Question 1: The clothing and fast fashion industry Suggested Answers



• Assuming that the cost of production remains constant / ceteris paribus, profits of producers will fall. [1]

(c)	(i)	Explain why the market fails from the production of fast fashion.
(\mathbf{U})	(1)	Explain why the market land norm the production of last lastion.

[4]

- **[P]** When deciding on the amount of clothing items to produce, a producer only considers his own private costs and benefits and ignores the external costs on third parties. The marginal private benefit (MPB) of clothing production is its marginal revenue, while the marginal private cost (MPC) is the marginal cost of production. **[1]**
- **[ET]** However the production of these items give rise to external costs on third parties who are not directly involved in the production or consumption of the good. For example, production of clothing lead to pollution of water sources (Extract 2), which may lead to medical costs incurred by people who stay use these water sources. **[1]**
- [DQQ] The presence of marginal external cost (MEC) creates a divergence between MSC and MPC. Assuming that there are no positive externalities, MPB = MSB. Without government intervention, the free market produces Qp units of clothing, where MPB = MPC. However, the socially optimum level of production is Qs, where MSB = MSC. There is overproduction as Qp > Qs. [1]
- **[D]** From Qs to Qp units, the total social costs exceeds the total social benefits, leading to a deadweight loss to society and hence, the market fails. **[1]**

(c)	(ii)	Discuss whether mandating that fashion brands contribute to a green	fund
		would be the most appropriate policy to address the market failure.	[8]

Question Interpretation

Command word/phrase	Discuss whether	To elaborate on and eventually weigh the effectiveness of two policies to address the market failure issue		
Content	Mandating that fashion brands contribute to a green fund, market failure	Mandating that fashion brands contribute to a green fund can be seen as a form of taxation, which will increase MPC.		
		To address the market failure issue, deadweight loss needs to be reduced/eliminated		
Context	Fast Fashion	Context of fast fashion.		

This question requires candidates to explain the workings and limitations of two different policies to address the issue of market failure in the fast fashion industry. Students are then required to compare the two policies and assess their appropriateness.

Introduction

- As mentioned in (i), market failure in the fast fashion industry due to the presence of negative externalities in production.
- To address this issue, the government can mandate that fashion brands contribute to a green fund or impose regulation on the production process.

KA1a: Explain how mandating that fashion brands contribute to a green fund may address the market failure

- Mandating that fashion brands contribute to a green fund will raise the MPC and address the market failure issue.
- As mentioned in Extract 3, the Australian government is considering mandating that fashion brands contribute to a green fund for every piece of clothing they produce.
- This will force producers to internalize the MEC and increase the MPC. Assuming that the required contribution is equal to MEC at QS, MPC will increase and shift upwards to MPC'.
- Since the new private optimal quantity Qp' (where MPC'=MPB) now coincides with the socially
 optimal quantity (MSB=MSC), deadweight loss is eliminated and the market failure issue is
 addressed.



KA1b: Explain the limitations/unintended consequences of mandating that fashion brands contribute to the green fund

- However, the policy comes with its own limitations.
- Due to imperfect information, the government is likely to have difficulty in attaching a monetary
 value to the amount of external costs incurred. An over-estimation or under-estimation of MEC
 can occur. If the external costs are overestimated, the required contribution to the green fund
 may be excessively high and result in a case of government failure where the welfare loss is
 greater after the government intervened.

KA2a: Explain how regulating the production process will address the market failure issue.

- The government can also regulate the production process to address the issue of market failure.
- As mentioned in Extract 3, the government may consider regulating the production process. This will likely include rules and regulations which prevent firms from discharging pollutants into water sources. This will reduce the negative externalities from production and reduce MEC.

 As such MSC will fall and shift downwards to MSC'. The new social optimal quantity, Qs' (MSC'=MSB) is now closer to Qp. Deadweight loss reduces from area 'abc' to area 'edc' and the market failure issue is alleviated.



KA2b: Limitations of regulating the production process

- However, regulating the production process has its limitations.
- Regulating the production process can incur high administrative and monitoring costs. Such high administrative cost could cause the implementation to be unsustainable and hence ineffective in the long term. Opportunity costs, in the form of benefits of spending on areas such as education will also be incurred.

Evaluative conclusion (1 stand + 1 well-substantiated ATMS angle is sufficient):

- **[Stand]** It is likely that mandating that firms contribute to the green fund would be a more appropriate policy to tackle the issue of market failure as it can address the root cause of the issue while being financially sustainable.
- **[Situation]** Extract 3 mentions about a similar programme, Seamless, where contributions are redirected to efforts to the industry's green efforts. Similarly, the green fund can be directed to fund research and methods to make the production process cleaner, which will address the root cause of the issue.

