



ST ANDREW'S JUNIOR COLLEGE

PRELIMINARY EXAMINATIONS 2021 (JC2)

General Certificate of Education Advanced Level

Higher 2

ECONOMICS

9757/01

Paper 1

30 August 2021

2 hours 15 minutes

READ THESE INSTRUCTIONS FIRST

An answer booklet will be provided with the question paper. You should follow the instructions on the front cover of the answer booklet. If you need additional paper ask the invigilator for a continuation booklet.

Answer **all** questions.

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

This document consists of 8 printed pages.

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[Turn Over]

Answer all questions.

Question 1: Trends in Singapore's Labour Market

Extract 1: Growth of the Gig Economy in Singapore

The gig economy is part of the labour market which concentrates on short-term / temporary jobs and contracts. In the gig economy, people work for firms like Uber and Deliveroo. Although it is often firms like these two that come to mind, there are a lot of organisations using workers in similar ways. In recent years, the rise of the gig economy has created new ways of working in various sectors, from banking, information technology, insurance and healthcare, to transport and online shopping. In essence, working in the gig economy means that an individual is paid per 'gig' or an ad hoc piece of work.

Figure 1: Number of Gig Workers in Singapore ('000)

	2016	2017	2018	2019
Primary	166.8	190.9	182.1	174.8
Secondary	33.3	32.6	28.7	36.3
Total (Primary and Secondary)	200.1	223.5	210.8	211.1

Source: Labour Force in Singapore 2019, Ministry of Manpower

Primary gig workers engage in freelance work as their primary source of income. Secondary gig workers hold multiple jobs and spend fewer hours in gig work relative to other types of employment.

In an article on the gig economy, Associate Professor ~~Randolph~~ Tan, an economist from the Singapore University of Social Sciences (SUSS), explains that the main contributor to the rise of the gig economy is technology. New technology has created new business models that demand persistent but ad hoc work to be done, so as to reduce costs and increase revenues. Online platforms such as Grab and Fiverr serve as intermediaries to match or connect services buyers with workers with the right expertise and who are willing to take up these short term jobs. So, there is matching of supply to demand.

The main positive of working in the gig economy is the flexibility it offers. Online platforms allow workers to market their skills and provide their services to earn an income, under a more flexible working arrangement that allows them to find time to focus on other pursuits. In an Organisation for Economic Co-operation and Development (OECD) paper on the gig economy, economists wrote that: "[the gig economy has] potentially positive effects on aggregate productivity and employment ... Overall, most gig workers are satisfied with their job and working for gig economy platforms appears to reflect mainly voluntary choices rather than the lack of other options."

Sources: Channel News Asia, 27 August 2017, Ministry of Manpower, 6 March 2017, www.ricemedia.co, 31 March 2020

Extract 2: Social Costs of the Gig Economy in Singapore

The gig economy also carries downsides, with irregular work, the lack of benefits and protection. The benefits of the gig economy are often discussed in the context of deep and specialised skills. Yet the fact remains that most of the freelancers and gig workers in Singapore are engaged in trades such as transport or food delivery, in which most criticisms regarding income inequality, career stagnation and exploitation are levelled. Half of the food delivery riders and ride-hailing drivers here earn a monthly household per capita income of \$1,500 or less, putting them in the bottom third of Singapore's workers.

Arguably, nowhere are these ramifications greater than in Singapore, where the lack of Central Provident Fund (CPF) contributions — a core pillar of the Republic's social security system — also has implications for healthcare and retirement. Dr Walter Theseira, a labour economist with the SUSS, said the exclusion of a growing number of workers from the country's social-protection system was "quite worrying". Mandatory social-protection systems like the CPF exist in the first place to help people put aside money for retirement. For young gig-economy workers, retirement is a "very distant prospect" and they may not actually care about retirement adequacy, which is not vital to most people if they cannot make ends meet currently.

