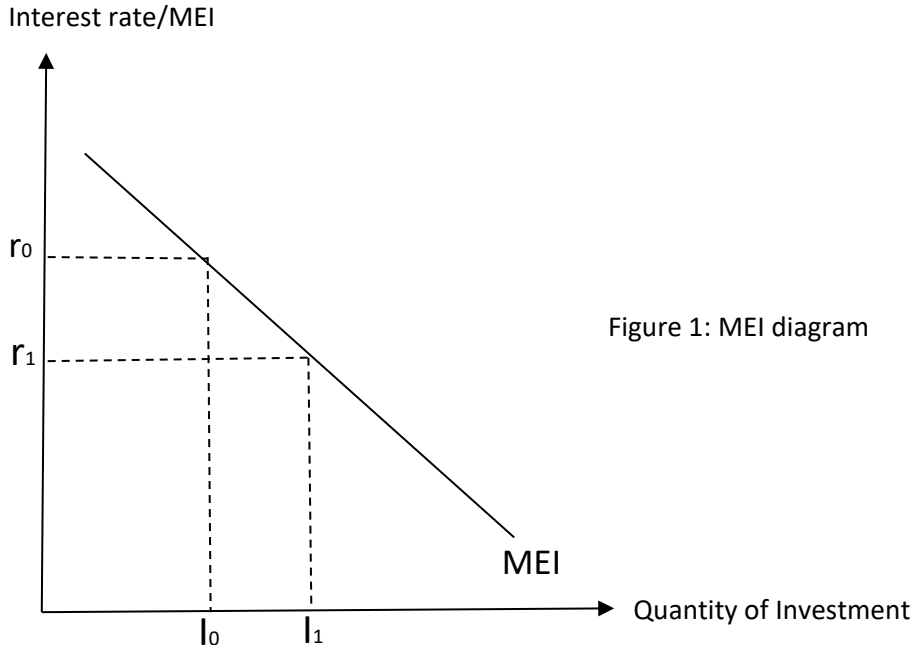
Introduction:

- Define internal demand: Internal demand refers to the total demand for goods and services within a country's own economy. It comprises the consumption, investment expenditure components of aggregate demand within an economy.
- Define external demand: External demand refers to the demand for a country's goods and services from foreign markets. It comprises of demand for a country's exports by foreign households and businesses.
- Define interest rates: price of money, cost of borrowing

Body:

R1: Explain how rise in interest rates affects internal demand (i.e. C and I)

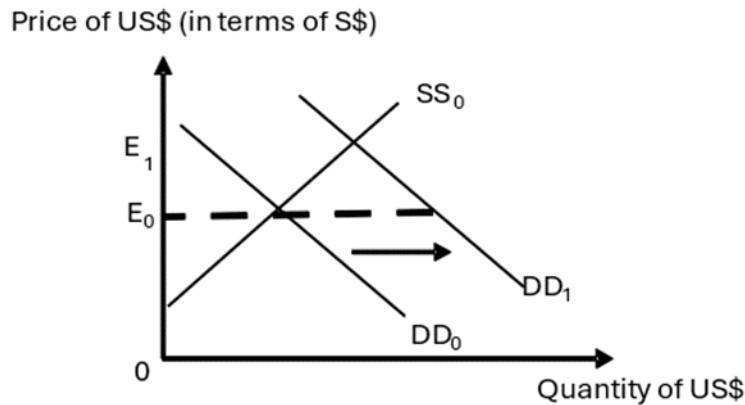
- Increase in interest rates causes C to fall.
 - An increase in interest rates increases the costs of borrowing, thus resulting in a decrease in borrowing by households to purchase interest sensitive items or big ticket such as new cars and furniture as the cost of financing interest on the debt increases. Hence, consumption decreases.
 - In addition, higher interest rates would mean that the returns on savings are now higher. In other words, the opportunity costs of current consumption increases. Hence, preferring to deposit more of their money in banks, households will reduce purchase of less goods and services. Hence, consumption decreases.
- Increase in interest rate causes I to fall.
 - According to Theory of Marginal Efficiency of Investment (MEI), there is an inverse relationship between interest rate and quantity of investments. The MEI refers to the expected rate of return of an additional unit of investment while the rate of interest (r) refers to the cost of borrowing.
 - At any instance, there will be many investment opportunities with varying expected rate of returns. By ranking such investment opportunities from highest to lowest MEI, a downward-sloping MEI curve will be derived as seen in Figure 1.
 - To decide whether to undertake an investment project, rational profit maximising firm will conduct a cost-benefit analysis. A profit-maximising firm will only invest if the MEI is greater than or at least equal to the interest rate.
 - With reference to Figure 1, if the interest rate is at r_0 , firms will undertake additional investment projects up till I_0 units, because for investment projects up till I_0 units, the MEI can at least cover r_0 , the cost of borrowing. Any additional units of investment beyond I_0 units will be unprofitable as $MEI < \text{interest rate}$
 - When interest rate increases from r_0 to r_1 , there will be less investment projects (I_0 to I_1) that would yield a MEI or expected rate of return that is greater than or equal to the new higher interest rate. Therefore, a rise in interest rate would lead to an decrease in level of investment as reflected by an **upwards movement along the MEI curve.**



- Increase in interest rate causes both C and I to fall, resulting in a fall in internal demand.

R2: Explain how a rise in interest rates affects external demand (i.e. exports via hot \$ and exchange rate effects)

Assume an open economy like the USA where free movement of financial capital. When interest rate of USA rises, 'hot money' will flow into USA to purchase interest bearing financial assets which provides higher rate of return. The demand for USD increases in the forex market as foreign speculators will demand more of USD to buy USA's short term financial assets. This increase in demand for USD (causes the demand curve to shift to the right from DD_0 to DD_1). At the original price level E_0 , there is a shortage as quantity demanded of US\$ exceeds quantity supplied of US\$ in the forex market. This exerts an upward pressure on the price of US\$ and the price of US\$ will eventually increase to the new equilibrium price E_1 , where the shortage will be eliminated. As such, the price of US\$ has appreciated against the foreign currencies where 1 unit of foreign currency can only buy fewer units of USD.



The appreciation of USD makes US exports relatively less price competitive compared to its substitutes as the price of US exports in foreign currency increases. Foreigners will become less able to consume US exports due to the increase in price resulting in a fall in purchasing power. They will also switch away from US exports to other countries' substitutes. As a result, US exports fall, resulting in a fall in external demand.

Examiners Comments:

1. A common observation was that candidates answered the question as if the question was on the impact on "internal and external economy". Instead of focusing on the main question requirement of internal demand (impact on C and I component of AD) and external demand (export component of AD), many scripts glossed over the explanation of the impact on internal and external demand and focused the bulk of their response on the impact on RNY, Unemployment and BOT. Such scripts thus tend to fare poorly as they did not sufficiently address the question. Hence, to help to define the parameters and the focus of the question, students should start off with the definition of the key idea of internal demand and external demand.
2. Candidates are also advised to focus the analysis on addressing the more **immediate impact** of a rise in interest rates on exports via the changes in hot money flows and changes in exchange rates. Some students instead explain why the demand for exports will increase when the rise in interest rates leads to a fall in inflation but that is a more delayed effect.
3. There was also a lack of definition of consumption and investment expenditure, as well as provision of examples for investment and consumption expenditures.
4. Another common issue is the lack of economic rigour in the analysis of the impact on C, I and X due to an increase in interest rate. Some possible ways to improve on the rigour are as follows:
 - a. Other than costs of borrowing and returns to savings, use concepts like opportunity cost of current consumption,
 - b. explain the details behind marginal efficiency of investment (MEI) theory, including its diagram.
 - c. Consistent reference to the diagram in the analysis also helps to improve the rigour of the analysis.
 - d. Linking the points explicitly back to the key word(s) in the question. For instance, an increase in interest rates will lead to a fall in consumption and investment because costs of borrowing increases, hence internal demand falls. An increase in interest rates in the US relative to other countries can lead to a fall in foreigners' demand for US exports and hence a fall in US export revenue. Its external demand thus falls, ceteris paribus.

Mark scheme

<i>Knowledge, Application, Understanding, Analysis</i>		
L1	• Largely irrelevant answer • A descriptive response • Glaring conceptual errors • Did not link back to the internal and external demand	1 – 4
L2	Lacks Depth of Analysis: • Underdeveloped explanation of how a rise in interest rates may affect internal and external demand in an economy. Links to internal and/or external demand unclear. Lacks Scope of Analysis: • Considers only 1 component of internal demand • Only R1 or R2 analysis	5 - 7

L3	Good depth of analysis: - Detailed and well-developed explanation linking explicitly to internal and external DD - Good diagrammatic analysis that is integrated well into main analysis Good Scope of analysis: - Considered at least 2 components of internal demand - Both R1 and R2 analysis covered	8 - 10
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Part (b)

Discuss whether conflict between macroeconomic aims may arise when addressing the problem of high inflation and why fiscal policy might be an appropriate macroeconomic policy to achieve price stability. [15]

Introduction:

- Clarify the possible macroeconomic aims that conflict goal of price stability: lower actual growth, higher dd-deficient unemployment.
- Clarify how appropriateness of FP can be examined: effectiveness, desirability, feasibility of implementation.

Body:

R1: Discuss whether conflict between price stability and actual economic growth/dd-deficient unemployment might arise

Thesis: Explain the conflicts between price stability and actual growth/demand-deficient unemployment when government employs DD-mgt policy

Assume the case when the government adopts a contractionary demand management policy to curb demand-pull inflation, such as contractionary monetary policy by increasing interest rates.

As explained in (a), the increase in interest rates will lead to the combined effect of fall in C, I and X --> lowering AD from AD_0 to AD_1 . As the AD moves further away from full employment, Y_f , there is greater spare capacity in the economy, less competition for scarce resources thus leading to lower GPL, GPL falls from GPL_0 to GPL_1 (figure 3), dampening dd-pull inflation.