Mark Scheme

Level	Knowledge, Application/Understanding and Analysis	Marks
L2	For a well-developed answer that has:	4 - 6
	• Good scope and balance – explains the workings and limitations of two policies	
	 Good rigour – explains using relevant market failure analysis, supported with well-labelled and correctly drawn diagram(s). 	
L1	For an undeveloped answer that:	1 - 3
	• Lacks scope and balance – either explains only one policy and its limitations OR explain two policies but without limitations.	

		 Lacks rigour – descriptive answer without relevant economic analysis. 	
		Evaluation	
E For an answer that uses economic analysis to support an evalu- judgement on the most appropriate policy to address market failu- the fast fashion industry.		For an answer that uses economic analysis to support an evaluative 1 judgement on the most appropriate policy to address market failure in the fast fashion industry.	- 2

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(d) Discuss whether there is incentive for an online retailer such as Shein to adopt a more environmentally sustainable model. [10]

Question Interpr	retation	
Command	Discuss whether	To elaborate on and eventually weigh on whether
word/phrase		Shein has any incentive to adopt a more environmentally sustainable model
Content	Incentive	Recall that firms are incentivised by profts.
	An online retailer such as Shein	Firm analysis required.
Context	Shein	Context of a firm in the fast fashion industry

This question requires students to provide a balanced analysis as to whether Shein has any profit incentive to adopt a more environmentally sustainable model. An evaluative conclusion which takes into account the context would be needed.

Introduction

- Online retailers such as Shein are primarily incentivised by profits.
- When considering whether there is incentive for the online retailer to adopt a more environmentally sustainable model, there is a need to consider the impact on profits for the firm.
- KA1: There may be incentive for an online retailer to adopt a more environmentally sustainable model as it can lead to higher profits.
- As seen in Extract 4, customers are concerned about sustainability.
- As such, should Shein adopt a more environmentally sustainable model, it is likely to lead to a favourable change in tastes and preferences for their products, leading to a rise in demand for their products.
- This will lead to a rightward shift of MR₁ and AR₁ curves to MR₂ and AR₂ respectively. Assuming cost remains constant, the profit maximising level of output where MC = MR increases from Q₀ to Q₁ and the profit-maximising price increases from P₀ to P₁. This results in an increase in total revenue from P₀aQ₀0 to P₁eQ₁0, allowing them to earn higher profits from P₀abc₀ to P1efc1.



sustainability record without making any meaningful change. This would allow them to see an increase in demand and revenue while keeping any rise in costs minimal to maximise their

profits. As such, Shein would likely employ such tactics rather than make any real changes to their production process.

Mark Scheme

Level	Knowledge, Application/Understanding and Analysis	Marks
L2	 For a well-developed answer that has: Good scope and balance – explain why online retailers like Shein may and may not have the incentive to change to a more environmentally sustainable model and analyse changes to both revenue and costs. Good rigour – explains using relevant firms analysis, supported with well-labelled and correctly drawn diagram(s). 	4-7
L1	 For an undeveloped answer that: Lacks scope and balance – either explains only why online retailers like Shein may or may not have the incentive to change to a more environmentally sustainable model OR only analyse changes to either revenue or costs Lacks rigour – descriptive answer without relevant economic analysis. 	1-3
	Evaluation	
E	For an answer that uses economic analysis to support an evaluative judgement on whether online retailers would have the incentive to change to a more environmentally sustainable model.	1-3

Question 2: Labour, skills and productivity – The stories of Serbia and Singapore Suggested Answers

