

2024 CATHOLIC JUNIOR COLLEGE H2 Prelims 9570/01

Suggested Answers:

(a) Using Figures 1 and 2, explain how the change in the price of fertilisers [3] has affected the price of wheat, and why this effect was predicted to be lagged.

Suggested Answer:

Fertilisers are used as raw materials to produce wheat, when price of fertilisers goes up in Figure 1, unit cost of producing wheat rises [1], supply of wheat fall, hence wheat prices will also go up. This is observed in Figure 2. [1]

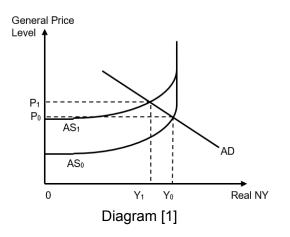
There is a lagged effect as producers of fertilisers are bounded by previous contractual obligations and not have adjusted their prices so quickly. [1] <u>Alternative:</u> Producers will make use of available stocks of fertilisers and only need to buy fertilisers at a higher price once the stocks are used up. [1]

(b) Using a diagram, explain how the imposed sanctions on Russia could [3] negatively affect the US economy.

Suggested Answer:

Sanctions on Russia are imposed largely on the Russia's exports, especially on primary products. The global shortage will drive up prices of these primary products and thus lead to higher imported costs for the US. [1]

When aggregate supply decreases from AS_0 to AS_1 due to rise in costs of production, the economy will experience a fall in the level of real output from Y_0 to Y_1 . Hence, there is a negative economic growth leading to an increase in unemployment level and a higher general price level (P_1). [1]



(c) With reference to Extract 2, explain one factor a government can [2] consider when deciding if it should intervene in the market for fertilisers.

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Suggested Answer:

Any relevant factor under the Decision-making Framework – costs, benefits, constraints, consequences, information and perspectives.

Factor 1: The government will consider the **potential benefits** from tackling the negative externalities in the excessive use of fertilisers. MEC incurred would be the health problems and thus higher healthcare costs not compensated by people living near farms where the source of pollution is. Thus, intervention will result in improve societal welfare as overconsumption and DWL is removed.

OR Alternative factors:

- The government can also consider the **costs of intervention** in terms of both explicit monetary costs in the implementation of policies (administrative & monitoring costs for legislation / tax collection), as well as implicit opportunity costs (government expenses on education forgone).
- **Information available** to determine extent of the problem regarding the size of MEC, whether it is easy to ascertain and size of MEC will determine the types of intervention.
- **Unintended consequences** of government failure that resulted in large drop in crop production that affected food security, exports, and economic growth.

(d) Using Extract 3,

(i) explain two reasons why Luckin Coffee chose to expand its branches [4] beyond China.

Suggested Answer:

Luckin Coffee is a profit maximising producer where Profits = TR - TC, thus it will seek to increase profits through raising TR/AR or minimising TC/AC by increasing its <u>scale of production</u> through expansion of its branches beyond China.

Expansion of its branches to other countries (such as Singapore for its mature coffee consumer market) will help to capture greater global market share and thus raise the overall demand for its products [1], shifting AR to the right and thus increase TR as Price and Output both increase, increasing profits [1].

Expansion also allows the firm to enjoy internal EOS which as costs savings the firm enjoys as it expand its scale of production [1], such as lower unit COP through bulk savings from ingredient costs – lower AC, increasing profits [1].

(ii) Discuss whether the introduction of mobile app is likely to benefit [8] Luckin Coffee.

Question Interpretation:

Command	Command Discuss whether – two-sided answer with a well-reasone conclusion	
Content	Non-price strategy – mobile app is a form of innovation, to increase profits	
Context	Luckin Coffee	
	of innovation as a strategy to increase profits Limitations of using innovation as a strategy to increase profits	
	Iusion – Stand and justification – Will the strategy of nefit Luckin Coffee or not	

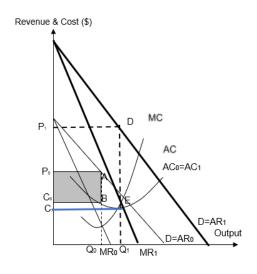
Suggested Answer:

Introduction:

• Assume Luckin Coffee aims to maximise profits and is operating in a competitive oligopoly in the coffee industry.