However, this may lead to a conflict with economic growth and demand-deficient unemployment. The autonomous fall in AD in turn triggers the reverse multiplier effect which works on the principle that one man's lack of spending is another man's loss of income. Given the fall in AD, ceteris paribus, this results in unplanned investment, firms step down production to reduce inventories accumulation and hence real output decreases. The initial fall in autonomous AD will lead to many rounds of lower induced consumption, causing multiple leftwards shift of AD curve. However, each subsequent round of fall in AD is by a lesser extent due to the presence of leakages in the form of savings, taxes and import. The multiplier process does not continue indefinitely, but comes to a stop when total fall in withdrawals is equal to the initial fall in autonomous AD. Hence resulting in a more than proportionate fall in real national income from Y_0 to Y_1 , and a **fall in actual growth** due to a reduction in utilisation of resources as the economy moves further away from the full employment level of output (Y_f) as represented in Figure 3. With lower real output level, firms hire less factors of production, with labour as derived demand, this causes **demand deficient unemployment**.

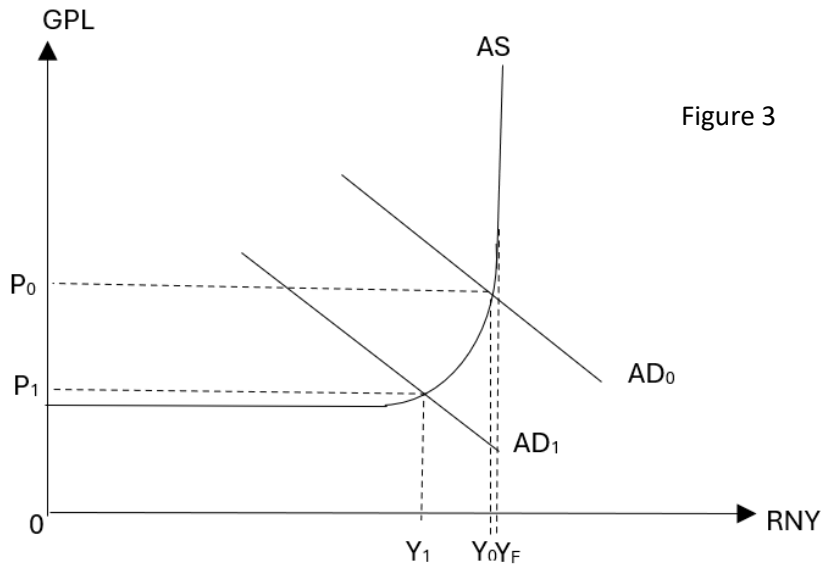


Figure 3

Anti-thesis: Explain why there may not be a conflict between price stability and actual growth.

1) analysis of a very over-heated economy which is operating in the classical range of AS

In the case of a very over-heated economy operating in the classical range/vertical range of the AS curve, the implementation of dd-management policy such as contractionary MP as explained earlier will cause the AD to fall, shifting AD curve leftwards from AD_1 to AD_2 , the rise in GPL is being dampened, achieving price stability with no trade-off with actual economic growth/employment as the economy still operates along the Y_f level, as seen in figure 4.

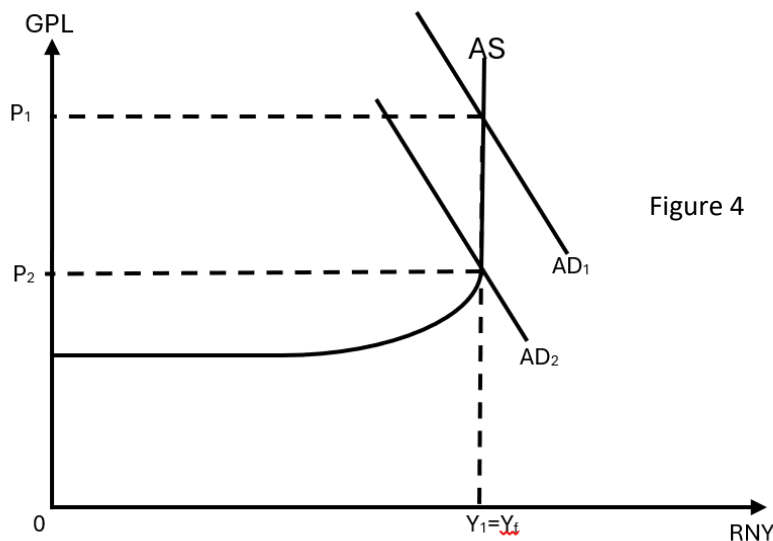


Figure 4

Or

2. when SSP is adopted to ease inflation. For example, **promoting freer trade between nations** via reduction or elimination of tariffs or other restrictions on imports. When tariffs are reduced or eliminated, the cost of importing raw materials, intermediate goods decreases, there is a reduction in input costs allows producers to lower their overall production costs

- With lower input costs, the AS curve shift downwards (increases), this will reduce shortages at the prevailing price level and firms will lower prices. As a result, GPL falls from P_0 to P_1 , reducing inflation. Real national income also increases due to the wealth, interest rate and international substitution effect.
- The removal of trade barriers can also create competition for domestic producers. In order to survive, domestic firms are encouraged to be more dynamically efficient for example to conduct research and development on more productive methods of production to remain cost-competitive, in face of foreign competition. Thus, the more productive method of production will help to increase productivity and output per unit input increase, AS shift right from AS_0 to AS_1 , there is an increase in productive capacity, Y_f increase from Y_{f0} to Y_{f1} , signifying potential growth (fig 5).
- Thus, the use of SSP such as the removal of trade barriers will not lead to conflict with the other macroeconomic goals such as actual economic growth and unemployment and potential growth.

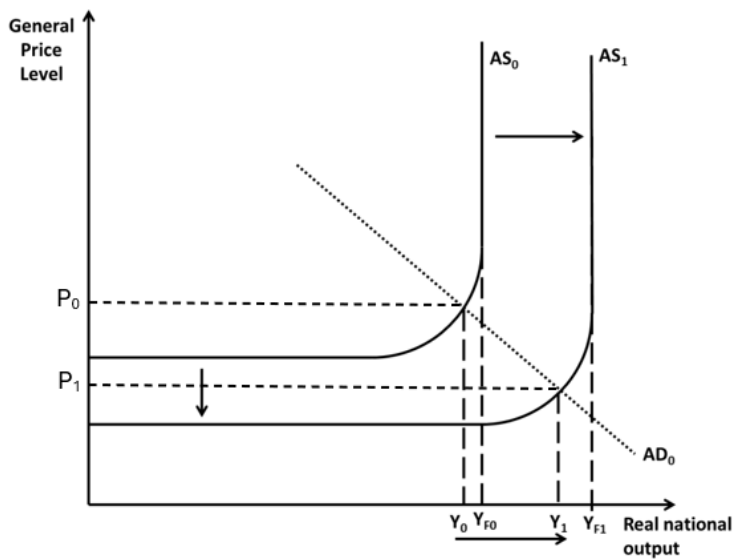


Figure 5

Possible Evaluation to R1:

Ultimately, whether there will be a conflict between macroeconomic aims depends on the state of the economy. According to the preamble, there is high inflation in the economy, and if it is due to a lack of spare capacity, the reduction in AD will likely see a smaller conflict between economic growth and cyclical unemployment. When inflation is brought down to an acceptable level, the government should then consider implementing supply-side policies to increase productive capacity of the economy, the rightwards shift of the AS curve will help to mitigate future inflationary pressure and achieve other macroeconomic aims at the same time.

R2: Discuss why FP may be appropriate

Thesis: Explain why FP may be appropriate to achieve price stability

Instead of contractionary MP, a government may consider implementing a contractionary fiscal policy, with cuts in government spending (G) or increase direct taxes to mitigate the increase in AD in the context of DD-pull inflation. A fall in G (for example, military spending or infrastructure) reduces AD since G is a component of AD.; a rise in personal income tax reduces disposable income, which leads to a fall in C , while a rise in corporate income tax reduces post-tax profits, which in turn reduces the incentive for firms to invest, leading to a fall in investment (I). Fall in C , I and G will lead to a fall

in AD. The fall in AD will lead to a surplus and when AD falls along the intermediate/classical segment of the AS curve away from full employment level. To get rid of the surplus, producers will reduce prices OR bottlenecks in the economy will be reduced (*Bottlenecks refers to the situation where firms are unable to meet demand because of delays, shortages and lack of spare capacity.*) The fall in AD will thus lead to a fall in GPL from P1 to P2, ceteris paribus. Assuming initially there was high inflation, contractionary fiscal policies can lead to a fall in inflation, reducing the rate of increase in GPL.

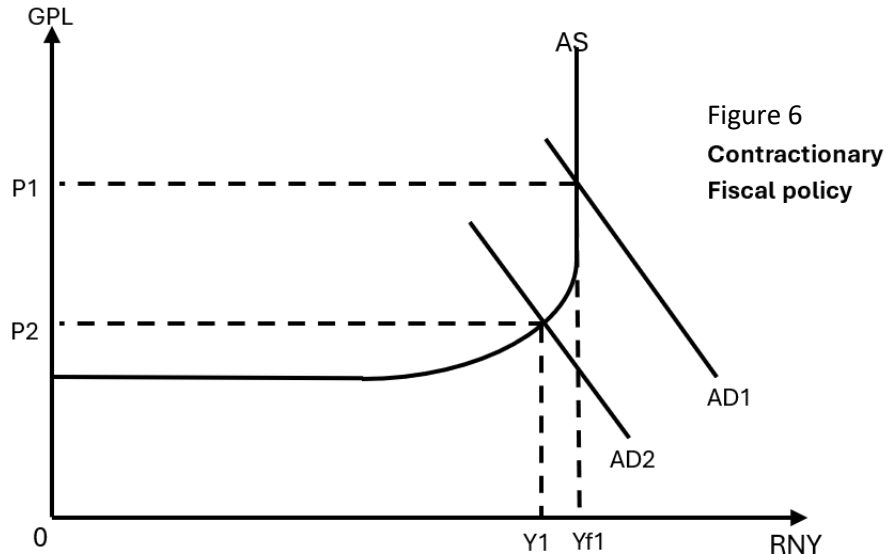


Figure 6
Contractionary
Fiscal policy

Anti-thesis: Explain why (contractionary) FP may not be appropriate to achieve price stability

[Any one point]

- Effectiveness depends on the relative share of the various AD component: For countries where C, I and G is a smaller percentage of the country's GDP, the fall in C, I and G due to contractionary fiscal policies may not lead to a significant fall in AD and in turn GPL. Thus, contractionary fiscal policies may be limited in effectiveness in addressing DD-pull inflation.
- Effectiveness depends on economic outlook: the high inflation could be due to strong economic outlook as a result of strong economic recovery. Thus, if consumers and business are confident about the future. Despite the increase in corporate and personal income tax, consumers and producers may still spend and invest respectively, thus limiting the effectiveness of the contractionary fiscal policy in reducing AD and dampening the inflationary pressure.
- Contractionary FP not appropriate due to long policy time lags:
 - 1) Recognition Lag: Policymakers might take time to identify that inflation is rising to a level that necessitates contractionary measures.
 - 2) Implementation Lag: Once identified, there is a delay in enacting the policy due to the need for legislative approval and political negotiations.
 - 3) Effectiveness Lag: Even after implementation, it takes time for changes in fiscal policy to filter through the economy and influence aggregate demand, potentially delaying the impact on inflation.