(a)	Calculate a 2022.	nd compare the real GDP growth rate (%) for Serbia and Singapore in [2]
[1] fo	or the correct	calculation of real GDP growth rates for both Serbia and Singapore.
		Real GDP growth rates
	Singapore	10.14% - 11.98% = -1.84%
	Serbia	1.73% - 6.12% = -4.39%
[1] f	or an accura	ate/valid comparison of the real GDP growth rates – any one of the
follo	wing:	
•	Both Singapor	e and Serbia experienced negative real GDP growth rates. OR
•	Both Singapor	e and Serbia experienced a fall in real GDP growth rates. OR
•	Serbia real GI	DP growth rate fell more compared to Singapore in 2022. OR
•	Sindapore's re	eal GDP growth rate is higher than that of Serbia's in 2022.
(h)	With the us	e of a production possibilities curve, explain the 'major repercussions'
()	on Serbia's	notential growth in light of the youth brain drain (Extract 5) [4]
•	A vouth brain	drain refers to the 'massive emigration lose half of its youth talent' (extract
	5) which mea	ns that there is a decrease in the working-age population in Serbia over time.
	ceteris paribus	s. There will be a fall in the quantity of labour in Serbia. [1]
•	A fall in the gu	antity of labour reduces Serbia's productive capacity. [1]
•	Therefore it v	vill reduce potential growth in the economy as shown by the inwards shift of
	the PPC curve	from PPC ₀ to PPC ₁ as seen in the below figure [1]
		1m for fully labelled and accurately drawn PPC diagram
	C	Quantity of capital goods
		↑
		PPC.
		PPC ₁
		Quantity of consumer goods
		0
(c)	Explain a p	ossible opportunity cost faced by a youth leaving his country. [2]
	L Opportunity of	est is defined as the value of the next hest alternative forgone when a decision
	is made [1]	series defined as the value of the next best alternative forgone when a decision

• When a young person leaves his country, he incurs an opportunity cost in terms of the wages that he could have earned if he had stayed in his home country and found a job. [1] **Any* other plausible explanations are accepted.

(d)Assess the extent to which national income indicators like real GDP per capita can
be used to compare living standards between Serbia and Singapore.[8]Question interpretation

Command words/phrase	Assess the extent	This question requires students to present a <u>balanced</u> analysis on the usefulness and limitations of national income indicators in comparing national income statistics between two countries.		
Content	National income indicators like real GDP per capita	 Income statistics between two countries. To compare material SOL over space, data on PPP-adjusted GDP/GNI per capita would be needed. PPP: to account for the purchasing power ability of the residents by adjusting for differences in price levels in terms of the cost of living between two countries; per capita: account for difference in population size. 		
Context	Compare living standards between Serbia and Singapore	To compare non-material SOL, non-material SOL indicators e.g. life expectancy rates (Table 1) would be needed.		

A relevant response requires a balanced analysis of the usefulness and limitations of national income indicators like real GDP per capita in comparing SOL between Serbia and Singapore. Limitations could be categorised into calculation and data issues, and the omission of non-SOL indicators. An evaluative conclusion on the overall usefulness of national income indicators like real GDP per capita is required.

Introduction (define key terms and outline approach):

- An economy's standard of living (SOL) can be defined as the well-being of residents in the economy and comprises both material and non-material aspects.
 - Material SOL is associated with the amount of goods and services available for consumption by the residents of an economy.
 - Non-material SOL is associated with the intangible aspects of well-being such as literacy rates and life expectancy of residents.
- While national income indicators like real GDP per capita may be useful to compare living standards between Serbia and Singapore, there are also limitations, which would be discussed.
- Thesis: National income indicators like real GDP per capita can be useful to compare a country's material SOL.
- Gross Domestic Product (GDP) can be defined as the total monetary value of all final goods and services produced by <u>factors of production</u> located within the geographical boundary of a country in a given time period.

- Real GDP accounts for inflation by measuring the changes in the value of GDP at constant prices so that changes in real GDP are due to changes in the physical output of produced goods and services only. 'Per capita' accounts for changes in population size. Dividing GDP by the total population size measures the GDP for an average citizen.
- From Table 2, Singapore's nominal GDP per capita is consistently and significantly higher than Serbia by approximately eight times across 2019 2022. Even with Singapore's higher inflation rate, it is still likely that Singapore would have a higher real GDP per capita than Serbia.
- A higher real GDP per capita would reflect an average citizen's higher purchasing power and hence higher ability to consume physical goods and services.
- Anti-thesis: However, there are limitations to the usefulness of national income indicators like real GDP per capita in comparing SOL between Serbia and Singapore.
- To compare the level of material SOL between two countries, national income indicators in the form of PPP-adjusted GNI per capita would be more useful.
- GDP measures the income generated by both citizens and foreigners within the geographical boundaries in a country. An increase in Singapore's real GDP per capita could be due to increases in income of foreigners residing in Singapore. For a country like Singapore which is highly dependent on foreign direct investment (FDI), the factor income paid abroad could be higher than the factor income received from abroad.
 - Therefore, GNI might be a better indicator as compared to GDP to measure material living standards, because when we convert GDP to GNI, we would remove foreigner incomes earned in Singapore and include income earned by Singaporeans overseas. (GNI = GDP + net factor income from abroad)
 - Purchasing Power Parity (PPP) refers to the number of currency units required to purchase the same amount of goods and services that can be bought with one unit of currency of the base country, for example the US dollar. The PPP exchange rate <u>converts</u> GNI of different countries <u>into a common currency</u> for comparison. It accounts for the purchasing power ability of the residents by adjusting for differences in price levels in terms of the cost of living between the two countries.
- If Singapore has a higher PPP-adjusted GNI per capita relative to Serbia, this means the average Singapore resident is likely to have a higher material SOL because of his higher purchasing power and ability to consume a larger quantity of goods and services compared to an average Serbian resident.