Thesis: Mobile app is an example of non-price strategy to increase profits for Luckin Coffee.

 Use of big data and mobile app eliminates the 'need to queue' which can be something unique about the coffee brand, appealing to consumers who value convenience. Hence may help to increase AR/MR and make PED more price inelastic due to its convenience and unique offerings, hence profits rise.



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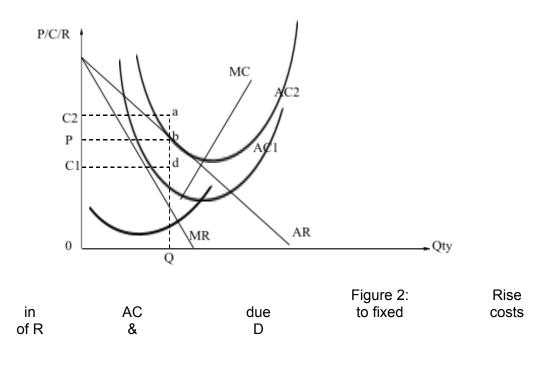
9570/01 JC 2 PRELIMINARY EXAMINATION/2024

Figure 1: Rise in AR/MR and PED<1

• From the above Figure 1, AR and MR increase from AR0 and MR0 to AR1 and MR1, becoming steeper and more price inelastic in demand. Profits rises from C0P0AB to C1P1DE.

Anti-thesis: Limitations in using big data and mobile app to increase profits for Luckin Coffee

 May experience high initial fixed costs of R & D involved in the development of the mobile app – may drive up costs, hence AC may not fall but in fact rise to AC2 and reduce initial profits from C1Pba to subnormal profits of PC2ab.



• Therefore, there is a need for Luckin Coffee to have past supernormal profits to cover these costs. However, this is unlikely a significant problem to Luckin Coffee given its ability to retain huge supernormal profits earned so far in its domestic market in China.

Synthesis (Summative Conclusion):

Substantiate using Time Frame: The benefit of using mobile app outweighs its costs due to its appeal to the younger generation who are likely Luckin

Coffee's target audience. They may also be keener to make use of the app's referral system.

Mark Scheme:

Marking Scheme			
Level	Knowledge, Application, Understanding and Analysis	Mark	
L2	For a well-developed and balanced answer on whether mobile app can increase profits and its limitations. Clear and coherent analysis, grounded by economic concepts, frameworks and principles and with application to Luckin Coffee.	4-6	
L1	Answer lacks balance or scope or reference to case material or details. Max 3 – If benefits of mobile app are explained but without any limitations		
	Evaluation		
E	Makes a substantiated judgement that answers the question.	1-2	

(e) Discuss whether the use of technology or public education is the more [10] effective way to achieve food security and affordability in Singapore.

Question Interpretation:

Command	d Discuss whether – two-sided answer with a well-reasoned conclusion	
Content	Use of technology – Affects supply with PED analysis Public education – Affects demand with PES analysis How the above changes have affect Pe and Qe in the market for food.	
Context	Food market in Singapore	
	e of technology to increase supply of food : Limitations of strategy	
	e of Public Education to decrease demand for food Limitations of strategy	
Overall cone factor is more	clusion – Stand and justification – whether demand or supply effective	
Introduction:		

• Food security (increasing equilibrium quantity to be self-sufficient) and affordability (ensuring stable equilibrium prices).

• Aim of government policies are to influence supply and demand in order to achieve the goals above.

Policy 1: Use of technology – increase supply of food

• The use of technology in redeveloping the Lim Chu Kang area and transforming it into a 'vibrant, high-tech agri-food cluster to boost the domestic food production' helps to improve productivity in food production and reduce the unit cost of producing food in Singapore. This will increase local supply of food supply shifts to the right from S1 to S2.