Sources: TODAY online, 22 May 2017

Extract 3: Ageing Workforce Cost and Productivity Challenges of Ill-health in Singapore

The Singapore workforce is ageing rapidly. Between 2016 and 2030, employees aged over 50 will be the fastest growing demographic and their number is projected to increase by 55 percent, representing 40 percent of the workforce. The shift in the age composition of the workforce with an increasing proportion of older employees, who are at higher risk of chronic diseases, such as diabetes, cancer, and heart disease will further increase healthcare expenditure. To complicate matters, Singapore also faces the challenges of deteriorating productivity growth.

Ill health in the workplace impedes productivity. In the short run, disruptions to productivity include hospital stay and recovery. Over the longer term, if an employee does not return to "full health", productivity will be impacted due to decreased efficiency or even the loss of the skills, motivations, ability to use technology permanently due to early retirement or death.

Given that employers provide a significant amount of healthcare to employees, this presents a potential financial burden for firms from increased medical claims costs and loss of productivity. At the societal level, the financial impact of ill health is substantial. At a national level, based on gross national income (GNI) per capita, productivity loss could represent a total loss of S\$3.3 billion in 2030.

Sources: Channel News Asia, 17 April 2019

Extract 4: Enabling Longer Productive Lifespans

Singapore's greatest resource is its workers. An ageing workforce may present challenges but older workers are also associated with advantages such as greater firm-specific knowledge, and lower turnover rates. If managed appropriately, diversity of age at work is shown to improve productivity.

Technology enables the growth of the gig economy, alternative employment models such as part-time/freelance work and telecommuting are possible. These changing work arrangements can enable older employees to remain in the job market for longer. The resulting decline of full-time employment could help some employers avoid bearing the burden of an ageing workforce. However, from a societal perspective, these financial costs are instead transferred from employers to society. For instance, more pressure could fall on the government to provide sufficient healthcare benefits for ageing workers in the gig economy, whose CPF contributions have been projected to be largely inadequate.

Health is both a pre-condition of productivity and also an outcome of productivity. Governments can also complement health programmes in firms by putting forward public health initiatives to encourage a healthier lifestyle, and by continuing to invest in the efficacy of the health system.

To close mismatches between seniors and firms, government can facilitate and encourage employers to maximise the performance of the ageing workforce through retraining schemes and incentives to support businesses' efforts to invest in technologies that accommodate and enable older workers. However, the persistence of ageist attitudes in society will inhibit seniors from remaining employed or from transiting to new productive opportunities, even when they remain able and willing to.

Sources: Civil Service College, 28 January 2019

Questions

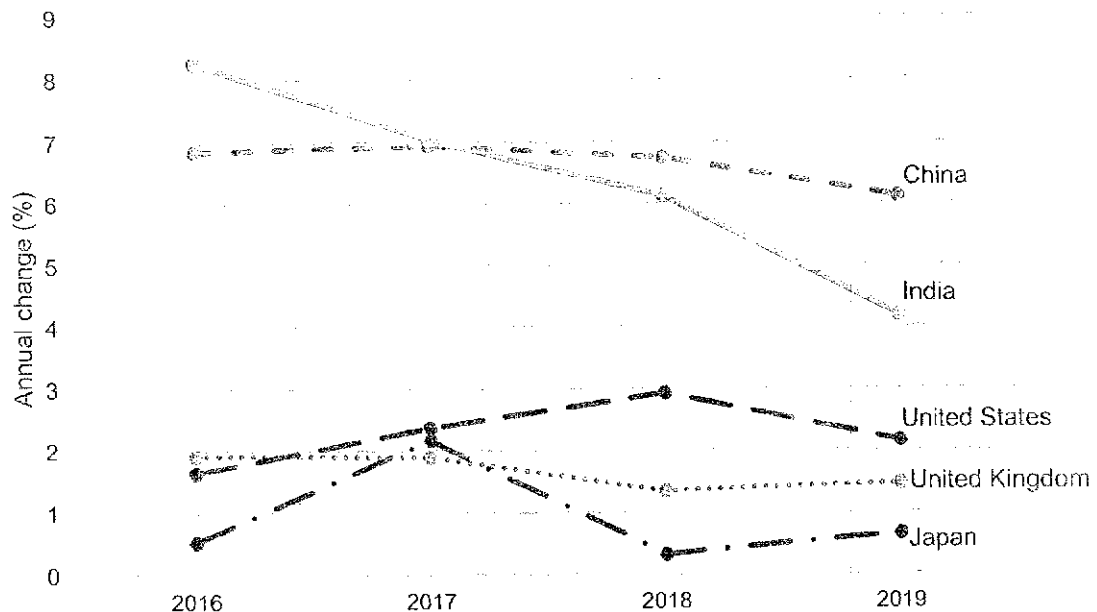
- (a) With reference to Figure 1, compare the change in the number of primary gig workers with that of secondary gig workers between 2016 and 2019. [2]
- (b) With reference to Extract 1 and the use of demand and supply analysis, explain the change in the total number of gig workers in Singapore. [5]
- (c) (i) What is meant by 'productivity'? [1]
- (ii) Using a diagram and the concept of 'productivity', explain how an ageing workforce is likely to impact a firm's profit. [4]
- (d) With reference to the data where appropriate, discuss the factors a rational worker should consider when deciding whether to participate in the gig economy. [8]
- (e) Governments intervene to promote both microeconomic and macroeconomic goals. [10]