Possible Evaluation to R2: EV of R2 depends on what is written for R2/T and AT.

Whether a contractionary FP is an appropriate policy to bring inflation down in an economy primarily dependent on the cause of the inflation which is largely determined by a country's economic characteristics.

Contractionary FP may not be appropriate when the country's inflation is more externally driven since it targets C, I, G and not the root cause of X and M. The sources of inflation in small and open economies such as Singapore are more likely due to international factors such as strong export growth and imported inflation; conversely, relatively larger economies such as the UK may be more affected by domestic factors due to changes in C and I. Hence, raising taxes may be more appropriate for countries like the UK, since C and I is a relatively more significant share of the country's GDP, thus contractionary FP is a more effective policy.

While, for small open economies like Singapore, to tackle inflation more effectively, an exchange rate policy may seem to be a more effective method since exports is a larger percentage of its GDP and hence has a more significant influence on its AD. It also helps to dampen the import induced inflation directly as well by helping to lower the prices of imported goods and services.

Reasoned Conclusion: Depends on what is written in R1 and R2

Managing inflation is a challenging task. It requires the consideration of the possible macroeconomic objective trade-offs and the appropriateness of different policy tools. Despite the complexity and costs of achieving low and stable inflation, all countries prioritise it as achieving price stability is key in achieving sustained economic growth in the long term.

Examiners Comments:

1. In general, the quality of discussion varied across answers. Stronger scripts were able to clearly distinguish the R1 and R2 in their organisation of the answers. Not distinguishing R1 and R2 resulted in answers which:
 - a. Missed out on establishing R1 AT or R2 AT.
 - b. Poor organisation, oscillating between R1 and R2
 - c. Repetition of points across R1 and R2
2. Candidates need to be mindful that fiscal policy is a demand-side policy. The main aim of implementing a fiscal policy is to influence AD to achieve macroeconomic objectives. Hence, the focus should not be on addressing the supply-side effects of fiscal policy.
3. Given the context of price stability and high inflation, contractionary fiscal policy seeking to reduce AD should be implemented to reduce high inflation to achieve low and stable inflation. Better responses provided a detailed explanation of how the use of different fiscal tools affect the different components of AD to bring about a fall in AD and in turn GPL, ceteris paribus. Better scripts also provided a detailed explanation of why GPL falls when the AD curve shifts to the left along the intermediate segment of the AS curve.

Some misconception in the analysis:

- Some answers erroneously linked the contractionary fiscal policy of rising corporate taxes to a rise in production cost, when the correct analysis should have been a fall in post-tax profits.
- Some answers also incorrectly explained that a rise in GST leads to a fall in C and thus a fall in AD, when the correct analysis should have been a rise in production cost (represented by

upward shift of AS curve), causing GPL to increase which results in a fall in C (represented by a leftward movement along the AD curve)

Some Gaps in analysis includes:

- Lacking the explanation on how contractionary fiscal policies lead to a fall in C and I.
 - When explaining how the fall in AD leads to an impact on RNY, students did not explain the reverse multiplier process
 - Lack of explanation on how the contractionary FP address inflation (lowering GPL), An good explanation could then be: “when AD falls along the intermediate segment of the AS curve away from full employment level, to get rid of the surplus, producers will reduce price, thus a lower GPL.”
4. Candidates should also be aware that the EV for each R should be a judgement based on the thesis and anti-thesis point for that specific R. Concluding EV should then be a judgement based on what is written in both Rs. Concluding EV is not a summary or a repetition of earlier points.

Suggested Mark Scheme:

Knowledge, Application, Understanding, Analysis		
L1	• No theoretical framework/Descriptive and journalistic writing • Meaning of question not properly grasped • Major conceptual errors • Answer mostly irrelevant or inaccurate	1-4
L2	Use of theoretical framework and analysis linked to the conflict between the macroeconomic goals and implementation of fiscal policy Lacks Depth of analysis: • Explanation of the conflict between the macroeconomic aims is underdeveloped and lacking in sufficient details • Discussion of how fiscal policy is an appropriate measure is underdeveloped Lacks Scope of analysis: • Only R1 or R2 covered • One-sided analysis in R1 and/or R2 • No explanation of how the policy implementation gives rise to the conflict between the macroeconomic aims • Only one yardstick considered in discussion of appropriateness of fiscal policy measure	5-7
L3	Good use of theoretical framework and detailed analysis, clear links to the conflict between the macroeconomic goals and implementation of fiscal policy Depth of analysis: • Explanation of the conflict between the macroeconomic aims is well-developed with sufficient details • Good use of diagram(s) that is well-integrated into main analysis • Discussion of how fiscal policy is an appropriate measure is well developed	8 - 10

	Scope of analysis: - Both R1 and R2 covered - Balanced discussion with thesis and anti-thesis for both R1 and R2 - At least 2 yardsticks used in discussion of appropriateness of fiscal policy	
Evaluation		
E1	- Weak evaluation of R1 and R2 - Overall stand made with a weak substantiation	1-2
E2	- R1 and/or R2 evaluation made - No/some attempt to weighing the arguments for the conflict between macroeconomic aims - No/some attempt to weighing the arguments for the appropriateness of fiscal policy - Overall stand made with some substantiation which demonstrates basic understanding of the key considerations involved in choosing to implement fiscal policy, with some evidence of contextual understanding	3-4
E3	- R1 and R2 evaluation made - Good attempt at weighing the arguments for the conflict between macroeconomics aims - Good attempt at weighing the arguments for the appropriateness of fiscal policy - Demonstrates a good ability to synthesize economic arguments, building on prior analysis to arrive at well-reasoned judgments. - The synthesis shows a solid grasp of the nuances of implementing fiscal policy (e.g., consideration of the extent of trade-offs, prioritization of macroeconomic policies) and reflects sound contextual understanding. - Overall stand is well-substantiated, demonstrating a strong grasp of the complexities involved in applying fiscal policy	5

- 2 Singapore's manufacturing output contracted for an eighth straight month in May 2023. The slump was deeper than expected, putting the economy at higher risk of a recession. This was largely attributed to weakness in exports and supply chain disruptions impacting the key sectors of the economy such as electronics manufacturing. Adapted from straitstimes.com Jun 2023

- a) Explain how the Singapore dollar exchange rate is determined in the managed float system and how the above events will affect the strength of the Singapore dollar. [10]
- b) Discuss the effectiveness of the exchange rate policy in addressing internal and external macroeconomic problems caused by a slowdown in exports for a small and open economy like Singapore. [15]

Introduction

- Clarify that the SGD is managed against a trade-weighted basket of currencies of major foreign trade partners. The various currencies are given different degrees of importance, or weights, depending on the extent of her trade dependence with that particular country. The value of the Singapore dollar against this trade-weighted basket of foreign currencies is known as the Nominal Effective Exchange Rate (S\$NEER).
- Identify that the SGD operates under a managed float exchange rate system
- Clarify that “the above events” refer to i) weakness in exports and ii) supply chain disruptions

Body

R1: Explain how SGD exchange rate is determined in the managed float exchange rate (ER) system

A managed-float exchange rate regime is a system of flexible exchange rates but where the central bank (Monetary Authority of Singapore – MAS) intervenes to prevent excessive fluctuations in its ER. There is an acceptable band whereby the exchange rate fluctuates in the foreign exchange market (based on demand and supply of the SGD) before intervention by the Central Bank begins.

The 3 main sources of demand for SGD by foreigners are i) their demand for SG's goods and services, ii) their intention to invest in Singapore (FDI or portfolio investment) and iii) currency traders expecting SGD to appreciate in the future. Similarly, the 3 main sources of supply for SGD by locals are i) SG's demand for foreign goods and services, ii) SG's demand to invest overseas and iii) currency traders expecting SG's currency to depreciate in the future.

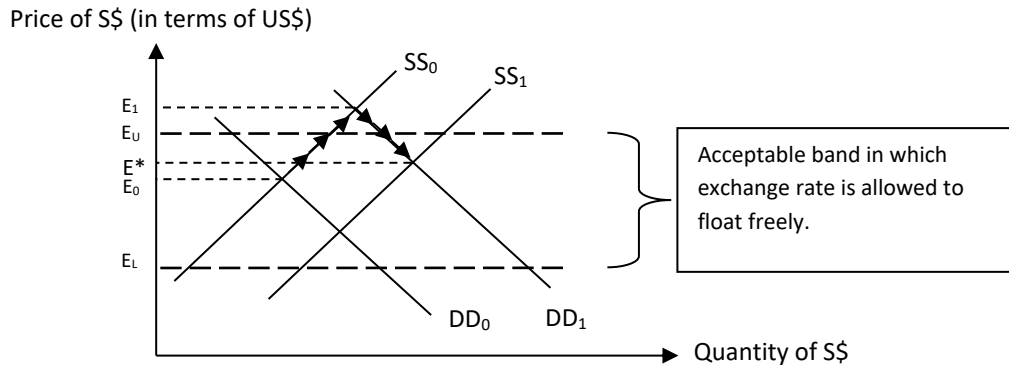


Figure 1:

Figure 1 shows how a managed float exchange rate system for the Singapore dollars in terms of US dollars. It shows that the external value of the Singapore dollar is determined by the market demand and market supply of Singapore dollars within specified limits or a target band, for example, between E_U and E_L . Assume that there is an increase in demand (DD_0 to DD_1) for S\$ due to an increase in preference for Singapore's goods by foreign consumers. The shortage at current value will create upward pressure on the value of the S\$ pushing it above E_U at E_1 . MAS will sell or increase supply of the Singapore dollars in the foreign exchange market and buy US dollars (and accumulates foreign exchange reserves). This will cause supply of SGD to rise to SS_1 , which will push the external value of the SGD back to E^* which is within the targeted band.

