

St Andrew's Junior College



Economics Department JC 2 Preliminary Examinations (2014)

Suggested Answers

H1 Economics Paper 1 (Syllabus 8819)

Section A

Question 1: The Olympics: The London Model

Suggested Answers

(a)	(i)	With reference to Table 1, compare the prices of Premium tickets to Fencing and Swimming events.	[2]
		<p>Similarity: The preliminary ticket prices were lower than the tickets for the finals. [1]</p> <p>Difference: The ticket prices for Swimming event were higher than for Fencing. [1]</p>	
	(ii)	Explain two possible reasons to account for your observations in part (a)(i).	[4]
		<p><u>Justification for the similarity</u></p> <p>Similarity: Higher demand for tickets to finals as compared to the demand for the tickets to preliminary events.</p> <p>Reason: [Taste and Preferences] Spectators would prefer to attend and watch the final events as final events are usually more exciting and they would be able to witness their favourite idols competing in the championship during the event.</p> <p style="text-align: center;">OR</p> <p>Similarity: Higher supply of tickets to preliminary events compared to the supply of tickets to Final events</p> <p>Reason: The number of preliminary events is greater than the final events of each sport.</p> <p><u>Justification for the difference</u></p> <p>Difference: Higher demand for tickets to Swimming events compared to the demand for tickets to Fencing events</p> <p>Evidence in Extract 1 → “demand was greatest foras well as the popular sports of ... swimming and artistic gymnastics”</p> <p>Reason: [Taste and Preferences] Due to the popularity of the swimming event, spectators would prefer to attend and watch swimming events.</p> <p style="text-align: center;">OR</p> <p>Difference: Lower supply of tickets to Swimming events compared to the supply of tickets to Fencing events</p> <p>Evidence in Extract 1 → “costs of maintaining of these pools were rather high.”</p> <p>Reason: Due to higher cost of holding the Swimming event, supply of swimming tickets would be lower than that of the Fencing event. This fall in supply would in turn result in higher ticket prices for Swimming event. This shows that LOCOG had passed on the increase in cost in terms of higher prices to the consumers.</p>	
	(iii)	With reference to Table 1, explain how the London Olympic Game Organising Committee (LOCOG) could make use of a relevant elasticity concept to increase total revenue.	[4]
		<p><u>Different price for different events (i.e. Finals vs Preliminary events)</u></p> <p>Preliminary events are poor substitutes for the Finals of the sport event, likewise TV telecast. Hence, there are less close substitutes for Finals → LOCOG should raise price of tickets to Finals to increase TR.</p>	

	<p>Reason: Demand for the Finals of sports events is price inelastic $P \uparrow \rightarrow$ less than proportionate \downarrow Qd. Revenue lost from fall in consumption < revenue increase due to the higher price.</p> <p>For Preliminary sessions of sport events \rightarrow dd is price elastic as there are more substitutes available \rightarrow LOCOG should reduce price to increase TR.</p> <p>Reason: $P \downarrow \rightarrow$ more than proportionate \uparrow Qd. Revenue gained from increase in consumption > revenue loss due to the lower price.</p> <p style="text-align: center;">OR</p> <p><u>Different price for different seats (i.e. Premium vs Standard Seats)</u> Ardent fans would be likely to select Premium seats for better view and would consider Standard seats to be poor substitutes. Hence demand for Premium seats is likely to be price inelastic as there are less substitutes for premium seats. LOCOG should increase price to increase revenue.</p> <p>Reason: $P \uparrow \rightarrow$ less than proportionate \downarrow Qd. Revenue lost from fall in consumption < revenue increase due to the higher price.</p> <p style="text-align: center;">OR</p> <p><u>Different price for different group of people (Senior Citizens vs Working Adults)</u> For senior citizens, demand is likely to be price elastic as watching TV telecast of the Games at home would be a close substitute for them – hence reduce price to increase total revenue.</p> <p style="text-align: center;">OR</p> <p>For senior citizens who are retirees, demand is likely to be price elastic as the proportion of income spent on tickets is relatively higher – hence reduce price to increase total revenue.</p> <p>Reason: $P \downarrow \rightarrow$ more than proportionate \uparrow Qd. Revenue gained from increase in consumption > revenue loss due to the lower price.</p>	
(b)	<p>What can you conclude from the information contained in Figure 1 about the impact of the 2012 London Olympic Games on the London's daily hotel occupancy rate?</p>	[2]
	<p>During the Olympic period, there was a general increase in daily hotel occupancy rate compared to pre-Olympic period. [1]</p> <p>However, this increase was not sustained as the the daily occupancy rate during the post-Olympic period was generally lower than pre-Olympic and Olympic period. [1]</p>	
(c)	<p>Discuss the impact of hosting the 2012 London Olympic on UK's economic growth and employment</p>	[8]
	<p>To have both positive and negative impact on economic growth & employment <u>Positive impact on economic growth and employment</u></p> <ul style="list-style-type: none"> ▪ <u>Positive Economic growth</u> \rightarrow beneficial as UK was in a recession (Extract 3). <ul style="list-style-type: none"> $\uparrow C$ due to <ul style="list-style-type: none"> - increase consumption by locals who choose to change their summer holiday plans by staying back in London Extract 2 	