In light of the issues posed by an ageing workforce, discuss the policy options available to the Singapore government to promote their goals.

[Total: 30 marks]

Question 2: A Global Recession is Imminent

Figure 2: GDP growth (annual %) of 5 largest economies in the world



Source: World Bank

Extract 5: The Global Economy Must be Ready for Downturn

The annual report by United Nations Conference on Trade and Development (UNCTAD), said finance ministries and central banks should focus on job creation, boosting wages and increasing public investment. Various central banks have recently announced interest rate cuts in an attempt to stimulate activity but the UN report was pessimistic about the chances of success. It cautioned that relying on easy monetary policy to stimulate demand would produce, at best, short-lived growth, while tax cuts for corporations and wealthy individuals were unlikely to trigger productive investment.

Trade growth was expected to slow sharply this year as a result of a slump in global demand and the protectionist measures announced by U.S. President, Donald Trump.

The UN stressed the need to look beyond the short-term threat of recession to focus on longer-term goals including sustainability. Climate change threatens the sustainability of numerous resources and if unchecked, would pose serious constraints to businesses across sectors.

Nearly 200 countries committed to mobilising green investment under the terms of the 2015 Paris Agreement on climate change. Broadly, green investment refers to investments aligned with a commitment to the conservation of natural resources, the production and discovery of alternative energy sources, the implementation of clean air and water projects, or other environmentally conscious business practices. The transition to a low-carbon, sustainable approach to growth could lead to an economic boost of \$26 trillion up to 2030 and help create more than 65 million new jobs, according to the Global Commission on the Economy and Climate.

While developed countries like US saw substantial increase in green investment, developing countries face particular challenges in financing national development priorities and have yet to make much inroad in going green, in spite of the potential benefits. Many developing

countries face a tension between the need to expand the electricity supply and reduce fossil fuel intensity. Opportunities for green investment in areas such as renewable energy, energy efficiency, and agricultural development are potentially commercially viable but currently inadequate. To play catch-up, governments can facilitate technology transfer from more advanced economies possibly via inviting foreign direct investments. Governments can also promote farm research and development to increase local farms' usage of environmental inventions by adapting foreign creations to suit local conditions.

*Source: Adapted from Larry Elliott, The Guardian, 25 September 2019
Katharine Rooney, World Economic Forum, 12 September 2019
United Nations Environment Programme, 2016*

Extract 6: The Crisis That Shattered India's Economic Dreams

India's slumping consumption is so severe that it's denting global growth. From 8% growth three years ago, the economy is set to expand just 5% in the fiscal year through March 2020, the weakest performance since 2009.

At the heart of the economy's problems is a lingering credit slowdown. As lenders choked off credit, domestic spending took a knock – and with consumption making up almost two-thirds of India's gross domestic product, it wasn't too long before growth numbers were hit. A lack of confidence, among buyers and in general among corporates, would have led to the intensifying slowdown. The government is now confronted with rising unemployment as layoffs spread across industries, from automakers to jewellers to construction jobs. The jobless rate climbed from a four-decade high of 6.1% in June 2018 to 7.85% in the final quarter of 2019. Many of such workers are vulnerable and typically ill-equipped to make a living elsewhere because of a lack of requisite skills to land new jobs.