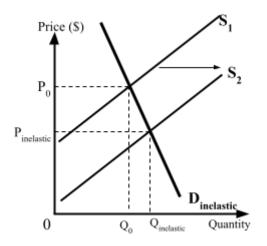


Figure 1: Supply rising due to use of technology

- Given that the price elasticity of demand for food is generally price inelastic due to a lack of substitutes, this will help to bring down equilibrium price of food to a large extent from P0 to Pinelastic and increase output of food from Q0 to Qinelastic (thus attain both food security and affordability).
- This impact on supply is likely to persist into the long run given the Singapore government's '30 by 30' vision. Hence, we should be able to see a continued fall in prices of food into the future.

Limitations

Besides the heavy investment from government that will incur high opportunity costs and impact on the country's fiscal health, the results of these technology enhancements may not be certain, and thus, supply of local food production may not increase significantly. In addition, given our small and open nature, with 70% of our food sources imported from abroad, perhaps it will be better for Singapore to diversify its food imports to minimise supply shocks in the future.

Policy 2: Reduce food wastage – decrease demand for food

 On the demand side, public education with various stakeholders on 'reducing food waste' can help to reduce demand of food by reducing food wastage as evidenced in Extract 4 "effectively addressing the excessive demand by changing mindsets towards responsible food purchase".

- Despite an overall increase in the demand for food by the Singapore population, with proper education, it is likely that the demand for food in the country will fall or will not increase as much than the projected rise in supply.
- It is also likely that the PES of food is inelastic given the lengthy period of cultivation time. Hence, we should expect a large fall in prices at a lower output.

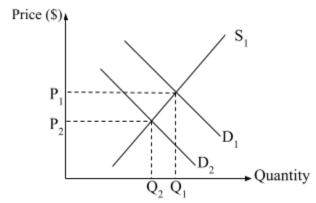


Figure 2: Public Education leading to a fall in demand

 In Figure 2, demand fall by a little from D1 to D2, given PES < 1, there is a large fall in price from P1 to P2 and a corresponding fall in quantity from Q1 to Q2.

Limitations

Given the rise in income and population (especially via increase immigration) for sustained growth, it is not feasible to reduce demand significantly without a substantial fall in SOL. Also, time is needed to change mindsets towards responsible and prudent approach towards food purchases. Perhaps the use of technology will be beneficial to inform consumers (especially F&B outlets) of the expiry dates and stock-taking to minimise food wastage on a national level.

Overall Conclusion: Demand fall more than rise in Supply

[Stand]: It is likely that the demand for food may continue to rise despite public education given current trends.

[Substantiate]: Hence the use of technology may be a better strategy for the government to consider. There may be issues with the long implementation time frame for technology to be adopted.

[Something Special]: In the interim, the government should still consider the use of public education to continually remind the public of the avoidance of food wastage.

Mark Scheme:

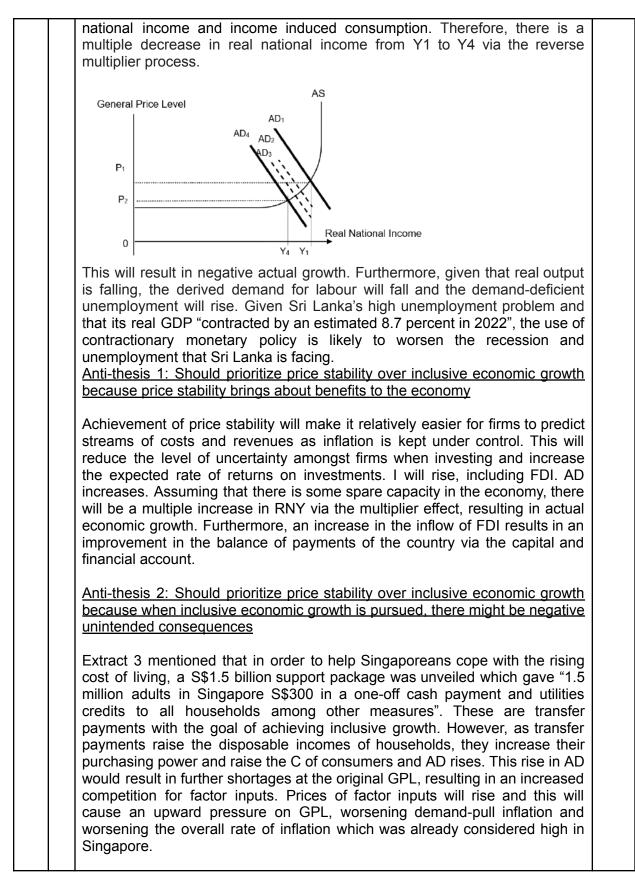
Knowledge, Understanding, Application and Analysis