(Supposed there is a fall in demand for SGD in the forex market causing the SGD to depreciate below E_L , MAS will intervene directly in the foreign exchange rate market to buy Singapore dollars and sell US dollars (by running down on its existing foreign exchange reserves). This has the effect of shifting demand curve for SGD to the right, putting upward pressure on the SGD to appreciate so that it is within the targeted band once again.)

R2: Explain how a weakness in exports and supply-chain disruptions will affect the strength of SGD

Event#1: Weakness in exports

Given a weakness in exports (usually due to falling foreign income globally due to the global uncertainty), this will cause a fall in demand for SG's exports since less SGD is needed by foreign buyers to exchange their local currency for SGD to pay for SG exports. This is reflected in a leftward shift of the demand curve in Figure 2 from DD_0 to DD_1 .

Event#2: Supply-chain disruptions

Given a disruption in the supply of intermediate inputs (from overseas producers), SG can import less of such intermediate goods like electronic components and thus this will be reflected as a fall in supply of SGD from SS_0 to SS_1 , since SG buyers supply less SGD to exchange for foreign currency to pay for the imports.

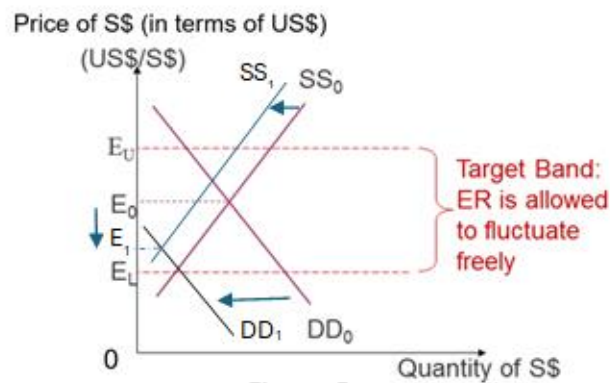


Figure 2

Combined effect of both events: Impact on SGD (whether it appreciates or depreciates) depends on the extent of fall in DD relative to fall in SS of SGD. If the fall in demand for SGD > fall in SS of SGD, we can expect the equilibrium SGD exchange rate to depreciate against USD from E_0 to E_1 .

Alternative analysis:

Supply chain disruptions will cause fall in production of raw materials overseas. This would mean a rise in prices of imported raw materials. Assuming $PED_m < 1$, rise in P_m will lead to a less than proportionate fall in Qty DD_m . Thus, the rise in import expenditure will result in an increase in SS of SGD, since more SGD is needed to pay for the higher M expenditure. Since there is a fall in DD for SGD and an increase in SS of SGD - expect depreciation of SGD against USD.

Conclusion

Given the persistent contraction in manufacturing output, primarily driven by weak exports and supply chain disruptions, the Singapore dollar is likely to face significant depreciation pressure in the managed float system. To prevent excessive volatility in the SGD, the MAS may need to intervene to buy up the SGD should the SGD exchange rate moves out of the targeted trading band.

Suggested Marks Scheme

<i>Knowledge, Application, Understanding, Analysis</i>		
L1	• Largely irrelevant answer • A descriptive response • Glaring conceptual errors	1 – 4
L2	• Analysis lacks sufficient scope Only R1 or R2 analysis is evident Only covered weakness in exports or SS chain disruptions • Analysis lacks sufficient depth - Weak understanding of managed float exchange rate system - No/poor use of diagram(s), analysis lacks sufficient elaboration. Eg. Link between X, M and DD, SS of SGD lacks sufficient development	5 - 7
L3	• Good scope of analysis • Both R1 and R2 analysis evident • Covered both weakness in exports and SS chain disruptions • Good depth of analysis • Detailed explanation of how the MAS manages the SGD in a managed float exchange rate system • Brief explanation of the price adjustment process • Detailed elaboration of how the weakness in exports and SS chain disruptions affects the DD and SS of SGD respectively with a combined analysis of DD and SS changes on the SGD • Good diagrammatic analysis that is well-integrated into the main analysis	8 - 10

Examiners' Comments:

- *Lack of scope of analysis:*
There are 2 key requirements to address this question well. (1) Explain how SGD exchange rate is determined in the managed float exchange rate system and (2) Explain how weakness in exports and supply chain disruptions will affect the value of the SGD. However, a significant number of responses failed to address requirement (2) fully. Such responses either did not address requirement (2) at all or only addressed either the issue of exports weakness or supply-chain disruptions. As such, such responses were not able to get beyond L2 marks.
- *Lack of clarity and insufficient depth of analysis:*

In the analysis of how SG uses the managed float exchange rate system, weaker responses suffered from poor use of the diagram to demonstrate clearly how the SGD was allowed to be freely determined by market forces within the trading band and how the Monetary Authority of Singapore (MAS) would intervene when it goes beyond the upper and lower limits of the trading band. For instance, a cursory mention of free float or fluctuation was made without further elaboration about the role of market forces of DD and SS of SGD. In another instance, there was no reference to how the DD and SS of SGD would be affected, other than a mentioned about buying and selling of SGD when MAS intervenes. For clarity, candidates are expected to use the diagram to explain how intervention would shift DD or supply curve and where the exchange rate would be restored within the trading band. Stronger responses in contrast also went on to provide a brief on the price adjustment process, which added depth to the analysis.

For the analysis of how exports weakness and supply-chain disruptions would affect the DD or SS of SGD, weak responses did not elaborate how a fall in demand for SG exports would reduce the demand for SGD. Once again, a cursory mention was made of the effect of falling X, hence lowering demand for SGD. Instead, what was expected is a clear link between falling X → fall in DD for SGD, since less units of SGD are needed by foreign buyers to exchange their local currency for SGD to pay for the SG exports.

- *Incorrect focus on secondary effect analysis*
A significant number of responses explained that SS-chain disruptions and shortages of essential raw materials would raise the COP for manufactured goods hence feeding into higher exports and reducing export competitiveness and as a consequence adversely affecting the DD for SG. This is a secondary effect analysis. Candidates are reminded to focus on the primary effect in their analysis. There were some good responses that explained that with supply-chain disruptions, due to a fall in production of raw materials, a rise in prices of imported raw materials may mean domestic importers having to pay more for the imports, resulting in an increase in SS of SGD.
- *Incorrect grasp of question requirement*
A number of responses incorrectly interpreted the segment of the analysis of how MAS would intervene in the managed float system as the SG government implementing exchange rate policy. Such responses usually referred to the gradual and modest appreciation of the SGD to combat imported inflation. Candidates are reminded not to produce rehearsed responses but to respond directly to the question set.
- *Others:*
 - *Poorly labelled diagram: Students should label the Y-axis more accurately as Price of S\$ (in terms of US\$) rather than “exchange rate”, price of SGD, USD/SGD etc.*
 - *Use of non-standard abbreviations such as ER, Dep, Appr are highly discouraged.*

b) Discuss the effectiveness of the exchange rate policy in addressing internal and external macroeconomic problems caused by a slowdown in exports for a small and open economy like Singapore. [15m]

Introduction

- Clarify meaning of slowdown: Fall in X revenue
- Clarify context of Small, Open Economy like Singapore: small domestic market, highly reliant on external demand to drive its economic growth and employment
- Clarify the internal and external macroeconomic problems in context:
 - Internal: Fall in actual growth and employment – due to fall in X → fall in AD → fall in actual growth and rise in demand deficient unemployment.
 - External: Worsening BOT – due to fall in X, cet par, fall in Net X → worsens BOT

Body

R1: Discuss the effectiveness of exchange rate policy in addressing internal macroeconomic problems caused by a slowdown in exports for S.O.E like SG

Thesis: Explain how a once-off depreciation of SGD will help in stimulating exports, increasing actual growth and employment

Given a once-off depreciation of SGD, price of exports in foreign currency terms falls. Foreigners will find price of SG's exports cheaper relative to domestic goods or other country's goods. Increase in demand for SG's exports → increase in X revenue → increase in AD. Considering that SG's exports make up about 180% of SG's GDP, this rise in exports will have a significant effect of raising AD.

The depreciation of SGD also makes the price of imports in domestic currency more expensive. Domestic firms and households will switch to local goods and services, thus reinforcing the rise in AD.

Multiplier effect - RNY: The increase in aggregate demand would result in an unplanned depletion in stocks of export industries as planned spending exceeds planned production in that time period. Firms would then respond by increasing output in the next time period leading to an increase in national income. This increase in income would lead to an increase in induced consumption as households would receive more factor payments from firms. This would then lead to another round of increase in aggregate demand causing another round of increase in national income. This cycle of spending and re-spending continues until the increase in withdrawals savings, taxes and import spending matches the initial increase in aggregate demand. The final impact of the increase in X and AD is a multiplied increase in real national income as seen from the rise in RNY from Y_1 to Y_2 (fig 3) which helps to mitigate the slow down in actual economic growth.

Unemployment: The rise in output from Y_1 to Y_2 also lead to increase in hiring of workers as demand for labour is a derived demand. This helps to address the problem of rising demand deficient unemployment.

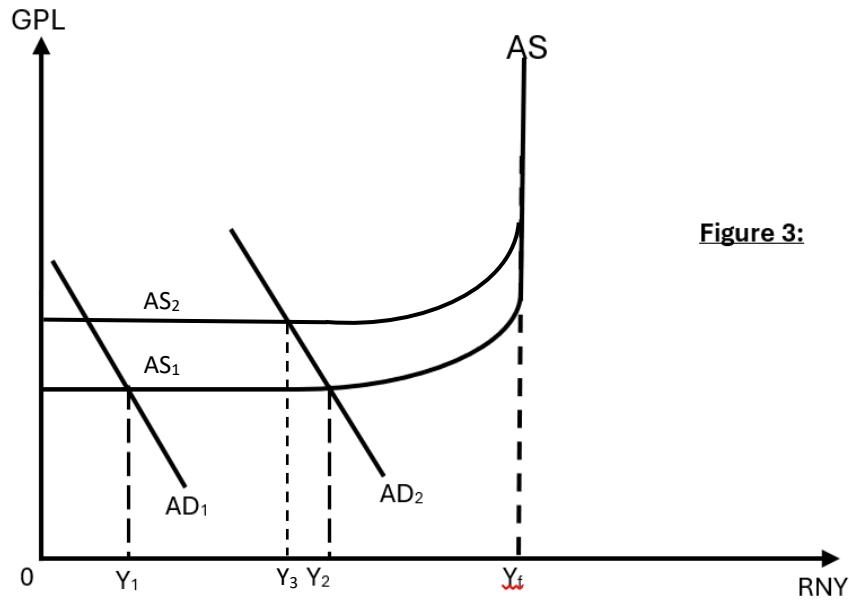


Figure 3:

Anti-thesis: Explain how a once-off depreciation of SGD may be ineffective in stimulating exports, increasing actual growth and employment.