Note: Additional points that can be accepted could include the omission of Gini coefficient, non-marketed activities, etc.

- In addition to PPP-adjusted GNI per capita data, non-material SOL indicators like life expectancy rates (Table 1) would be required to allow for a more holistic comparison of SOL between Serbia and Singapore.
- A comparison of life expectancy can give us an indication of how individuals in different economies may have different access to quality healthcare and sanitation. Singapore's consistently higher life expectancy (years) from Table 1 could suggest higher healthcare quality and residents' greater accessibility to such healthcare services and availability of clean drinking water compared to Serbia. This would then allow us to conclude that Singapore has a higher non-material SOL compared to Serbia.

Evaluative Conclusion (1 stand + 1 well-substantiated ATMS angle is sufficient)

- **[Stand]** National income statistics like real GDP per capita alone is not useful to compare both material and non-material SOL between Serbia and Singapore mainly because of the omission of non-material SOL indicators and the lack of conversion to a common currency for comparison of SOL over space.
- **[Alternative]** An alternative indicator would be the Human Development Index (HDI) which measures life expectancy at birth and education in addition to <u>PPP-adjusted GNI per capita</u>. This composite indicator will be more useful as it allows for a more holistic and comprehensive measurement and hence comparison of both the material and non-material SOL between Serbia and Singapore.

Mark Scheme

Level	Knowledge, Application, Understanding and Analysis	Marks
L2	 For a well-developed answer that has: Good scope and balance – explains both the usefulness and limitations of national income indicators in comparing material and non-material SOL between Serbia and Singapore Good rigour and application – thorough and good elaboration on the linkages of how indicators can measure and be used to compare both material and non-material SOL between Serbia and Singapore 	4 – 6
	An answer that discusses only material OR non-material SOL will be capped at L2 – 4m.	
L1	 For an underdeveloped answer that Lacks scope and balance – only explains either the usefulness or limitations of national income indicators in comparing SOL between two countries Lacks rigour – descriptive explanation of the usefulness of national income indicators in measuring SOL and/or limited contextual application 	1 – 3
	Plus up to 2 marks for Evaluation	
E	For a well-substantiated evaluative judgement on the extent of the usefulness of national income indicators like real GDP per capita in comparing SOL between two countries.	1 - 2
	in two likely causes of unemployment in Serbia	

the job vacancies. [1]
Extract 6 mentioned that the "Serbian economy is growing to rely more on ICT" and "needs at least 15,000 more engineers in the tech sector" to "meet the increasing demand for ICT exports". This suggests that the ICT industry is an expanding / rising industry which requires skills that unemployed workers may not possess currently. [1]

Due to **occupational immobility**, the unemployed workers do not have the skills to take up jobs in the ICT industry.

- The second cause of unemployment is likely to be <u>demand-deficient unemployment</u> due to a lack of AD.
- From extract 7, with Serbia facing challenges that include "slowing trade and investment" OR an expected recession in a large number of European countries which could lead to a "further slowdown in economic activity in Serbia", this implies that there could be a potential fall in (X-M) and/or I, which would reduce AD [1] and lead to a multiplied fall in real GDP via the reverse multiplier effect. With a fall in real GDP, firms cut down on production and reduce their derived demand for factors of production, including labour, and demand-deficient unemployment arises. [1]

(f)	Discuss whether increasing productivity is the best way to address unemploymer				
	in a count	ry.	[10]		
Ques	Question Interpretation				
Command words/phrase		Discuss whether 'best way'	This question requires a <u>balanced approach</u> (both workings and limitations) on whether the proposed policy in the question is the best way (to compare		
			against 1 other policy).		
Con	tent	Increasing productivity address unemployment	Increasing productivity: can increase quality of labour, increasing productive capacity (increase LRAS) and reduce unit cost of production, hence increasing SRAS. To reduce demand-deficient unemployment, the focus should be on increasing real GDP.		
0.00	40.4	A country	Skills training (alternative policy): to reduce skills mismatch à reduce structural unemployment		
Con	text	A country	examples from Serbia, Singapore, or use their own background knowledge		

Introduction

- Unemployment is defined as the situation where people of legal working age are not working but are available for work and actively seeking work.
- This response will examine whether increasing productivity or skills training is the best way to address both demand-deficient and structural unemployment in a country.