L2	Sound analysis of the strategies of using technology and public education using the demand and supply framework of food in the market. Good use of economic concepts, principles and framework to achieve affordability and food security with limitations of the measures explained. Use of relevant case information to support analysis	5-7
L1	Answer that attempts to consider the strategies of using technology and public education using the demand and supply framework of food in the market with major conceptual errors.	1-4
	Evaluation	
E2	Evaluative judgment that reaches a conclusion based on the analysis offered	2-3
E1	Evaluative judgment without explanation or elaboration or superficial evaluation	1

CSQ2 answer

Using Figure 1, explain how the overall trend in real wages could have affected the standard of living of people in Sri Lanka.	[2]
Figure 1 shows that there has been an overall fall in real wages [1] which means that there is a fall in purchasing power. People are able to buy less goods and services ->material SOL falls -> overall SOL falls. [1]	
Using Extract 1, explain how importing "\$3 billion more than it exports every year" caused Sri Lanka to "run out of foreign reserves".	[2]
Sri Lanka's X was falling and M was rising, causing it to import "\$3bn more than it exports every year", resulting in a balance of trade deficit which resulted in a depreciation of the Sri Lankan rupee as seen in figure 2. [1] The government stepped in by using its foreign reserves to buy up the Sri Lankan Rupee in the forex market, causing demand for its domestic currency to rise. This helps to prevent a further depreciation of its exchange rate, this supporting its value. However, this would cause Sri Lanka to "run out of foreign reserves". [1]	
With reference to Extract 1, explain how the Sri Lankan government's import substitution approach was intended to improve the country's trade balance.	[4]
With the import substitution policy, Extract 1 mentioned that Sri Lanka used tariffs to increase the price of imports. [1] If Sri Lanka is able to successfully develop substitutes for its imports, then the demand for its imports would be price elastic. [1] As price of imports increase, Qd for imports will fall by more than proportionately as consumers switch to buying more domestically produced import substitutes. Import expenditure (M) will fall. [1] As M falls -> (X-M) falls -> balance of trade improves [1].	
Using Figure 2, explain how the high inflation in Sri Lanka in 2022 is likely to have affected the value of the Sri Lankan Rupee.	[4]
Sri Lanka's high inflation likely means that its inflation rate is higher than that of other countries. Therefore, its exports would be relatively more expensive whereas the imports would be relatively cheaper. [1] Assuming that demand for Sri Lanka's exports is price elastic, a relatively higher prices of exports will result in a more than proportionate fall in quantity demanded for exports and hence a fall X -> demand for Rupees fall in the forex market [1] Also, given that domestic goods and imports are substitutes, the relatively higher price of domestic goods will cause Sri Lankans to switch consumption from domestic goods to foreign imports leading to an increase in demand for imported goods, causing an increase in M -> increase in Sri Lanka's demand for foreign currency -> supply of Rupees increase in the forex market [1] As demand for Rupees fall and supply of Rupees increase in the forex market, this combined effect will cause the Rupee to depreciate against the USD. [1] <u>Alternative answer:</u> With high inflation in Sri Lanka, it makes it harder for firms to make accurate prediction of their costs and revenue. [1m]	
	affected the standard of living of people in Sri Lanka. Figure 1 shows that there has been an overall fall in real wages [1] which means that there is a fall in purchasing power. People are able to buy less goods and services ->material SOL falls -> overall SOL falls. [1] Using Extract 1, explain how importing "\$3 billion more than it exports every year" caused Sri Lanka to "run out of foreign reserves". Sri Lanka's X was falling and M was rising, causing it to import "\$30m more than it exports every year", resulting in a balance of trade deficit which resulted in a depreciation of the Sri Lankan rupee as seen in figure 2. [1] The government stepped in by using its foreign reserves to buy up the Sri Lankan Rupee in the forex market, causing demand for its domestic currency to rise. This helps to prevent a further depreciation of its exchange rate, this supporting its value. However, this would cause Sri Lanka to "run out of foreign reserves". [1] With reference to Extract 1, explain how the Sri Lankan government's import substitution approach was intended to improve the country's trade balance. With the import substitution policy, Extract 1 mentioned that Sri Lanka used tariffs to increase the price of imports. [1] If Sri Lanka is able to successfully develop substitutes for its imports switch to buying more domestically produced import substitutes. Import expenditure (M) will fall. [1] As M falls -> (X-M) falls -> balance of trade improves [1]. Using Figure 2, explain how the high inflation in Sri Lanka in 2022 is likely to have affected the value of the Sri Lankan Rupee. Sri Lanka's high inflation likely means that its inflation rate is higher than that of other countries. Therefore, its exports would be relatively more expensive whereas the im