[Any one point]

- **Contracts and Agreements:** Many international trade contracts are negotiated and agreed upon well in advance, sometimes months or even years ahead. A one-time depreciation may not affect the prices or terms of these contracts, limiting the immediate boost to exports, AD, actual growth and employment.
- **Loss in non-price competitiveness of exports:** If slowdown in exports is due to real or perceived loss of quality of export competitiveness, then the once-off depreciation will do little in improving the non-price competitiveness of exports, as the latter depends on factors like product quality and innovation. Hence this again limits the ability to boost exports, AD, actual growth and employment.
- **Import Costs:** While a depreciation can make exports cheaper for foreign buyers, it also makes imports more expensive for domestic consumers and businesses. Given that SG relies heavily on imported inputs or raw materials for its export industries, this increase in imported input costs could offset the benefits of the depreciation. As represented in Figure 3, given a fall in AS, AS curve shifts upwards from AS_1 to AS_2 , RNY falls from Y_2 to Y_3 , dampening the effect of rise in RNY.

Possible R1 Evaluation:

Given that SG is a SOE, highly reliant on exports to drive its growth, the weakness in exports due to global uncertainty is likely to nudge the MAS to allow the SGD to weaken (or zero appreciation). It is also likely to be a once-off depreciation to avoid significant risk of imported inflation which can lead to other problems for the SG economy in the long run.

Whether the depreciation of the SGD is able to dampen and overcome SG's export weakness will depend on how prolonged and root cause behind the weakness in our exports. If due to poor quality of SG's exports, then a depreciation will be ineffective in overcoming the problems.

Note: MAS's exchange rate policy stance depends on the targets. If it is intended to rein in inflation, then an appreciation of the SGD will be used. If boosting exports due to dim global economy outlook, it has historically implemented a zero-appreciation stance (which occurred in 2008 and 2016).

R2: Discuss the effectiveness of exchange rate policy in addressing external macroeconomic problem caused by slowdown in exports for S.O.E like SG

Thesis: Explain how a once-off depreciation of SGD may be effective in improving the BOT

[Any one point]

- **Export Competitiveness:** A depreciation of SGD makes SG's exports cheaper for foreign buyers. This can lead to an increase in export volume as foreign consumers find the products more affordable. As a result, the value of exports may rise, contributing positively to the balance of trade, cet par.
- **Import Substitution:** A weaker SGD makes imports more expensive for domestic consumers and businesses. This can incentivize them to switch to domestically produced goods and services, reducing the volume of imports. As a result, the value of imports may decrease, improving the BOT, cet par
- **Marshall-Lerner condition (MLC):** A depreciation of the domestic currency will cause the price of the country's exports in terms of foreign currencies to fall. The extent of an increase in quantity demanded of exports depends on the price elasticity of demand for exports. Secondly, a depreciation of the domestic currency will cause the price of imports in terms of domestic currency to rise. The extent of the fall in quantity demanded of imports depends on the price elasticity of demand for imports. According to the Marshall-Lerner condition, which states that if the sum of the price elasticities of demand for exports and imports is greater than one [$PED_x + PED_M > 1$], a depreciation of the SGD can lead to an improvement in the balance of trade. Considering that SG is a small producer in the global market, it is likely that PED_x will be elastic.

Anti-thesis: Explain how a once-off depreciation of SGD may be ineffective in improving the BOT.

J-curve effect:

- According to the J-curve effect, immediately following a depreciation, the trade balance often worsens before it improves. In the short run, the PED_x and PED_M may be low and the Marshall-Lerner Condition may not be satisfied initially following a depreciation of the currency.
- In the very short run, changes in the quantity demanded for exports and imports may be insignificant as consumers may take time to change their consumption pattern and preference from imported goods to domestically produced substitutes. It also takes time to find substitutes. On top of that, producers may also have to fulfil the terms of prevailing contracts with respect to the volume and price of imports/exports.
- Thus, since in the very short run, MLC does not hold, this will worsen the balance of trade position initially (before it eventually improves in the LR).

Possible R2 Evaluation

To determine the overall effectiveness of a one-off SGD depreciation in improving the BOT, several factors must be considered. First is the timeframe. As a once-off depreciation of the SGD, it is more likely to be ineffective in the SR as the J-curve effect suggests a worsening of the BOT. Second is the nature of SG's X. This is an intriguing aspect as even though Singapore is a small producer in the global market, we have also successfully moved up the value chain, exporting products with ever increasing sophistication and complexity. Given that SG tends to export products and services of high value-added, we could argue that our demand may be seen as price inelastic.

High value-added products often have fewer close substitutes available in the market. The specificity of the product's use, combined with its unique features, makes it difficult for buyers to find equivalent alternatives. For many high value-added products, switching to another supplier or product involves significant costs. These costs can be related to reconfiguring production processes, training staff, or even redesigning products to accommodate a different component.

Exemplification

Semiconductors and Electronics: Singapore is a major exporter of semiconductors and electronic components, which are crucial for various high-tech industries. The demand for these components tends to be driven by technological needs and product specifications rather than price.

Pharmaceuticals and Biotechnology: The pharmaceutical and biotechnology sectors rely on high standards of quality and innovation. Products like specialized medical devices and biotech solutions are less sensitive to price changes due to their critical applications and regulatory requirements.

Hence the impact of depreciation of SGD is more likely to be limited in boosting export revenue and improving its BOT.

Reasoned Conclusion

Exchange rate policy, particularly a one-off depreciation of the SGD, can provide some relief to internal and external macroeconomic problems caused by a slowdown in exports. However, its effectiveness is constrained by the structural characteristics of Singapore's economy, such as the reliance on high value-added exports with relatively price inelastic demand and the dependence on imported inputs.

Recognising the constraints of Exchange rate policy in the SG context, exchange rate should be part of a broader strategy that can include: i) Promoting Innovation and Quality: Enhancing the non-price competitiveness of exports through innovation, quality improvement, and diversification of products and services. ii) Improving Productivity: Investing in productivity enhancements to reduce the cost of production and improve the overall competitiveness of Singapore's exports of goods and services.

While exchange rate policy can contribute to mitigating the impacts of a slowdown in exports, it must be complemented by comprehensive economic policies aimed at strengthening the underlying competitiveness and resilience of the exports sector.

Suggested Marks Scheme

Knowledge, Application, Understanding, Analysis		
L1	• Largely irrelevant answer • A descriptive response • Glaring conceptual errors	1 – 4
L2	Analysis lacks sufficient depth • Underdeveloped explanation, analysis lacks sufficient elaboration of how exchange rate policy impacts actual growth, employment, and BOT • No/poor use of diagram(s) Analysis lacks sufficient scope • Only R1 or R2 analysis is evident • Internal macroeconomic aim only covered actual growth or employment • One-sided analysis, no thesis/anti-thesis arguments for R1 and/or R2	5 - 7
L3	Good depth of analysis • Detailed elaboration of how the once-off depreciation of SGD affects both internal and external macro aims. • Good diagrammatic analysis that is well-integrated into the main analysis Good scope of analysis • Both R1 and R2 analysis evident • Internal macro aims covered both actual growth and employment • Balanced analysis, covered both Thesis and Anti-thesis argument for R1 and R2	8 - 10
Evaluation		
E1	• Weak evaluation of R1 and/or R2 • Overall stand made with a weak substantiation	1-2
E2	• R1 and/or R2 evaluation, some attempt to apply to the SG context, but the grasp of the nuances of policy application is weak. No/little attempt to weigh up the exchange rate policy effectiveness. • An overall stand made with some substantiation, but understanding of the complexities involved in applying exchange rate policy in an SOE like SG is weak	3-4
E3	• Evaluation of R1 and R2, demonstrates good grasp of the nuances of application of exchange rate policy in the SOE context of SG when weighing up the policy effectiveness to attain the internal and external macroeconomic aims • Overall stand made with strong substantiation which demonstrates good grasp of the complexities involved in applying exchange rate policy in an SOE like Singapore, good understanding of a need for a complementary policy mix approach.	5

Examiners' Comments:

- *Lack of scope of analysis:*

There are 2 key requirements to address this question well. (1) To discuss the effectiveness of exchange rate policy in SG to address the internal macroeconomic problems of a fall in actual growth and demand-deficient (2) To discuss the effectiveness of exchange rate policy in SG to address the external macroeconomic problem of worsening BOT

However, a number of responses failed to fully address one or more of the aspect(s) of each requirement. Eg. Internal macroeconomic aim only covered actual growth or employment effects, or BOT effects not addressed. As such, such responses were not able to get beyond L2 marks.

Weaker analysis also failed to explicitly analyse the effects of an exports slowdown but chose instead to focus on the adverse effects of FDI due to the contraction of the manufacturing sector in SG and/or hot \$ due the exchange rate policy. As a result, the scope of the analysis was limited in addressing the exports slowdown effects.

A number of responses also did not address the counterargument that exchange rate policy of a once-off depreciation of SGD is not effective. This was either a glaring omission or a misguided choice to focus on the issue of desirability like trade-offs against price stability, instead of the issue of effectiveness required in the question. This showed a lack of understanding of the distinction between effectiveness and desirability of policy choices of the government. Such responses again were not able to get beyond L2 marks.

- *Lack of clarity and insufficient depth of analysis:*

Weak responses were not able to elaborate clearly how a once-off depreciation of the SGD would affect the price of X and M and hence net X and AD, with the consequent effects on actual growth and employment. Such responses also gave a cursory explanation of the multiplier effect. Similarly, for the explanation of BOT effects with a depreciation of SGD, there was a lack of application of PED concepts.

In the counterargument for why exchange rate policy of depreciation of SGD may be ineffective in the short-run, most common argument is the lack of substitutes. Such responses are mostly vague and lacks development. Better responses went on to explain that consumers may take time to change their consumption pattern and preference from imported goods to domestically produced substitutes. Producers may also have to fulfil the terms of prevailing contracts with respect to the volume and price of imports/exports, hence the lack of responses of Qd to the changes in the prices of X and M when SGD depreciates.

- *Lack of application to context*

Poor responses suffered from a lack of context appreciation and hence the responses were not well applied to the context in the question.