KA1: Increasing productivity works to reduce demand-deficient unemployment

• When productivity is increased, the quality of factors of production improves, leading to an increase in the Aggregate Supply (AS), thus increasing real GDP and reducing demand-deficient unemployment.

- A way to increase productivity is to infuse the use of technology in the production process, or R&D to improve the efficiency of the production process. When successful, this can lower the economy-wide unit cost of production, and cause AS to increase.
- As shown in the figure below, the increase in productivity will lead to AS shifting downwards from AS_1 to AS_2 . This increases real GDP from Y_1 to Y_2 .



- Furthermore, this increase in productivity could also potentially attract foreign direct investment (FDI) into the country, thus increasing the AD.
- This increase in AD triggers the multiplier effect, where there is successive rounds of increase in income-induced consumption, thus increasing the AD and shifting it rightwards from AD₁ to AD₂.
- The real GDP thus increases further from Y_1 to Y_3 as shown in the figure. With an increase in real GDP, firms will increase their derived demand for factors of production like labour, thus reducing demand deficient unemployment from $(Yf_1 Y_1)$ to $(Yf_1 Y_3)$.

• However, increasing productivity does has its own limitations.

- Some of the R&D processes take very long time to fruition and its outcome may also be uncertain. As such, the AS and hence rise in real GDP may not increase as much as expected.
- Furthermore, the increase in productivity through the infusion of technologies in the production process may lead to a rise in structural unemployment instead, as some lowskilled workers may be displaced from their jobs and lack the skills to move to expanding industries.

KA2: Skills training works to reduce structural unemployment

- Skills training for workers will help to reduce the skills mismatch, thus reducing structural unemployment in the economy.
 - From extract 8, it was mentioned that the Singapore government has announced a \$4000 SkillsFuture credit top-up, allowing workers to attend selected training programmes and training for sectors adhering to the Progressive Wage Model.
 - This policy measure helps to train workers, especially the low-skilled workers who may have been structurally unemployed to gain new skillsets to transit into expanding sectors.
 - This would reduce structural unemployment in the country.

• However, skills training for workers has its own limitations.

- The effectiveness of such a policy to reduce structural unemployment is dependent on the receptivity of workers to attend such training courses to gain new skillsets. Workers may not have the correct attitudes towards skills training, thus limiting the effectiveness of the policy in reducing structural unemployment.
- Furthermore, such a policy also may take a long time to see its effects as well.

*Students can also use any demand management policy that can increase the AD and hence reduce demand-deficient unemployment.

Evaluative Conclusion (1 stand + 1 well-substantiated ATMS angle is sufficient)

- **[Stand]** Ultimately, whether increasing productivity is the best way to reduce unemployment in a country depends on the unemployment that the country is suffering from and the method by which the country increases its productivity.
 - **[Situation]** In a country like Serbia where the level of structural unemployment seems to be high and severe, increasing productivity via technology may in fact worsen the unemployment situation in the country. On the other hand, if a country is mainly suffering from demand-deficient unemployment, increasing productivity may be a better policy measure as it is able to reduce unit cost of production and increase real GDP and reduce unemployment.
 - **[Situation]** Should a country employ pervasive use of technology in the production process to realise the increase in productivity, this may result in displacement of lowly skilled workers and therefore worsen unemployment in the country. However, if the country instead focuses on targeted technical courses and training for workers, it may help to reduce both demand-deficient and structural unemployment in the country.

Level	Knowledge, Application/ Understanding and Analysis				
L2	For a well-developed answer that has:	4 – 7			
	 Good scope and balance – explains both the workings and limitations of increasing productivity to reduce unemployment; together with 1 other policy to reduce unemployment; Good rigour – utilises suitable framework and AD/AS analysis; and Good use of context – explains with relevant case material to support the analysis. 				
L1	For an under-developed answer that:	1 – 3			
	 Lacks scope and balance – either explains working or limitations of increasing productivity and / or that of 1 other policy; Lacks rigour – explains workings of policies in a descriptive manner that lacks sufficient economic analysis; and/or 				
	• Lacks application – explains policies with no application to the case and no support using relevant case material.				

Mark scheme

E	Up to 3 additional marks for valid evaluative comment(s) on whether	1 – 3	
	increasing productivity is the best policy to reduce unemployment in a		
	country.		