	Some local and foreign firms might want to leave Sri Lanka for countries with better price stability and the supply of Sri Lankan Rupee will increase as firms sell their Rupee to get foreign currencies. [1m] With high inflation in Sri Lanka, potential investors might drop the intention to invest there, and this will cause a fall in demand for Rupee. [1m] With the increase in supply and a fall in demand for Rupee, this combined effect will reinforce the depreciation of the Sri Lankan Rupee against the USD. [1m]	
(e)	With reference to Extracts 2 and 3, discuss whether both the Sri Lankan and Singapore governments should prioritize inclusive economic growth over price stability.	[8]
	Introduction When considering whether or not to prioritize inclusive economic growth over price stability, there is a need for the two governments to consider the benefits of each goal and whether the pursuit of one will result in negative unintended consequences as well as the extent of each.	
	Body <u>Thesis 1: Should prioritize inclusive economic growth over price stability</u> <u>because it results in higher SOL for majority of people in the country</u> With economic growth, there will be a higher real income per capita. Thus, consumers' purchasing power increase and they are able to buy more goods and services. Assuming that the economic growth rate is greater than the population growth rate, the real GDP per capita will rise, causing a rise in the <i>material</i> standard of living.	
	If the economic growth were to be inclusive, it means that there is also a relatively low gini coefficient where the majority of households will experience a rise in incomes and therefore, the majority of households will be able to enjoy the higher material standard of living. Given that extract 2 mentioned that "at least half a million people lost their jobs" during Sri Lanka's crisis, inclusive economic growth is important to help them the citizens achieve a higher material standard of living.	
	Inclusive economic growth that results from higher productivity, especially amongst the lower income workers, enable people to have more time for leisure, increasing <i>non-material</i> standard of living. <u>Thesis 2: Should prioritize inclusive economic growth over price stability</u> <u>because there could be some negative unintended consequences when a</u>	
	 <u>country pursues price stability</u> Extract 2 mentioned that "Sri Lanka's Central Bank has raised its key interest rates to their highest levels in more than 20 years to try to contain inflation". Raising the interest rates will increase the cost of borrowing for purchases of big ticket items. Moreover, higher interest rates lead to higher returns to savings and higher opportunity cost of spending. Consumers will thus be less willing to spend. C falls. Furthermore, with higher interest rates, investments 	
	are likely to be less profitable, encouraging a decrease in investments. This results in AD decreasing, ceteris paribus. Thus, AD shifts leftwards from AD1 to AD2. The negative unintended consequence of contractionary monetary policy to achieve price stability is that a fall in AD causes a fall in real national income which will decrease income induced consumption and result in a further decrease in AD. There will be successive rounds of decreases in	