There were a few notable instances of poor context application:

- (i) *Inaccurate argument that SG is operating close to Yf, lacked sufficient capacity to produce since it is an advanced economy. Such responses then went to argue that depreciation of*

the SGD while increasing AD, RNY, would eventually lead to sharp increases in GPL resulting in price-instability. This showed a lack of understanding that the context given in the preamble suggests weakness in the economy.

- (ii) Incorrect application of gradual modest appreciation of the SGD. Such responses argued that SG's approach to exchange rate policy traditionally has been to have a strong SGD to ward-off imported inflation. Such responses showed a lack of understanding of the nuances in the implementation of exchange rate policy in SG. Exchange rate policy is not cast in stone and the MAS has from time to time, where appropriate opted for a once-off depreciation of the SGD.
- (iii) Others argued that given a slowdown in exports with a consequent fall in DD for SG's exports and SGD, a depreciation of SGD necessitates that the MAS engages in a policy of appreciating the SGD. Such a response would run counter to the real world application of exchange rate policy by the government, where a weaker SGD is favoured to keep exports price competitive in order to boost actual growth and employment for a small and open economy like SG that is highly dependent on exports for its economic growth.
- (iv) Some responses argued that since SG is constrained by a small multiplier, hence the exchange rate policy to stimulate X and increase AD, RNY and hence actual growth and employment would be ineffective. While this point is valid from the SG context, it is not a well-applied point that is directed at the issue of slowdown in X. Stronger responses in contrast approach it from the perspective of the root-causes of slowdown in X and showed good understanding that a depreciation of the SGD will not help to resolve issues like a loss in non-price export competitiveness in the long-run.

Common errors:

- Net X is not X, vis-à-vis.
- Inaccurate to say X-M is a significant/key component of AD¹
- SG's X+M and not X-M is 3 to 4 times of GDP
- Marshall-Lerner condition, if fulfilled, improves BOT rather than it increases Net X. The increase in Net X is inferred from the BOT improvement
- Misinterpreting the issue of effectiveness as desirability. A significant number of responses provided a counterargument for exchange rate policy, but this was incorrectly framed as explanation of trade-offs or unintended consequences. Such responses addressed the issue of desirability rather than ineffectiveness of exchange rate policy which was the question requirement.

Evaluation

This was generally weak as many did not direct and anchor their R1 and R2 evaluation on analysis presented in the Thesis or Anti-thesis, which is the use of exchange rate policy to address the macroeconomic problems arising from a **slowdown in exports**. For instance, when evaluating the effectiveness of the once-off depreciation exchange rate policy, it was common to see students focusing on the issue of trade-offs being less or more severe or on the unintended consequences of the effects on hot \$ or FDI flows because of the exchange rate policy. As a result, suggestions of

¹ Eg. In 2021, SG's net X is 31.9% of GDP, while C is 31.5% of GDP
https://www.singstat.gov.sg/modules/infographics/-/media/Files/visualising_data/infographics/Economy/singapore-economy08082022.pdf
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government needing a policy mix to address such unintended consequences were not focused on the issue of exports slowdown.

- 3 Singapore is increasingly focused on achieving inclusive growth. However, in recent years, it is facing significant cost pressures due to escalating commodity prices, coinciding with sluggish economic growth.
- Explain why a government will be concerned about sluggish growth and rising cost pressures in an economy. [10]
 - Discuss whether the use of supply-side policies would be effective in achieving inclusive growth in Singapore. [15]

Suggested answer to (a)

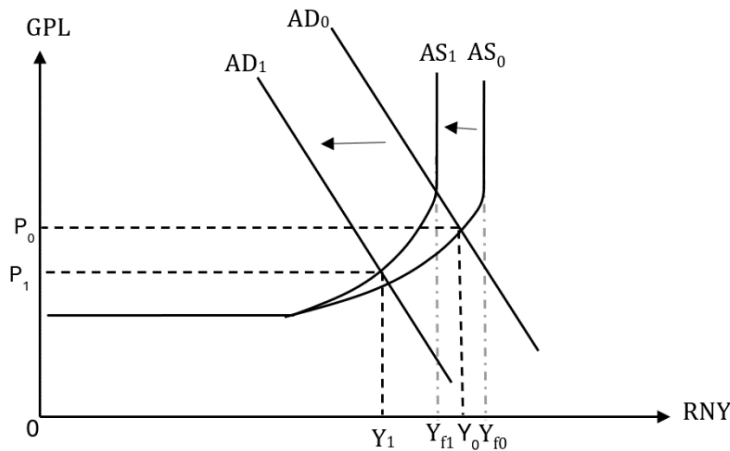
Introduction:

- Clarify what is meant by sluggish growth – **weak economic growth** or a rate of economic growth that is below desired ie. Economy is likely operating below Y_f (briefly provide a reason for sluggish growth: fall in income of trade partners)
- Clarify what is meant by rising cost pressures – given that rising cost pressures arise from escalating commodity prices - **increase in COP** due to increases in prices of FOP.
- Frame the issue of being concerned as the **adverse macroeconomic consequences** faced by economies as a result of the above-mentioned scenarios.

Body:

R1: Explain why a government will be concerned about sluggish growth (link to the negative consequences on the macroeconomic aims)

- Fall in investment**
Sluggish economic growth can create a poor economic outlook - poor business confidence as businesses are likely to be pessimistic about their future sales and profits - firms are less willing and able to undertake investment projects as they expect any investment projects to yield lower profitability - fall in Investment (I)
- Fall in consumption**
Sluggish economic growth - lower consumer confidence as consumers are more likely to be pessimistic about their future employment and earnings prospects. When individuals are uncertain about their job security and future earnings - engage in more precautionary savings to protect against future uncertainties by postponing consumption - fall in consumption (C).
- Hence, with a fall in autonomous C and I - fall in AD, triggering a reverse multiplier process which essentially reflects how one man's loss of spending results in another man's loss of income. The fall in AD results in unplanned inventory accumulation - signals to firms to decrease output in the next production cycle - firms hire less factor inputs (including labour since labour is a derived demand) - **rise in demand-deficient unemployment** and moving the economy further away from Y_f , ceteris paribus. With less FOP hired - less factor incomes received. As national income falls - fall in income-induced consumption (C_d), causing another round of decrease in AD. At each successive round, the decrease in income-induced consumption gets smaller because of leakages in the form of savings taxes and imports spending. Eventually, the reverse multiplier stops when the cumulative fall in withdrawals equals the initial fall in AD - more than proportionate fall in RNY - **adverse effect on actual growth**. Diagrammatically, this is illustrated via leftward shift of AD from AD_0 to AD_1 resulting in a decrease in real NY from Y_0 to Y_1 .



- In addition to the **negative impact on employment and actual growth**, the fall in investments - less capital stock accumulation - reduces the productive capacity of the economy in the long run - **Y_f falls from Y_{f0} to Y_{f1} - adverse effect on potential growth.**
- On the whole, sluggish growth in an economy is a **matter of concern** to governments since it contributes to **a rise in demand-deficient unemployment** and **adverse effects on actual and potential economic growth** ie. **Adverse effect on sustained economic growth.**

Additional arguments:

- As analysed previously, sluggish growth - fall in RNY, which can potentially lead to **lower material standard of living** enjoyed by residents (assuming no changes in population size) since there would be a fall in real GDP per capita, reflecting a fall in purchasing power of an average person in the country - a fall in ability to consume goods and services.
- Assuming that an economy operates under a progressive tax system, a fall in RNY caused by sluggish economic growth - reduced income tax revenues collected by governments - less revenue might be spent on improving the quality of public healthcare, education and amenities - leading to **lower non-material standard of living.**
- Following from the above argument, the fall in RNY also affects the government's ability to collect sufficient income tax revenue to finance social welfare programmes such as upskilling and reskilling programmes targetted at uplifting low skilled and marginalised workers - reduce productive employment opportunities, widen income inequalities to the detriment of the low-skilled and marginalised workers - **reduces country's ability to achieve inclusive growth.**

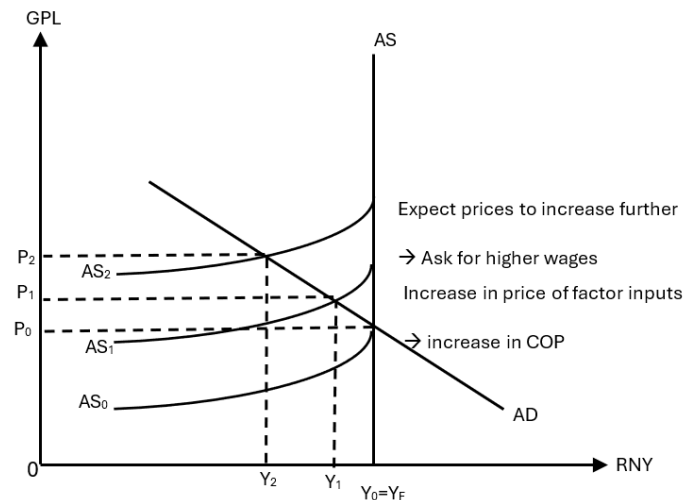
R2: Explain why a government will be concerned about rising cost pressures in an economy (link to the negative consequences on the macroeconomic aims)

- **Cost-push inflation**

Rising cost pressures due to escalating commodity prices for e.g. raw materials - increase COP incurred by firms - ceteris paribus, firms will cut back on production levels to maintain profits - results in a fall in AS (illustrated via an upward shift of AS curve from AS_0 to AS_1). The fall in AS creates shortages at the prevailing price level - upward pressure on price levels as illustrated via increase in GPL from P_0 to P_1 . The increase in general price level will cause real

national income to fall because spending for goods and services will fall due to the wealth, interest rate and international trade effects (represented by a movement along the AD curve). The **general price level will rise** until the shortage is eliminated at the higher equilibrium price of OP_1 and a **lower equilibrium level of income** at OY_1 .

- If inflation expectations become entrenched - a risk of sparking off a **wage-price spiral**. When workers expect prices to continue to increase, they will start asking for higher nominal wages to maintain their purchasing power - a further rise in the costs of production, reflected by a further upward shift of the AS curve from AS_1 to AS_2 . As a result, the general price level will increase further from P_1 to P_2 , resulting in higher **cost-push inflationary pressures**.