		<p>“stocking up on supplies and entertaining at home”</p> <ul style="list-style-type: none"> - ↑X due to increased arrivals of international tourists and their spending on retail, hotel and travel industry extract 2. - ↑G – infrastructural development & upgrading - ↑AD → ↑equilibrium real NY → actual growth. - ↑LRAS → increase productive capacity from infrastructural construction of sport facilities and venues - Helped U.K. economy which was in a recession. <p>▪ <u>Unemployment falls</u></p> <ul style="list-style-type: none"> - Many temporary vacancies → workers were employed in Olympic related activities and related industries such as retail, hotel and travel industry. - Might learn useful skills which increased their employability in the future. - Helped U.K. economy which was in recession. <p><u>Negative impact on economic growth & employment</u></p> <p>▪ <u>Actual economic growth might not necessarily improve</u> Increase in X might not be sustained:</p> <ul style="list-style-type: none"> - Increase tourist arrivals might not be sustained after the Games. Figure 1 Potential tourists were deterred from visiting London during the Games period, dampen the increase in X due to Olympics tourists. Extract 3 <p>▪ <u>Potential Economic Growth</u></p> <ul style="list-style-type: none"> - Though there was potential growth, additional capacity such as Olympic Park might be left unutilised, similar to Athen experience.[Extract 3] <p>▪ <u>Unemployment might not fall (Seasonal UN rise)</u></p> <ul style="list-style-type: none"> - Jobs were temporary Extract 3 “temporary vacancies increase”. - Excess capacity – sport venues left unutilised – similar to Athen? extract 4 <p>Hosting the game is costly for govt → less funds to spend on reviving the UK economy .</p> <p><u>Judgement:</u> Benefits likely to be short-lived. Extract 4 – ‘recovery is a mirage’ Whether hosting the Olympic Games is beneficial for U.K. depends on:</p> <ul style="list-style-type: none"> - Depends on follow-up measures by both the government and the private sector to ride on the publicity arising from hosting the Olympics. - Examples U.K.’s efforts in wooing tourists, utilisation of additional sports capacity via organisation of other sports events, conversion of Olympic sites for alternative use. This would also help to utilise the newly acquired skills of workers from their involvement in the Olympics and related activities. 	
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		Level (Marks)	Level Descriptor	
		L3 (5-6)	Well-developed answer that examines both positive and negative impact on economic growth & employment with reference to the case material. Applies economic framework.	
		L2 (3-4)	Answer briefly explains the positive and negative impact on economic growth & employment with some reference to the case material. Max 3 for answer that examine either positive or negative impact or positive & negative impact on either economic growth or unemployment. Applies economic framework.	
		L1 (1-2)	Stating impact with little analysis involved. Very limited or no economic framework applied. No reference to the case material.	
		E2 (2)	Evaluative assessment based on sound economic analysis.	
		E1 (1)	For an unexplained assessment or one that is not supported by economic analysis.	
(d)		Do you agree that the promotion of waste segregation is a sufficient measure to achieve an efficient allocation of resources in the market for plastic food packaging?		[10]
		<p><u>Explain that the promotion of waste segregation is an effective measure to achieve an efficient allocation of resources.</u></p> <ul style="list-style-type: none"> ▪ ▪ Explain how the over-usage of plastic food packaging will result in negative externality and hence over-allocation of resources (explain with the aid of MSB-MSC diagram) <ul style="list-style-type: none"> ○ Example of MEC: Increase in non-compostable and degradable plastic waste kills wildlife and aquatic animals. Increase in plastic waste also takes up landfills, which are limited. If there's insufficient landfills, inappropriate disposal of plastic waste would harm human's health ▪ Explain how waste segregation in promoting recycling will reduce MEC → show MSC shifting downwards <p><u>Explain that the promotion of waste segregation is insufficient even though it is effective. + suggested alternative policies</u></p> <ul style="list-style-type: none"> ▪ Explain that MEC could only be reduced by a smaller extent due to the following factors <ul style="list-style-type: none"> ○ lack of assistance for spectators, potential confusion caused by items which were neither recyclable nor compostable → not enough campaign conducted before the Olympics on how to distinguish between the recyclable, compostable and residual products 		