The government's response to the slowdown so far has been focused on boosting production in the economy, rather than stimulating demand. Companies were granted \$20 billion worth of tax cuts last year, and foreign investment rules were eased. The Reserve Bank of India's five rate cuts last year had done little to spur lending. Economists proposed the usage of a coordinated fiscal and monetary boost. Tax cuts aimed at spurring private consumption and a boost in public capital expenditure could increase capacity utilisation, while avoiding any crowding out of private-sector firms.

Source: Adapted from V. Beniwal, R. Satijia, D. Pandya, and A. Nag, Bloomberg, 30 January 2020

Extract 7: Britain Faces Its Highest Risk of Recession Since the Financial Crisis

The U.K. is facing the highest risk of recession since the financial crisis due to Brexit uncertainty and a global economic slowdown. Last month, the Bank of England cut its forecast for economic growth in the second-quarter to zero.

During the last recession of 2008, interest rates in the U.K. were gradually cut from 5.75% to 0.5%, quantitative easing (QE) amounted to £375 billion and VAT was cut to 15%. "Ahead of the next recession, it is clear that U.K. policy makers do not have quite the same room for manoeuvre as they did ahead of the GFC (global financial crisis)," James Smith, research director at Resolution Foundation. With interest rates already at historically low levels and quantitative easing unlikely to have the same effect as in the past, Smith said policymakers in the U.K. need to have a plan in place, warning that if policy is not able to respond, "a recession can become a depression."

Source: Elliot Smith, CNBC, 15 July 2019

Extract 8: Revitalising UK Exports in the New World of Trade

Trade and exports have always been critical engines of the United Kingdom's economy. UK companies enjoy a comparative advantage in a wide range of sectors, from insurance to food and drinks to chemicals and pharmaceuticals. The United Kingdom's services exports are highly diversified, ranging from financial and professional services to IT services to advertising to R&D. It has trade surpluses in all services sectors, except travel and tourism and government services.

However, global trade patterns are shifting dramatically, with Brexit being just one element in a changing landscape. It is cause for concern that the United Kingdom's overall share of global exports has been declining. UK-based companies have struggled to build positions in the fast-growing emerging markets. The United Kingdom's share of total goods exports to developing economies is only 3%, in contrast with Germany's and the United States' shares, at 14% and 19%, respectively.

Global trade is increasingly turning to services and going digital. The global market for traded services is growing more than 60% faster than goods trade. That trend presents important opportunities for the United Kingdom in emerging markets, as the services sector is less dependent on proximity to trading partners. The United Kingdom is already one of the world's largest exporters of digitally delivered services. For example, its exports of architectural, engineering, scientific and other technical services grew from around \$5 to \$15 billion between 1997 and 2017.

To sustain and sharpen international competitiveness, UK businesses must seize opportunities in the fast-growing services and digital trades. Businesses need to reconfigure supply chains to take advantage of new technologies, thereby gaining a cost advantage. There are issues to be addressed. UK exporters need to prioritise growth, speed to market, and proximity to customers. Businesses need to be present in the world's big growth markets. Over the next 15 years, China's working-age-consumer segment will expand by an additional 100 million people. The speed of innovation in the digital powerhouse that is China is both a challenge and an opportunity; companies require customer-centric operating models to succeed.

Both the government as well as the industries must play their parts. Brexit gives the UK the chance to pursue an independent trade policy for the first time in over 40 years. The government will be able to set its own tariffs and pursue its own free trade agreements. It could enable the UK to focus more on fast-growing markets outside the EU. The government could also put in place complementary strategies targeted at uplifting local businesses, such as training grants and supports for infrastructural upgrades. UK businesses must act now to foster long-term growth and sharpen their competitiveness – regardless of the uncertainty about Brexit.