Summative Conclusion	
Stand: In conclusion, whether or not a country should prioritize economic growth over price stability depends on whether the main ro of being unable to achieve inclusive growth is the lack of price sta- the severity of this price stability.	oot cause
Substantiation:	
[Root cause and Situation] If the inflation is so high to the point that of living rises severely and a huge portion of the population, as in the Sri Lanka, are living in poverty (extract 2), then the government first solve inflation before it can achieve inclusive economic growth.	e case o
On the other hand, for Singapore's case, the inflation was higher the but not that severe like in Sri Lanka (extract 3), the government ca more moderate and balanced approach in achieving price stat inclusive economic growth since the pursuit of one tends to re trade-off with the other goal.	an take a pility and
Mark Scheme	
 Knowledge, Understanding, Application and Analysis L2 Question requirements are interpreted accurately. Well-developed explanation of the importance of prioritising both price stability and inclusive growth Appropriate economic concepts, theories and principles are used. Economic analysis is accurate, complete and well supported by contextual evidence. Appropriate diagrams are used to support economic analysis, where relevant. 	4-6
L1 • Question requirements are interpreted inaccurately, or	1 – 3
 Undeveloped explanation of the importance of prioritising price stability and inclusive growth, or Developed explanation of the importance of prioritising either price stability or inclusive growth Inappropriate economic concepts, theories and principles are used. Inaccurate economic analysis. Inappropriate or wrong diagrams are used. 	
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 Undeveloped explanation of the importance of prioritising price stability and inclusive growth, or Developed explanation of the importance of prioritising either price stability or inclusive growth Inappropriate economic concepts, theories and principles are used. Inaccurate economic analysis. Inappropriate or wrong diagrams are used. 	2

(f)	Discuss whether "bold tax reforms" (Extract 2) are better than privatization in helping Sri Lanka to pursue sustained economic growth whilst maintaining fiscal sustainability.	[10]
	Introduction Sri Lankan crisis has arisen due to the multiple problems faced by Sri Lanka which includes: recession, increased borrowing and high levels of government debt. In addition to loans taken from China & India, Sri Lanka had to borrow further from IMF and WB to implement policies that would help the economy come out of the crisis stronger.	
	Body	
	Thesis: "bold tax reforms" are better than privatization in helping Sri Lanka pursue sustained economic growth whilst maintaining fiscal sustainability	
	Extract 6 mentioned that income taxes for higher earners were raised, corporate tax was increased from 24% to 30% and the VAT was also increased from the current 15% to 18%.	
	In the short run, higher taxes on higher income group, will increase tax revenue for the government that can be used to provide transfer payments to low income households, redistributing income from the rich to the poor. This will increase C as the lower income households have higher MPC. This will increase in AD, c.p., resulting in a multiplied increase in RNY via the multiplier process, resulting in positive actual economic growth.	
	In addition, the higher VAT and import duties will further help to increase governments' revenue which will enable the government to better be able to repay for debts incurred. As a result, the debt to GDP ratios falls, improving fiscal sustainability.	
	In the long run, with lower debts, there would be greater confidence in the economy, resulting in increases investments and consumption, resulting in further increases in AD, c.p., causing a multiplied increase in RNY. This would result in further actual economic growth of the Sri Lankan economy.	
	In addition, the higher investment would result in an increase in the quantity of capital which is a factor of production. This will result in a rise in productive capacity of the economy which increases the LRAS. The full employment level of output increases and there is potential growth. The achievement of both actual and potential growth help to achieve sustained growth. <u>Evaluation of "bold tax reforms"</u> In the SR, the VAT and import duties are likely to increase unit cost of	
	 production, decreasing SRAS. This is likely to cause a fall in RNY and increase in unemployment. worsen economic growth. This could also lead to cost-push inflation. Increase in taxes on high income group who tend to be more highly skilled may cause them to leave the country, resulting in a brain drain which reduces the quantity and quality of labour. LRAS falls and this results in negative potential growth. Furthermore, as these high income earners leave the 	