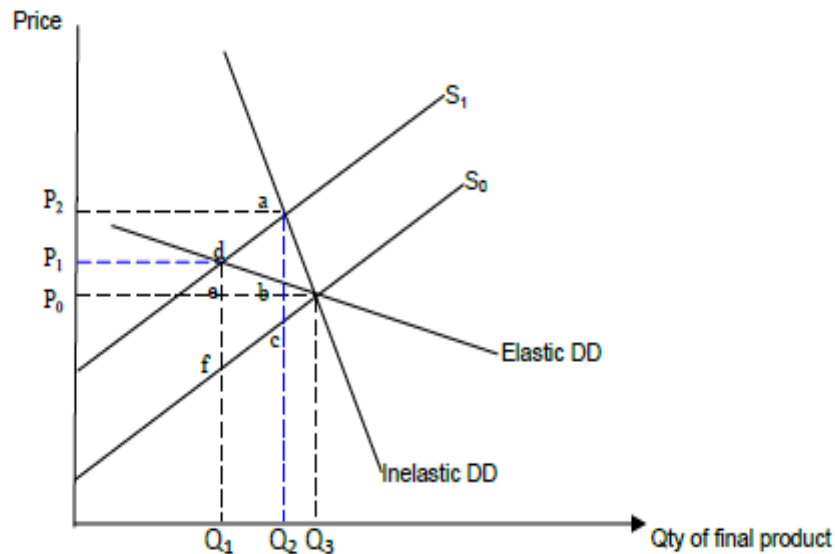
		<ul style="list-style-type: none">○ The bulk of packaging waste might not be recyclable in the first place resulting in a large amount of residual plastic which needs to be incinerated or buried in landfills, both of which are not environmental friendly.○ Better solution is to collaborate with suppliers such as Coca Cola to come up with food packaging that are mainly recyclable. → reduce DD for non-recyclable products and hence reduce negative externality <p><u>Synthesis/Judgement</u></p> <ul style="list-style-type: none">• Waste segregation is a necessary but not sufficient measure.• Collaboration with suppliers to come up with totally recyclable food packaging is a more sustainable and long term solution.• To effectively deal with the problem, LOCOG needs to foster cooperation among the LOCOG, suppliers of food packaging and consumers. However, this may not be easy, because it might lead to higher cost of production for the suppliers.													
		<table><tr><th>Level (Marks)</th><th>Level Descriptor</th></tr><tr><td>L3 (6-8)</td><td>Well-developed answer that examines whether waste segregation is a sufficient measure. An alternative policy is well-analysed. Analysis is based on economic framework (social costs & benefits vs private costs & benefits) and with reference to the case materials.</td></tr><tr><td>L2 (4-5)</td><td>Answer that attempt to address the issue of sufficiency of waste segregation as a measure to achieve efficient allocation of resources in the market for plastic food packaging. An alternative policy is identified but explanation is descriptive rather than analytical. Overall, answer lacks scope or depth. Analysis is not strongly/consistently based on economic framework though there is reference to case materials.</td></tr><tr><td>L1 (1-3)</td><td>An answer that lacks both scope and depth. Did not address the issue of sufficiency of waste segregation as a measure to achieve efficient allocation of resources in the market for plastic food packaging. Brief mention of alternative if at all.</td></tr><tr><td>E2 (2)</td><td>Evaluative assessment of whether waste segregation is a sufficient measure based on sound economic analysis.</td></tr><tr><td>E1 (1)</td><td>For an unexplained assessment or one that is not supported by economic analysis.</td></tr></table>	Level (Marks)	Level Descriptor	L3 (6-8)	Well-developed answer that examines whether waste segregation is a sufficient measure. An alternative policy is well-analysed. Analysis is based on economic framework (social costs & benefits vs private costs & benefits) and with reference to the case materials.	L2 (4-5)	Answer that attempt to address the issue of sufficiency of waste segregation as a measure to achieve efficient allocation of resources in the market for plastic food packaging. An alternative policy is identified but explanation is descriptive rather than analytical. Overall, answer lacks scope or depth. Analysis is not strongly/consistently based on economic framework though there is reference to case materials.	L1 (1-3)	An answer that lacks both scope and depth. Did not address the issue of sufficiency of waste segregation as a measure to achieve efficient allocation of resources in the market for plastic food packaging. Brief mention of alternative if at all.	E2 (2)	Evaluative assessment of whether waste segregation is a sufficient measure based on sound economic analysis.	E1 (1)	For an unexplained assessment or one that is not supported by economic analysis.	
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Question 2: Economic Slowdown in US and India

Suggested Answers

(a)	(i)	Compare the current account balance of US and India between 2008 and 2013.	[2]
		<p><u>Similarity</u> Both countries are experiencing a deficit in their current account [1]</p> <p><u>Difference</u> US : Deficit as a percentage/proportion of GDP is improving India : Deficit as a percentage/proportion of GDP is worsening [1]</p>	
	(ii)	With reference to the data, explain possible reasons for your observations in a(i).	[4]
		<p><u>Similarity</u> Weakening external demand due to Eurozone Crisis and global economic crisis → fall in demand for exports of the US and India → assuming no change in import expenditure, may result in export revenue < import expenditure → ceteris paribus, current account deficit in both the US and India</p> <p><u>Differences</u></p> <p>India</p> <ul style="list-style-type: none"> ▪ Weakening external demand due to Eurozone crisis and US economic slowdown (Ext 4) ▪ High & rising inflation (Table 1) – Loss of export competitiveness ▪ Positive economic growth (Table 1) – Higher demand for imports <p>US Lower oil prices (Extract 1) → lower import expenditure due to inelastic demand for oil Higher income in China → increase in US exports to China (Extract 1) Positive growth in India (Table 1) → increase in US exports to India</p>	
(b)		What conclusions would you draw from Table 1 about the economic performance of US between 2009 and 2012?	[4]
		<p><u>From table 2, US economic performance showed an improvement:</u></p> <ul style="list-style-type: none"> - Inflation is low and stable and may imply an improvement in consumer and investor confidence since the sub-prime crisis in 2009 where there was deflation due to fall in AD. - Unemployment also fell since 2009 implying less wastage of resources. - There is an improvement in the government budget deficit. Size of deficit fell as proportion of GDP. - Real growth rates were positive implying a rise in real income. Material standard of living improves. <p><u>However, despite the improvement in most of the key economic indicators, there are still concerns about the economic performance.</u></p> <ul style="list-style-type: none"> - Unemployment is still high at about 8% and growth rates are relatively low and may be slowing down further leading to stagnant growth. 	