*Source: T. Allas, D. Chinn, V. Hunt & D. Mikkelsen, www.mckinsey.com, 29 Mar 2019
Dominic Webb, <https://commonslibrary.parliament.uk>, 10 Jan 2020*

Questions

- (a) With reference to Figure 2, explain any evidence that suggests that a global recession is imminent. [2]
- (b) Using the circular flow of income, explain how the 'credit slowdown' can worsen the economic crisis in India. [4]
- (c) (i) With reference to Extract 6, identify two types of unemployment present in India. [2]
- (ii) Explain two reasons why monetary policy would be of limited help in addressing the rising level of unemployment in India. [4]
- (d) "The UN stressed the need to look beyond the short-term threat of recession to focus on longer-term goals including sustainability." (Extract 5) [8]
- Discuss the likelihood of green investment being successful in attaining sustainable growth in different economies.
- (e) Discuss the extent to which revitalising UK exports will be effective in addressing the economic slowdown in the UK. [10]

[Total: 30 marks]

~End of Paper~



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Paper 1

Suggested Answers

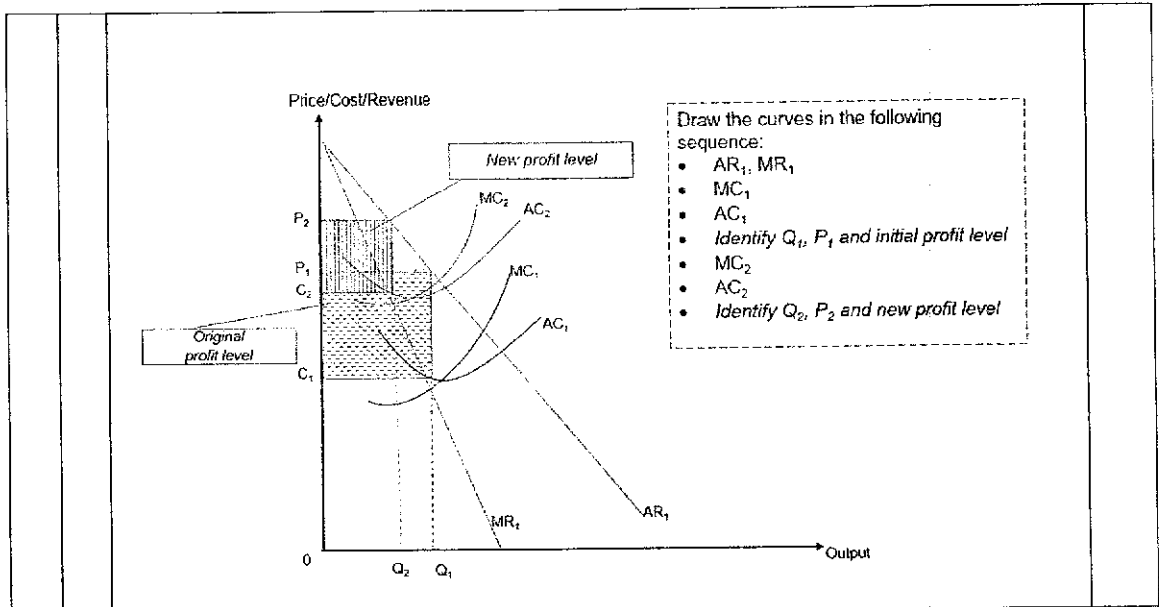
30 August 2021

2 hours 15 minutes

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Question 1: Trends in Singapore's Labour Market