Additional arguments:

- Fall in employment**
As firms cut back production, demand for factors of production - ceteris paribus, unemployment increases.
- Fall in actual growth**
With the decrease in real NY from Y_0 to Y_2 , the economy moves further away from the full employment level Y_f with decreased resource utilisation - ceteris paribus - **fall in actual growth**.

Conclusion:

Sluggish growth and rising cost pressures are key concerns for a government given the adverse impact on macroeconomic goals that each development creates. It is important to note that taken together, sluggish growth and rising cost pressures result in countries facing stagflation ie. inflation coupled with negative economic growth, which is even more concerning to governments given the difficulties involved in implementing appropriate macroeconomic policies to resolve the issue of stagflation.

Knowledge, Application, Understanding, Analysis		
L1	- Largely irrelevant answer - A descriptive/journalistic response	1 – 4

	• Glaring conceptual errors	
L2	Answer that lacks depth of analysis: • Underdeveloped explanation of why a government may be concerned with sluggish growth and/or rising cost pressure in an economy. Analysis lacks relevant details. Answer that lacks scope of analysis: • Considers only R1 or R2 analysis • Considers only one macroeconomic aim and/or consequence	5 - 7
L3	Answer with good depth of analysis: • Detailed and well-developed explanation linking explicitly to the key macroeconomic effects • Good diagrammatic analysis that is integrated well into main analysis Answer with good scope of analysis: • Both R1 and R2 covered • Good range of relevant macroeconomic aims and macroeconomic effects	8 - 10

Examiner's Comments:

- Responses **lack clear economic framework** (ie. AD/AS framework) used to facilitate an economic analysis of adverse macroeconomic effects of sluggish growth and rising cost pressures. For e.g., many students went into an explanation of the negative impact of sluggish growth on material and non-material SOL without reference to how **sluggish growth can result in a fall in components of AD** hence creating a fall in RNY that forms the basis of their arguments about a fall in purchasing power to consume goods and services. Such scripts utilise the PPC framework in their answers which inadequately illustrate the impact on macroeconomic goals.
- Many scripts have weak linkages to macroeconomic goals (eg. Stop at fall in RNY or the increase in GPL)
- Similarly, many students conveniently assumed that rising cost pressures meant that the economy is suffering from inflation and went straight into an explanation of the secondary effects of inflation on an economy (ie. Loss of export competitiveness on BOT or a loss of investor confidence on AD and RNY) without realising the need to first utilise the **economic analysis of a fall in AS brought about by rising cost pressures** to explain **how rising cost pressures can lead to cost-push inflation** in the country, hence compromising the goal of price stability.

Many gaps in economic analysis

- Many students conveniently used the diagrammatic illustration of an upward shift of AS curve and a rise in price levels from P0 to P1 to replace their economic analysis of the adjustment process through which a fall in AS (production levels) resulting in a shortage at prevailing price level would create upward pressure on price levels leading to cost-push inflation.

Inaccurate terms used in essays

- While a good number of students recognised that sluggish growth is a result of RNY increasing at a slower pace, but these students went on to claim that purchasing power fell amongst households leading to a fall in material SOL, which is incorrect since a slower rate of increase in RNY should ideally reflect a continued rise in purchasing power, albeit at a slower rate.

Gross misinterpretations

- Many students misinterpreted sluggish growth to be an economy that is operating close to or at full employment level of output and hence facing demand-pull inflation and continued with their erroneous analysis of the negative effects of demand-pull inflation in their essays.
- It is erroneous to say that GPL increase leads to a fall in autonomous consumption. Note that autonomous consumption changes due to non-GPL and non-income factors.

Failure to recognise requirements of the question

- A handful of students analysed the detrimental effects of the combination of sluggish growth and rising cost pressures ie. Stagflation on the economy and went on to justify why governments should be concerned about stagflation and its effects due to the difficulties involved in implementing policies to manage stagflation. These students have gone off-focused as they failed to recognise the requirements of the question, that is to separately analyse the impact of sluggish growth on an economy to fulfill one requirement, and that of rising cost pressures as the second requirement.
- Some students focused too much of their attention on explaining what causes sluggish growth.
- The question is not about what the government can do to overcome the problem.
- Avoid the use of arrows in your answers. All answers need to be written in prose.

(b) Discuss whether the use of supply-side policies would be effective in achieving [15] inclusive growth in Singapore.

Suggested answer:

Introduction:

- Define inclusive growth: growth rate sustained over time, broad-based across sectors, and creates opportunities for most of the country's population. It ensures that the benefits of economic growth are equitably distributed, preventing the exacerbation of income inequality.
- Clarify the meaning of supply-side policies for purpose of achieving inclusive growth: Measures aimed at improving the efficiency and productivity of the economy by increasing the aggregate supply of goods and services. For the purpose of achieving inclusive growth, these policies focus on enhancing the productive capacity and competitiveness of the economy while ensuring that the benefits of growth are widely shared across the population.

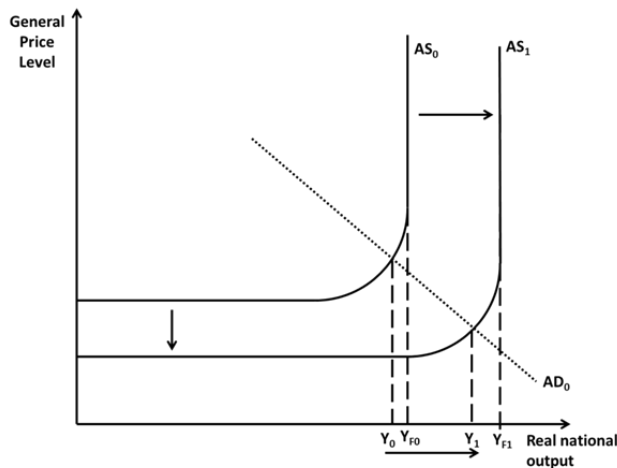
Body:**R1: Discuss the effectiveness of one supply-side policy to achieve inclusive growth in SG.**

Thesis: Explain the effectiveness of subsidies for education and training to achieve inclusive growth

The **Workfare Skills Support** (WSS) scheme in Singapore is part of the broader Workfare initiative aimed at helping lower-wage workers enhance their skills and employability. This scheme provides additional support and incentives for training and skill development, contributing to inclusive growth by enabling workers to access better job opportunities and higher wages, while improving the quality of labour. Key features of the WSS scheme are:

- Training Subsidies: The WSS scheme offers significant subsidies for approved training courses. Eligible workers can receive up to 95% course fee subsidies for a wide range of skills training programs - reduces the financial burden on workers and encourages them to pursue continuous learning and professional development.

Upgrading the skills of workers can lead to both **actual and potential economic growth** through improvements in productivity and attractiveness to firms. With improvements in the quality of labour, and if labour productivity increase faster than wage increases - lower unit COP faced by firms - increase AS, ceteris paribus (diagrammatically seen as a downward shift of the AS curve) - increase RNY from Y_0 to Y_1 , due to higher production levels - economy moves closer to Y_f with increase in resource utilization - indicating **actual growth**. There is also an increase in the productive capacity of the economy, represented by the rightward shift of the AS curve from AS_0 to AS_1 , Y_f level increases from Y_{F0} to Y_{F1} , resulting in **potential growth**.

Inclusive

Anti-thesis: Explain the ineffectiveness of the supply-side policy to achieve inclusive growth [Any one point]

[Turn Over

- Low-skilled workers may suffer from **low literacy rates** which reduces their ability to comprehend the skills taught in the courses - **inability to acquire the skills taught** - limit their ability to take up better paying jobs to narrow the income gap - hence limiting the effectiveness to achieve inclusive growth.
- Training programmes tend to **take time** to bear fruit and **results are unlikely** to be seen in the **short run** due to:
 - **Learning Curve:** Acquiring new skills and knowledge through training is a process that involves a learning curve. Workers need time to absorb and apply what they have learned effectively in their jobs. This initial period of adjustment and learning can delay the immediate benefits of training.
 - **Implementation and Practice:** Even after completing training, workers often need to practice and refine their newly acquired skills to achieve proficiency. This practical application phase can take time as individuals adapt to applying theoretical knowledge to real-world tasks and challenges.
 - **Integration of skills into workplace:** Integrating new skills into organizational processes and workflows may require adjustments and alignment with existing practices. This organizational adaptation process can vary in complexity and duration depending on the nature of the skills being developed and the industry context.

Possible Evaluation to R1: [Any one point]

- In SG context, education and training as a supply-side policy is more likely to be effective in achieving inclusive growth. The Education and training programmes have been curated for the lower-skilled group and refined over time to ensure only the most suitable courses/programmes are made available for these workers to choose from to upgrade their skills. Thus, as the courses are consistently revised and updated to tailor and pitched to help the lower wage workers gain better skills it helps the lower- skilled workers to attain better skills and be able to take up better paying jobs.
- The SG government's commitment to continuously refine and update training programs ensures that these low-skilled workers have access to courses that are relevant and beneficial for upgrading their skills. By tailoring education initiatives to meet industry demands and technological advancements, Singapore not only prepares its workforce for current job opportunities but also anticipates future shifts in the economy. Singapore's proactive approach to adapting supply-side policies to industry shifts enhances the effectiveness of education and training initiatives. For instance, initiatives like SkillsFuture and Workfare Training Support are responsive to emerging sectors and technologies, equipping low-skilled workers with the skills needed to participate in growing industries. This adaptability not only reduces the risk of skills mismatch but also enhances the employability and earning potential of lower-wage workers. This industry-relevant focus increases the likelihood that such trained workers will successfully transition into higher-paying jobs, contributing to a reduction in income disparity and promoting inclusive growth.

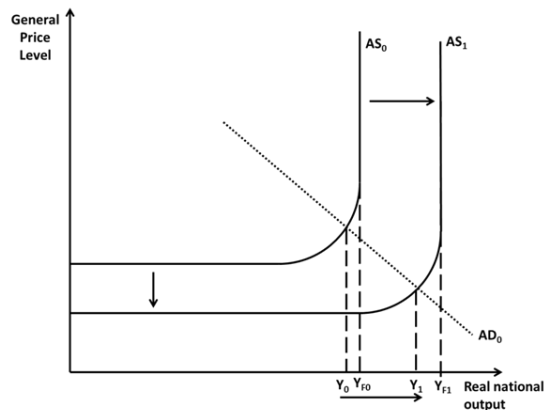
R2: Discuss the effectiveness of one other supply-side policy to achieve inclusive growth in SG.