		<p>- Although the budget deficit is smaller, government spending is still higher than its revenue implying a greater tax burden on future generations.</p> <p>In conclusion, while US economy showed signs of recovery, it still has not achieved a fundamentally sound economy. It is necessary for governments to continue its reforms to ensure sustained economic growth.</p>	
(c)		Using the concept of circular flow of income, explain how the expected fiscal cliff would affect the equilibrium level of national income in the US.	[4]
		<p><u>Definition of circular flow of income:</u> Illustrates the flow of money as well as goods and services between producers and consumers in an economy [1]</p> <p>Simple circular flow diagram to indicate the main components with reference to a 4 sector economy.</p> <p>Fiscal Cliff – Increase in tax, Fall in G [1] → Increase in withdrawals and fall in injection → $W > J$ → → firms reduce production → fall in firms making factor payments to factors of production → fall in national income → households will then save less, pay less tax and buy less imports until withdrawals fall to match injections. → Equilibrium level national income is restored at a lower level.</p>	
(d)		Using elasticity concepts and appropriate diagram(s), analyse the likely impact of a cut in diesel subsidies on producers and consumers of final goods and services.	[5]
		<p>Cut in diesel subsidies affects the market for final goods and services in the same way as an increase in taxes as it raises cost of production. Cut in diesel subsidies → higher cost of producing final products → supply curve shifts to the left → an increase in equilibrium price and fall in equilibrium quantity.</p> <p>Concept of price elasticity of demand and supply can be used to determine the burden of the higher cost of production that is experienced by the producer and consumer of final goods and services.</p> <p>Define PED – degree of responsiveness of quantity demanded of a good to a change in its price ceteris paribus. Define PES – degree of responsiveness of quantity supplied of a good to a change in its price ceteris paribus.</p> <p><u>Use diagram to illustrate the burden of higher cost on consumer and producer</u> [1]</p>	



If $PED < PES$ for the final product

Where demand for final goods and services are highly price inelastic, like the demand for basic necessities such as food and energy, an increase in price leads to a less than proportionate fall in quantity demanded by consumers. As consumers are relatively less responsive to price changes than producers, producers can more easily pass on the increase in cost of production to consumers. As a result, the consumers would bear a greater proportion of the cost of the diesel price rise (ab) while producers bear a smaller proportion (bc).

If $PED > PES$ for the final product

Where demand for final goods and services are highly price elastic, like the demand for luxury goods, an increase in price leads to a more than proportionate fall in quantity demanded by consumers. As consumers are relatively more responsive to price changes than producers, producers cannot pass on the increase in cost of production to consumers easily. As a result, the consumers would bear a smaller proportion of the cost of the diesel price rise (de) while producers bear a larger proportion (ef).

Evaluation: Not all production processes are dependent on heavily on diesel. In some service industries, the cost of diesel is not a significant portion of cost of production. In such industries the cut in diesel subsidies will have minimal impact on producers and consumers. For industries where cost of diesel is a large proportion of cost of production like the transportation industry, supply is likely to be highly price inelastic with producers bearing a larger burden of the higher cost of production.

(e)	(i)	Explain how “a persistently high fiscal deficit will raise interest rates”.	[3]
		Define Budget deficit [1]	
		Persistently high budget deficit → higher interest rate. This refers to the crowding out effect. [1]	
		Increase in fiscal deficit → government borrowing from the public → increase	

		in demand for loanable funds → higher interest rate assuming no change in supply of loanable funds [1]					
(e)	(ii)	Using information from the case and your own relevant knowledge, assess whether the benefits of attracting foreign direct investments into India outweigh the costs.	[8]				
		<p><u>Introduction</u></p> <p>Definition of FDI - defined as a company from one country making a physical investment into building a factory in another country which includes direct investment in buildings, machinery and equipment.</p> <p><u>Possible Benefits</u></p> <ul style="list-style-type: none">▪ Increase competition and efficiency → reduces unit cost of production → increase in SRAS → higher real GDP and lower cost push inflation.▪ Increase in competition and efficiency → lower unit cost of production → lower prices for consumers → increase in consumer surplus → increase in consumer welfare.▪ Transfer of technology → increase in productivity → lower unit cost of production and increase in productive capacity → increase in SRAS and LRAS▪ Deregulation of power sector → increase foreign investment into energy sector → reduce power shortages → lower unit cost of production → increase in SRAS → higher real GDP and lower cost push inflation.▪ Increase in FDI → higher investment → increase in AD → higher real GDP and employment → higher GDP per capita assuming increase in real GDP>increase in population → higher material SOL▪ Inflow of FDI → c.p. improvement in KFA → c.p. improvement in India's BOP position▪ Increase tax revenue → reduce fiscal deficit <p><u>Possible Costs</u></p> <ul style="list-style-type: none">▪ In SR, further burden on infrastructure → further demand pull inflation▪ May worsen income balance of current account in LR when profits are remitted back▪ May worsen income distribution as demand for skilled workers increase faster than the demand for unskilled workers <p><u>Evaluation</u></p> <ul style="list-style-type: none">▪ SR – less benefits as infrastructure may be unable to support the higher investments coming into the country▪ LR more benefits when productive capacity increases and is better able to support the FDI▪ Overall benefits outweigh cost <table><tr><th>Level (Marks)</th><th>Level Descriptor</th></tr><tr><td>L3 (5-6)</td><td>Well-developed answer that examines both benefits and costs of attracting FDI into India with reference to the case material and good application of economic framework.</td></tr></table>	Level (Marks)	Level Descriptor	L3 (5-6)	Well-developed answer that examines both benefits and costs of attracting FDI into India with reference to the case material and good application of economic framework.	
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L3 (5-6)	Well-developed answer that examines both benefits and costs of attracting FDI into India with reference to the case material and good application of economic framework.						