a	<p>With reference to Figure 1, compare the change in the number of primary gig workers with that of secondary gig workers between 2016 and 2019.</p>	2
	<p>Similarity:</p> <ul style="list-style-type: none"> • There was an overall increase in both primary and secondary gig workers. <p>Any Difference:</p> <ul style="list-style-type: none"> • The number of secondary gig workers increased faster. • Primary gig workers increased by 5% whereas secondary gig workers increased by 9%. • The number of primary gig workers fell from 2017-2019 but the number of secondary gig workers fell from 2016-2018. • The number of primary gig workers peaked in 2017 but the number of secondary gig workers was the highest in 2019. 	
b	<p>With reference to Extract 1 and the use of demand and supply analysis, explain the change in the total number of gig workers in Singapore.</p> <p>Total number of gig workers increased in Singapore from 2016 to 2019.</p> <p>Technology helps to increase dd/ss of gig workers.</p> <ul style="list-style-type: none"> • <u>Increase in DD (Derived Demand)</u>: emergence of new business models, e-commerce that need gig workers to serve customers more flexibly and responsively or complete ad-hoc tasks, so as to reduce costs and increase revenues. • <u>Increase in SS</u>: Some workers prefer flexible working arrangements, ownership, + tech helps to reduce barriers to enter the gig economy as workers have better information to assess when and how their skills are needed, and work around other commitments/pursuits. → more willing and able to offer their services to work in the gig economy. <p>Due to the increase in demand and supply, there will be an increase in equilibrium qty explaining the increase in the number of gig workers in Singapore.</p>	5
c	<p>What is meant by 'productivity'?</p>	1
	<p>Productivity is the relationship between output and a unit of factor input. Lower productivity means less output per unit of factor input (e.g. worker)</p>	
c	<p>Using a diagram and the concept of 'productivity', explain how an ageing workforce is likely to impact a firm's profit.</p>	4
	<ul style="list-style-type: none"> • Ageing workforce is more predisposed to ill health → fall in productivity due to illness • Fall in output per man-hour which results in an increase in <u>labour cost</u> or healthcare costs that might be borne by employers → Variable cost increase → MC increase. • AC also increases. • At profit maximising point, output falls from Q1 to Q2 and price increases from P1 to P2. The profits fall from area 0Q1x P1C1 to area 0Q2xP2C2 as shown in the diagram. 	



d With reference to the data where appropriate, discuss the factors a rational worker should consider when deciding whether to participate in the gig economy. **8**

Question analysis:

Command:	Discuss
Content:	Factors a rational worker should consider when deciding whether to participate in the gig economy
Context:	Gig Economy

Schematic plan:

Introduction: Identify aspects of DMF		
<ul style="list-style-type: none"> • Consider benefits of participating in gig economy 	<ul style="list-style-type: none"> • Consider costs of participating in gig economy 	<ul style="list-style-type: none"> • Consider constraints of participating in gig economy
Conclusion		

A rational worker will take into consideration the following factors in their process of decision making whether to participate in the gig economy:

- 1) Benefits and costs
- 2) Constraints
- 3) Changing Information (e.g. unintended information)
- 4) Perspectives

1. Benefits & Costs

Benefits:

- Gig economy involves working on a project basis and as freelancers. Main attractions for those who prefer to work in a manner that encapsulates freedom, autonomy, flexibility and ownership → more flexible working arrangement allows some to pursue other interests (e.g. hobbies, skills upgrading) → rise in non-material SOL.

- Online platforms – a feature of the gig economy serves as intermediaries to match or connect services buyers with workers, allow workers to market their skills and provide their services to earn an income → better matching between workers' skills and jobs → greater job satisfaction → rise in non-material SOL
- Gig economy allow some (e.g. students, housewives, and retirees) to gain side income → rise in mat SOL

Costs:

- Gig workers may face irregular work. Low-skilled gig work does not allow career progression and may face exploitation with low wages → leading to stress → lower SOL
- Gig workers contribute very little to their CPF for retirement. People who've relied heavily on self-employment throughout their working lives are likely to have more difficulty in retirement, especially if their incomes were not high. → compromise future mat SOL
- Opportunity cost of gig work → loss of steady stream of income from a full time job → lead to anxiety due to need to support oneself and even family → fall in non-mat SOL

Evaluation

- However, whether benefits outweigh costs may depend on the type of gig workers. Workers with specialised skills may likely see benefits outweigh costs.
- There will also always be workers who still prefer traditional work i.e. 9-5 desk bound jobs. So, for non-workers who prefer traditional work, costs may outweigh benefits

2. Constraints:

The constraints of any worker include his time available, his education and skills level, physical mobility, etc.

Evaluation

- Constraints differ between different types of workers
 - A worker who prefers to participate in the gig economy and earns a primary income from it may tend to face greater constraints in time rather than skills. Gig economy allows flexibility to overcome time constraint so that he can continue with his other pursuits.
 - A non-preferred worker may participate in the gig economy whether to earn primary or secondary source of income may generally face a constraint of lack of skills and expertise – resulting in him unable to land a full time job.