country, income tax revenue of the government falls and the budget balance worsens. The desired effect on EG may also not be achieved in the LR if confidence level does not increase. As such, C and I may not increase significantly, resulting in lower rates of EG. With lower rates of economic growth, tax revenue generated may also increase insignificantly. limiting the government's ability to pay off debts adequately. Anti-thesis: Privatization is a better policy to achieve sustained economic growth whilst maintaining fiscal sustainability Extract 6 mentioned that the government is privatizing state-owned enterprises like Sri Lankan Airlines, Sri Lanka Telecom. In the short run, privatization may result in an increase in investment by private entities into these state-owned firms. If the increase in I exceeds the fall in G, there is likely to be a net increase in AD, c.p., resulting in a multiplied increase in RNY and actual economic growth, assuming the economy is currently operating below full employment. In addition, due to profit motive, privatization is likely to increase efficiency in production, decreasing unit cost of production. This would increase SRAS, resulting in a further increase in RNY and therefore an increase in actual economic growth. With privatization, these profit-motivated firms might then have greater incentive to invest in R&D. The level of technology improves and LRAS increases, resulting in a rise in the full employment level of output. Therefore, potential growth is achieved. The achievement of both actual and potential growth help to achieve sustained growth. Privatization will also reduce the burden on the government to support the state-owned industries. With less money spent to support the state-owned industries that have been privatised, this would cause a fall in G. This would improve in government budget position, improving fiscal sustainability. Evaluation of privatization However, if due to privatization, the fall in G > increase in I, this will result in an overall fall in AD, c.p., causing a multiplied fall in RNY and negative AEG. This may also reduce fiscal sustainability in the SR as the government tax revenue may fall. The desired effect on EG may also not be achieved in the LR if confidence level does not increase. If confidence does not improve, I may not increase significantly, resulting in lower rates of EG. As such, tax revenue generated may also increase insignificantly, limiting the government's ability to pay off debts adequately. Summative Conclusion Stand The implementation of "bold tax reforms" are less useful than privatization in helping Sri Lanka achieve sustained growth whilst maintaining fiscal sustainability. Substantiation

inflatio will rec stream fall and [Weigh income was al taxes leave t unlikel <u>Mark S</u>	 As mentioned above, increasing VAT will worsen. This worsens the already severe price instability in Sreduce FDI further as it becomes even more difficult for files of costs and revenues. This reduces AD and LRAS, can worsens Sri Lanka's growth prospects further. A worsens Sri Lanka's growth prospects further. Aning]: The likelihood that a brain drain from Sri Lanka e taxes for the higher income groups is very high. This is a fready political and economic instability in Sri Lanka. H would further increase the impulse of higher income Sthe country. The brain drain would worsen growth prospects that fiscal sustainability can be achieved. Acheme Vledge, Understanding, Application and Analysis Question requirements are interpreted accurately. Balanced discussion of both "bold tax reforms" and privatization. Appropriate economic concepts, theories and principles are used. Economic analysis is accurate, complete and well supported by contextual evidence. Appropriate diagrams are used to support 	i Lanka which rms to predict ausing RNY to due to rising because there Higher income Sri Lankans to
L1	 Appropriate diagrams are dised to support economic analysis, where relevant. Question requirements are interpreted inaccurately, or Undeveloped one-sided answer, or A balanced answer given but lacked economic analysis Inappropriate economic concepts, theories and principles are used. Inaccurate economic analysis. Inappropriate or wrong diagrams are used. 	1 – 4
	lation	
E	Evaluative comments are well-explained and supported by economic analysis.	2 – 3