		L2 (3-4)	Answer examines either benefits or costs of attracting FDIs into India with limited reference to the case material with some application of economic framework or answer examines both benefits and costs but lacks application of economic framework	
		L1 (1-2)	Smattering of points with conceptual errors or answer identifies either the benefits or costs of attracting FDI into India with limited application to economic framework	
		E2 (2)	Evaluative assessment based on sound economic analysis:	
		E1 (1)	For an unexplained assessment or one that is not supported by economic analysis.	

Section B: Essay Question

Question 3

Demand and supply shocks are likely to create shortages and surpluses in a market.

- (a) Explain how the price mechanism attempts to solve the above imbalances faced in a free market. [10]
- (b) “Where the price mechanism fails in the market for demerit goods, the government is always able to improve the situation by taxation.” [15]
To what extent do you agree with this statement?

Analysis of question (a)

- Candidate must explain how price mechanism attempts to solve both shortage and surplus.
- Application to real-world situations with assumptions stated would garner high marks.
- Suitable diagrams could be drawn, though not necessary, to aid in explanation.

Suggested answer to (a)

Introduction

- State what is meant by free market – Q_e and P_e determined totally by free market forces of demand and supply. No government intervention.
- State that price signal is the main tool to resolve shortages and surpluses in the market.

Body

Framework

- What is mkt eqm? Conditions for eqm?

Shortage

State condition for a shortage → $Q_d > Q_s$

- At original eqm, either ↑ in Q_d or ↓ in Q_s (or various other combinations) would lead to a shortage. Provide real world examples.
- Explain how price mechanism, through the use of price signals, guides the market towards a new equilibrium via the incentives given to the producers to increase quantity supplied (Law of Supply) and also for some consumers to no longer be vying for the goods and services.
- Process will continue so long as shortage remains in the market and will stop once new eqm is attained.

Surplus

State condition for a surplus → $Q_s > Q_d$

- At original eqm, either ↑ in Q_s or ↓ in Q_d (or various other combinations) would lead to a surplus. Provide real world examples.
- Explain how price mechanism, through the use of price signals, guides the market towards a new equilibrium via the incentives given to the consumers to increase quantity demanded (Law of Demand) and also for some producers to no longer be willing and able to sell the goods and services.

- Process will continue so long as surplus remains in the market and will stop once new eqm is attained.

Assumptions for price signal to work (Explain either one of the following)

- Perfect information between suppliers and consumers
 → Perfect factor mobility
 → No government intervention

Conclusion

- Price mechanism may attempt to bring market to equilibrium given perfect conditions. However equilibrium is an ideal as the market is more likely to be in a constant flux due to the constant changing shocks to the market.

Level	Knowledge, Application, Understanding and Analysis
L3 (7 – 10)	Detailed, thorough, sequential explanation from introduction of shock till attainment of new equilibrium. Minimal forgivable errors detected. Candidate has a clear grasp of economic theory on demand and supply.
L2 (5 – 6)	Able to somewhat explain price mechanism and end up with a new equilibrium. Clumsy explanation coupled with some errors/gaps may be present though candidate may still be regarded as possessing the grasp of the theory. Marks capped at 5m if only one imbalance is explained.
L1 (1 – 4)	Illogical explanation, fatal mistakes detected (e.g. wrong labelling of demand and supply curves, if diagram is used). Did not mention price signal at all in guiding the market to the new equilibrium.

- (b) “Where the price mechanism fails in the market for demerit goods, the government is always able to improve the situation by taxation.” [15]
To what extent do you agree with this statement?

Analysis of question (b) → ‘Improve the situation’ → smaller DWL, not necessarily zero DWL → To what extent → under what conditions will we agree with the statement?
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Suggested answer to (b)

Introduction

- State why govt needs to intervene in mkt or demerit good
- State other methods besides taxation which govt could employ
- State taxation may not always improve the situation.

Body

Framework

- use of cost-benefit analysis to briefly illustrate how market fails in the case of a demerit good (**provide an example**).