Thesis: Explain the effectiveness of the Progressive Wage Model which complements the Workfare Skills Support (WSS)

The **Progressive Wage Model (PWM)** in Singapore serves as a key supply-side policy designed to uplift lower-wage workers through a structured approach of skills upgrading and wage progression. The PWM was introduced by the Ministry of Manpower (MOM) in SG through which firms are mandated to pay workers in cleaning, security and landscape sectors an entry-level basic

wage, based on their skillset. For instance, general cleaners employed under government contracts must be paid a basic wage of at least \$1,200 per month. Hence, **low-skilled workers who are employed at the basic minimum wage rate** would become better off with higher wages/incomes - **narrowing the wage gap directly**. By providing monetary incentives for workers to upskill, the PWM encourages the acquisition of new skills and knowledge which not only enhances the capabilities of such workers but also leads to higher-quality work outputs, hence justifying **wage increments as their productivity rises** - further contributing to the **reduction in income disparities and inclusive growth**.

As workers become more skilled, they produce more output per unit of input, increasing productivity. When productivity rises at a faster rate than wage increases - decrease in the unit cost of production (COP) - ceteris paribus, firms raise production levels seen as an increase in AS ie. a downward shift of the Aggregate Supply (AS) curve (from AS_0 to AS_1). Consequently, the economy moves closer to its full employment output level (Y_F), indicating an increase in the efficient utilization of resources. Real national income rises from Y_0 to Y_1 , reflecting **actual economic growth**. The increase in the productive capacity of the economy with an increase in output per unit of labour, is illustrated by a rightward shift of the AS curve from AS_0 to AS_1 , representing **potential growth**. With actual and potential growth attained, the economy experiences **sustained economic growth**.



The PWM's focus on skills upgrading not only boosts individual worker productivity but also contributes to broader economic growth by enhancing overall efficiency and competitiveness. By aligning wage increases with productivity gains, the PWM fosters sustained growth and reduces income inequality. This dual effect of increasing actual and potential output underscores the PWM's role in promoting inclusive growth, where economic benefits of growth are more widely distributed across society.

Anti-thesis: Explain the ineffectiveness of PWM in achieving inclusive growth. [Any one point]

Higher COP incurred for sectors where PMWs implemented

Implementing the Progressive Wage Model (PWM) can lead to higher costs of production in sectors where it is applied. By setting minimum wages, the PWM may initially create wage-push inflationary pressures, causing the Aggregate Supply (AS) curve to shift upwards and leading to an increase in the GPL which contributes to an increase in cost of living, especially for low-skilled and low-wage workers. This rise in GPL results in reduced real incomes and purchasing power, particularly impacting lower-income earners. This could exacerbate income inequality and pose challenges to achieving inclusiveness.

Constraints in productivity improvements

Furthermore, the potential for increased productivity from low-wage jobs under the PWM may be constrained by technological limitations. For instance, if current technology allows a dishwasher to wash only 40 dishes per hour, there may be limited scope for the PWM to significantly boost productivity in such roles. Therefore, while the PWM can potentially narrow income inequality by setting minimum wages, its ability to enhance overall economic growth, particularly in terms of productivity improvements, may be limited.

Hence, while the PWM aims to address income disparities through minimum wage standards, its impact on achieving inclusive growth may be constrained by inflationary pressures and technological limitations in certain sectors.

Possible Evaluation to R2:

In SG context, PWM as a supply-side policy is more likely to be effective in achieving inclusive growth. This is due to various reasons:

Sectoral Approach and Expansion:

The PWM initially covered specific sectors like cleaning, retail, and landscaping, targeting 85,000 workers. Over time, it expanded to encompass industries such as food services and waste management, projecting benefits for approximately 234,000 workers by 2023. The phased expansion reflects a tailored approach to addressing wage disparities across diverse sectors, ensuring that the model's benefits are broad-based and sector-specific challenges are effectively addressed.

Explicit links between wage increases and skills upgrading:

The PWM is projected to benefit 94% of the lower-wage workforce, significantly reducing income inequality and improving the economic prospects of a large segment of workers. By linking wage increases to skill levels and job responsibilities, the PWM not only raises incomes but raises labour productivity.

Refinement of and Collaboration in Training Programs:

Efforts to collaborate with training providers to update existing programs or develop new ones aim to close skills gaps and ensure workers are equipped with relevant competencies. Collaboration with employment facilitation agencies enhances the effectiveness of training initiatives by aligning them with industry needs, thereby fostering sustainable skill development and career advancement.

Engagement with Industry and Unions:

Efforts to engage and collaborate with industry partners and unions ensure buy-in and support across sectors, enhancing the implementation and impact of the PWM. This collaborative approach fosters a conducive environment for wage growth and career progression. By aligning wage progression with skills development and industry demands, the PWM enhances productivity within the sectors, contributing to overall economic growth. This approach not only reduces income inequality but also cultivates a skilled and motivated workforce capable of driving Singapore's economic growth in the long run while ensuring growth is inclusive.

Reasoned Conclusion: [Any of these possible points]

LR effectiveness of SSP on inclusive growth:

Overall, supply-side policies in Singapore have proven effective in achieving long-term inclusive growth by enhancing the social mobility of low-wage workers through upskilling and reskilling initiatives. These policies help uplift the wages of lower-skilled workers, enabling them to secure better-paying jobs.

Singapore's fiscal capacity and demographic advantages:

Singapore's strong fiscal budget and smaller population size enhance the effectiveness of supply-side policies, allowing the government to provide quality training programs and enforce minimum wage standards through the Progressive Wage Model (PWM).

Need for complementary measures considering rising cost of living in SG and a balanced approach that addresses both SR and LR challenges in achieving inclusive growth:

However, while supply-side policies like the PWM and WSS are crucial for promoting skills development, the benefits of these training programs take time to materialize. In the short run, supply-side policies should be complemented with targeted transfer payments for lower-income groups, particularly due to rising living costs to address the immediate socio-economic challenges. Inflation disproportionately affects lower-income households, as they spend a larger share of their income on necessities and have limited ability to switch to cheaper alternatives. Thus, there is a need for policies that directly increase the disposable income of lower-income households in the short term, mitigating the immediate financial pressures they face. This dual approach ensures that Singapore's economic policies not only support long-term inclusive growth but also provide immediate relief to those most affected by rising costs, thereby fostering a more inclusive growth.

<i>Knowledge, Application, Understanding, Analysis</i>		
L1	- No theoretical framework/Descriptive and journalistic writing - Meaning of the question is not properly grasped - Major conceptual errors - Answer mostly irrelevant or inaccurate	1-4
L2	Lacks Depth of Analysis: - Underdeveloped explanation of how the proposed supply-side policies work to address inclusive growth. Analysis lacks relevant details. - No/little application to the SG context, supply-side policy discussed lacks specifics to accurately capture the nuances of it being used in Singapore to address inclusive growth. Lacks Scope of Analysis: - Only R1 or R2 analysis covered - One-sided analysis: T or AT in R1 and/or R2	5-7
L3	Good use of theoretical framework and detailed analysis, clear links inclusive growth Good Depth of analysis: - Explanation of the supply-side policies to address inclusive growth is well-developed with sufficient details - Good use of diagram(s) that is well-integrated into main analysis - Good application to SG context. Discussion shows good understanding of the specifics of SSP in SG that accurately captures the nuances of it being used to address inclusive growth in SG context Good Scope of analysis: - Both R1 and R2 covered - Balanced discussion with thesis and anti-thesis for both R1 and R2	8 - 10

Evaluation		
E1	- Weak evaluation of R1 and R2 - Overall stand made with a weak substantiation	1-2
E2	- R1 and/or R2 evaluation made - No/some attempt to weighing the arguments for the effectiveness of SSPs in SG to achieve inclusive growth - Overall stand made with some substantiation which demonstrates basic understanding of the key considerations involved in the effective use of SSP, with some evidence of contextual understanding	3-4
E3	- R1 and R2 evaluation made - Good attempt at weighing the arguments for the effectiveness of SSPs in SG to achieve inclusive growth - Demonstrates a good ability to synthesize economic arguments, building on prior analysis to arrive at well-reasoned judgments. - Overall stand is well-substantiated, the synthesis demonstrates a solid grasp of the nuances involved in the effective use of SSP in SG context	5

Examiner Comments:

- **Time management issues:** Many students are unable to complete this part (b) of the question, with many responses being one-sided in analysis with the analysis of thesis of SSP or responses with analysis of only one SSP.
- **Poor grasp of question's requirements:** Many students provided an analysis of only one SSP coupled with the analysis of expansionary FP or MP(exchange rate policy), instead of 2 different SSPs as implied by the question. Majority of students who attempted this question did not fully comprehend the requirements associated with the attainment of inclusive growth ie. The attainment of sustained growth as a pre-requisite to attaining inclusive growth. This resulted in students failing to provide a detailed analysis of how SSPs can lead to the attainment of sustained economic growth before explaining how these SSPs can also contribute to inclusive growth by narrowing wage/income gaps either directly through raising incomes for the low-skilled or indirectly through increasing their skillsets that allow them to access higher paying jobs.
- Many students provided responses that reflect **incomplete analysis** of policies for eg. Presenting an analysis of how one SSP achieves sustained growth and that of another SSP in achieving inclusive growth, instead of detailing how both SSPs achieve sustained and inclusive growth. **Gaps in analysis** are also commonly found in the anti-thesis of SSPs in which students merely negated the effectiveness of SSPs such as education and skills upgrading with one-liner statements on how the receptiveness of such policies might be low amongst the elderly or the low-skilled workers or how skills training takes time which makes it ineffective in the short-run.
- Many did not explain how policy enhances productivity of low-skilled workers but make general assertions about this outcome without explanation
- **Poor choice of policies chosen:** Many students wrote about privatisation/deregulation/nationalisation/grants for encouraging entrepreneurship/wage subsidies/tax cuts/reduction in trade union power etc without analysing how each of these SSPs can result in both sustained yet inclusive growth through providing direct opportunities/benefits to lower-income or lower-skilled workers.

- *General choice of AT points or a lack of contextualisation to low-income or low skilled workers: Many students provide generalise limitations of policies including the strain of government's budget rather than limitations unique to the policy chosen. Answers that provided limitations specific to the policies can improve by contextualising the explanation to the low-skilled and low-income workers which the policies are specifically targeting.*

*******END*******

“Start where you are. Use what you have. Do what you can.” ~ Arthur Ashe