How taxation may improve situation

- explain how taxation increases costs incurred by consumers of demerit goods, pushing up MPC at each and every output level of consumption.
- Rightly set, the new pte outcome will also be socially optimal – improvement in situation.
- *Even if wrongly set*, so long as new DWL is smaller than original DWL → agree with statement. → Better for govt to under-tax than over-tax.
- **Use of diagram is expected to illustrate the above.**

How taxation may not improve situation

- Excessive taxation → new DWL becomes even larger than the original free market DWL. (Provide reason for such wrongful taxation)
- **Use of diagram is expected to illustrate the above.**

Evaluation

- The better the estimate of the external cost in quantifiable terms, the more likely the taxation is going to improve the situation. With more sophisticated means of detecting and measuring external costs, the tax imposed based on such improved data could indeed improve the situation in the market for demerit goods.
- Further support for the statement if the govt devotes the tax revenue to further reduce the DWL – campaign to dissuade consumption, implement other restrictive policies to reduce consumption of demerit goods (e.g. set quota of locals entering casinos).

Conclusion

- Imposing tax on the consumption of demerit good would indeed improve the social welfare, provided the quantum of tax imposed is appropriate. The government has to continually review its tax quantum to ensure the relevance of this instrument to improve the situations in the markets for demerit goods.

Level	Knowledge, Application, Understanding and Analysis
L3 (9 – 11)	<p>Able to provide a well-balanced response to the question. Unambiguous, logical explanation using cost-benefit framework to clearly illustrate how taxation could or could not improve the situation.</p> <p>Further analysis, which may include differing tax rates for different groups of consumers (based on sound economic reasoning), should be awarded top marks.</p>
L2 (6 – 8)	<p>Able to illustrate how taxation could or could not improve the situation through the cost-benefit analysis. However, illustration is incomplete and may contain some errors.</p> <p>One-sided answer – max 6m.</p>
L1 (1 – 5)	<p>Answers show scant knowledge of taxation or cost-benefit analysis framework. Haphazard re-production of lecture notes materials which may not answer the question well.</p>
E2 (3 – 4)	<p>Judgement given with supported reasons. For example, taxation is likely to improve the situation especially when the government mimics international practices. Furthermore, the government may be able to better determine the tax quantum with better and more complete data compiled due to advancement in technology to detect and measure the external costs.</p>
E1 (1 – 2)	<p>Mainly unexplained judgment.</p>

Question 4

- (a) Explain the key factors that could change the level of Aggregate Demand (AD) and Aggregate Supply (AS) in your country. [10]
- (b) Discuss the view that economies should rely primarily on supply-side policies to pursue economic growth. [15]

Analysis of question (a)

- ➔ Candidates must explain how AD and AS can be changed with clear application to the context of a country.
- ➔ Context need not be limited to just Singapore.

Suggested answer to part (a)

AD refers to the total level of spending in an economy at each price level, *ceteris paribus*. It shows the amount of domestically produced goods and services which households, firms, government and foreigners desire to buy at each general price level.

AS shows the total output of goods and services that firms as a whole would like to produce and sell at each general price level, *ceteris paribus*. The country in consideration is Singapore, which is a small, open and resource scarce economy.

Factors that could change AD**a) Households' net wealth**

Households' net wealth refers to the value of all assets owned by households minus any liabilities, or debts owed. Changes to net wealth will change consumers' attitudes towards consumption at all levels of national income, changing the consumption component of AD. For Singapore, prices of private and public housing have been increasing. Since a majority of Singapore households are home owners, this translates to an increase in net wealth of consumers in the economy, *ceteris paribus*. This would in turn lead to an autonomous increase in consumption, leading to a rightward shift of the AD.

b) Business expectations

Business expectations refer to the outlook that firms have on the Singapore economy, and will impact the expected profitability of investment. Changes in business expectations will impact the level of investment in Singapore, changing the investment component of AD. For Singapore currently, the political and market sentiments are positive due to the continued stability of economic growth over the past few years. As such, this would give firms the confidence to increase their investments in Singapore, leading to an autonomous increase in investment and a rightward shift of the AD.

c) Rise in quality of goods and services relative to trading partners

If quality of local goods rises relative to foreign goods, the demand for local goods in foreign markets will rise and the demand for foreign goods in the domestic market will fall. As a result, total expenditure on imports will fall and total revenue from exports will rise, resulting in a rise in the (X-M) component of AE. This has in turn led to an improvement in the quality of goods that are produced in Singapore, relative to our trading partners. For instance, R&D efforts have resulted in the creation of handheld projectors by a Singapore-based firm. If such practices are prevalent in the economy, it will increase export competitiveness, leading to an autonomous increase in net exports and a rightward shift of the AD.

Factors that could change AS

a) Changes in costs of production i.e. price of oil, labour, capital

A decrease in the price of oil will have an impact on AS since it affects many firms' costs of production given that it is used for transportation, to generate electricity and as a raw material to many products. Hence an increase in the costs of production leads to a rightward shift (rise) of the AS curve. For the Singapore economy that heavily relies on imports of oil, the pursuit of a modest and gradual appreciation of the Singapore dollar would lower the price of oil denominated in Singapore dollars. This would in turn lead to a decrease in cost of production throughout the economy, leading to a rise in the AS curve.

b) Changes in quantity of factors of production

A greater quantity of resources at the disposal of the economy allows it to attain a greater maximum full employment level of national income/output, thus shifting AS to the right. For the Singapore economy which is seeking to increase its pool of capital by attracting foreign direct investment to Singapore, the provision of tax credits to foreign firms would increase the profitability of investing in Singapore, leading to a larger pool of capital and an outward shift in the AS curve.

c) Quality of Factors of Production

Higher productivity levels of workers increase the output produced for a given level of inputs, ceteris paribus. This leads to an increase in AS. Productivity levels are typically influenced by the educational levels, the availability of technology to augment their talents and opportunities for training. For the Singapore economy which is moving towards higher value-added manufacturing, firms engaging in continuous training of labour and R&D in process innovation would increase the quality of factors of production, leading to an outward shift of the AS curve.

These factors would impact AD and AS, and are considered key factors based on the characteristics of the economy.

Knowledge, application, understanding, analysis	
L3 (7-10)	Good explanation on how 3 factors lead to changes in AD <u>and</u> AS, with clear application to the characteristics of a country.
L2 (5-6)	Good attempt in explanation of 2 factors leading to changes in AD and/or AS. There are some lapses in explanation and limited in scope of coverage. There is also some use of examples but may not be well-explained.
L1 (1-4)	Mere smattering of points. Answer is underdeveloped in the explanation on how each factor leads to the change in AD or AS Only factors affecting either one of AD or AS are considered.

- (b) Discuss the view that economies should rely primarily on supply-side policies to pursue economic growth. [15]

Analysis of question (b)

- Candidates must examine the use of supply-side policies in the pursuit of economic growth.
- Candidates should analyse the strengths and limitations of supply-side policies to pursue economic growth.
- “rely primarily” → should economies also consider the use of other policies?

Suggested answer to Part (b)

Supply-side policies are implemented when the government attempts to increase the level of short run aggregate supply (SRAS) and/or long run aggregate supply (LRAS). These policies aim to lower cost of production, increase the long-term productive capacity and achieve potential growth.

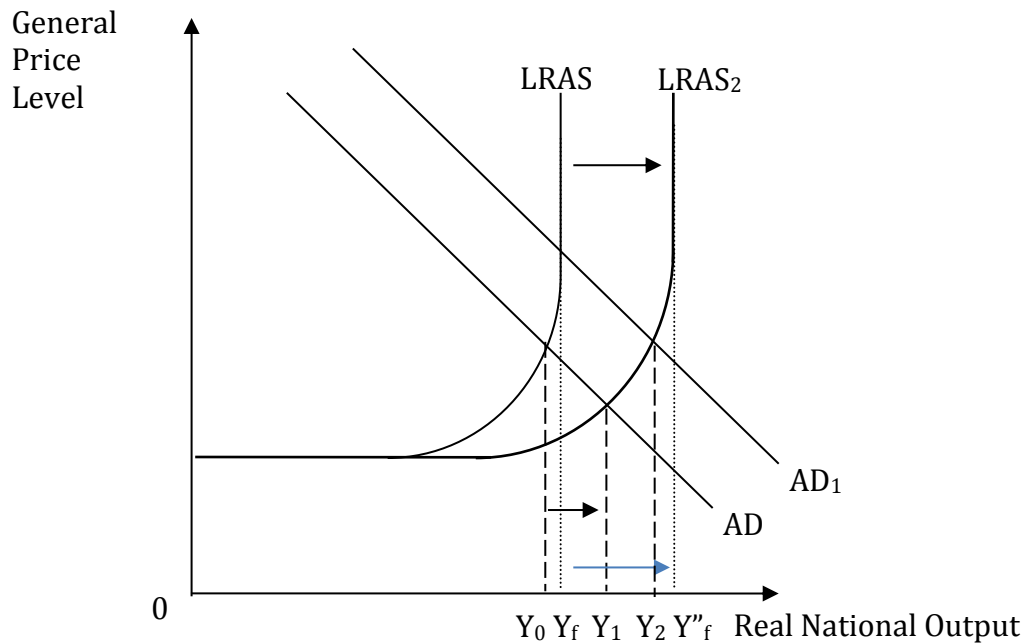
The government can make use of interventionist or market-oriented supply-side policies in pursuing economic growth. Economic growth can also be further divided into two types: actual growth (recorded by an increase in real national income) and potential growth (recorded by an increase in productive capacity of the economy)

Thesis: Supply-side policies enable economies to attain potential growth

Economies should rely on interventionist supply-side policies to attain economic growth. The government may carry out or sponsor training activities through grants or subsidies. Assuming such training for labour turn out to be successful, more output could be produced with the same amount of labour, leading to an increase in productive capacity, illustrated by a rightward shift in aggregate supply in Fig. 1, thereby bringing about potential growth.

For instance, the Singapore government set up Continuing Education and Training (CET) Centres to help workers to acquire industry-relevant skills across various industries. The provision of such a platform for training would increase the productive capacity of an economy.

At the same time, such investments in human capital would build up the talent pool in the economy. This would encourage both domestic and foreign firms to invest in Singapore, leading to another round of increase in AD from AD to AD₁ in the long run. This illustrates sustained growth.



Economies can also rely on market-oriented supply-side policies to attain economic growth. These aim at encouraging market forces to work freely as it is believed that market forces always result in efficient allocation of resources. The government can privatise a previously government-owned entity by transferring ownership to the private sector. Privatisation can lead to increased efficiency as privately-run firms, being profit-motivated, would usually be more cost conscious. Reduction in cost, *ceteris paribus*, will translate directly to higher profits. Hence, a more efficient use of resources by the private firms rather than the government sector will boost the aggregate supply in an economy, bringing about potential growth. For Singapore, the Port of Singapore Authority was privatised as PSA, and this has brought about greater efficiency in the running of our port facilities since then, enabling the economy to enjoy potential growth.

Anti-thesis 1: Supply-side policies are limited in achieving economic growth due to its limitations

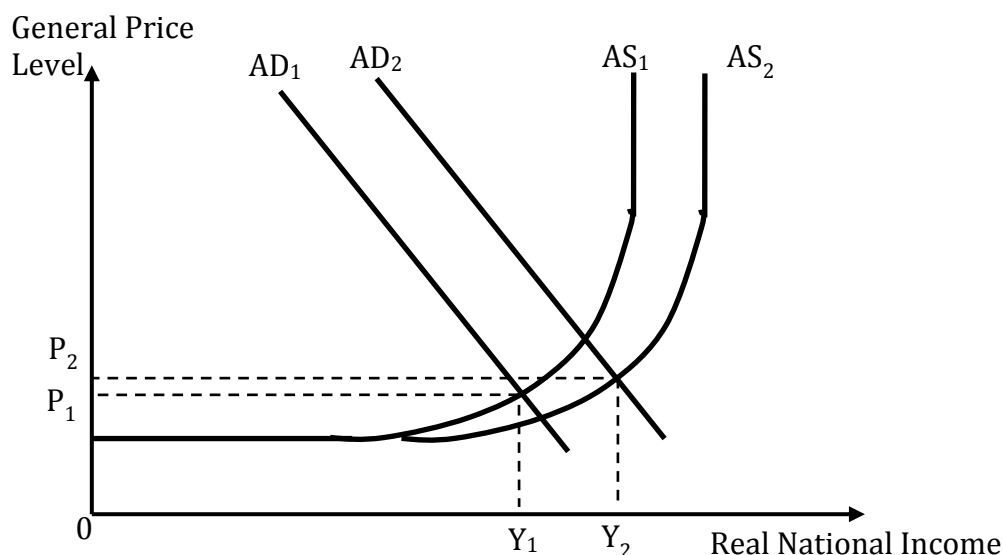
However, the effects of supply-side policies may only be seen in the long run. This is because it takes time to deregulate industries or for the efforts put into R&D to actualise and increase productive capacity in the economy. More often than not, restructuring may destabilise economic growth in the short run as the economy is adjusting to the changes in production methods or focus. At the same time, since it takes time, the strain on government budget may be over a long period. Should the government be unable to sustain the policy over a period of years, the increase in AS may not be actualised.

Anti-thesis 2a: Supply-side policies are limited in achieving economic growth due to its nature

At the same time, supply-side policies generally focus on increasing the AS of an economy. The aspect of actual growth may be neglected when supply-side policies are the main policy instrument. If AS increases without a corresponding increase in AD, the economy may be faced with a situation of excess capacity and there will not be a rise in real national income. As such, supply-side policies should be complemented with the use of demand-management policies.

Anti-thesis 2b: governments should rely on other policies to pursue economic growth, such as expansionary fiscal policy

A demand-management policy like expansionary fiscal policy can help the economy to stimulate AD in the short run and AS in the long run. The government can reduce corporate tax, which increase the retained profits of firms. With this increase in retained profits, firms can then increase investment expenditure. In the short term, this corresponds to an increase in AD. Via the multiplier effect, there will be an increase in real GDP, assuming the economy is below full employment. In the long term, the increase in capital goods will result in an outward shift of the AS due to the rise in productive capacity. As such, there would be both actual and potential growth, as illustrated in the following diagram below.



Synthesis:

In conclusion, economies should not rely primarily on supply-side policies due to its inability to address actual growth. Whilst supply-side policies should be pursued, demand-management policies should also be in place to boost AD in the short run. That being said, the government should also consider if the lack of productive capacity is the key hindrance to economic growth, particularly when the economy is operating near full employment, and pursue supply-side policy.

Marking Scheme for Part (b)

Knowledge, application, understanding, analysis	
L3 (9-11)	For an answer with a good scope of coverage (covers supply-side policies and at least one demand-management policy). Careful analysis of the limitations of supply-side policies in achieving actual growth, with explanations clearly linked to specific economies.
L2 (6-8)	For an answer which analyses the workings and limitations of supply-side policies with some considering the need for alternative policies to pursue economic growth. There is clear reference to the impact of supply-side policies on the AD/AS of the economy and distinction between the two types of economic growth. Explanations are not contextualised to consider the nature or conditions of economies.
L1 (1-5)	For an answer that is descriptive and lacks the use of economic framework/concepts in analysis. Mere smattering of points on how supply-side policies work without clear reference to their impact on growth.

Evaluation	
E2 (3-4)	Evaluative assessment and judgment supported by economic analysis. Excellent synthesis in which the student is able to justify and arrive at a convincing stand (based on earlier arguments and counter arguments)
E1 (1-2)	Unexplained judgment that is not supported by economic analysis