3. Changing Information (e.g. unintended consequences)

A worker may change his decision when new information arises e.g. Unintended consequences from participating in the gig economy may require the worker to review his decision whether to join the gig economy.

Evaluation

- However, it may be hard for information to be perfect. It may be hard for a worker to always be able to weigh the costs and benefits of participating in a gig economy well. E.g.
 - Uncertainty of the future → underestimating the contributions to the CPF.

- Unexpected events → covid may cause some people to take up gig work after losing their full time job while others feel even more vulnerable as there is less gig work and they had hoped to have a full time job.

4. Perspectives

A worker may consider the perspectives of his family members, friends and society. Despite the net benefit of participating in a gig economy, a workers may postpone or even not join the gig economy given objections of the close friends and family

Evaluation

Society is recognising the increasing importance of the gig economy. The gig economy may become a fundamental feature of any labour market.

Conclusion

Assuming no constraints, a rational worker must essentially weigh the benefits and costs of participating in the gig economy. When there is net benefit the worker will join the gig economy. However, the decision may change given changes in information or how much he values others' alternate perspectives.

Mark scheme

Knowledge, Application & Analysis		
L2	Thorough knowledge and an excellent analytic explanation of different aspects of decision making framework. Answer is well-contextualised to gig economy.	4 - 6
L1	Answer demonstrates limited understanding of question requirements. Inadequate explanation of aspects of decision making framework with few valid points made 1-2m: Answer was mostly irrelevant or inaccurate.	1 - 3
E2	Well-reasoned judgement (E.g. evaluates assumptions or brings in other aspects of DMF to consider or suggests what decision should be made)	2
E1	Unsupported evaluative statement(s) or judgements.	1

e	<p>Governments intervene to promote both microeconomic and macroeconomic goals.</p> <p>In light of the issues posed by an ageing workforce, discuss the policy options available to the Singapore government to promote their goals.</p>	10
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Question analysis:

Command:	Discuss
Content:	Policy Options to achieve micro and macro goals
Context:	Singapore government Issues Posed by Ageing Workforce

Schematic plan:

Introduction:

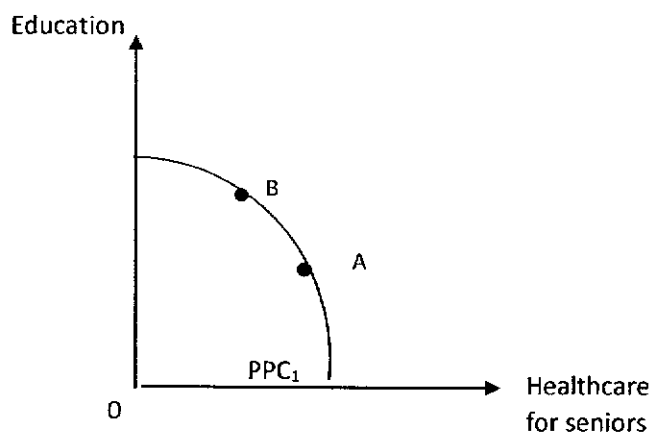
Identify Micro Goals: Efficiency Equity Identify Macro Goals: Economic Growth, Low Unemployment, Price Stability Favourable BOT Identify issues posed by ageing workforce: structural unemployment, inequity, inefficient use of resources, hampering of economic growth	
<u>Policies to achieve Micro Goals</u> <ul style="list-style-type: none"> • Training to reskill workers in order to achieve efficient use of FOP, achieve equity • Redistributive policies to promote equity • Provision of better healthcare or promotion of healthy living might help improve economic efficiency 	<u>Policies to achieve Macro Goals</u> <ul style="list-style-type: none"> • Upskilling to reduce structural unemployment • Increase productivity to increase LRAS to promote growth
Conclusion	
<p><i>Note: Not all suggested points are required. At least one macro and one micro goal should be discussed.</i></p> <p>Ageing workforce with stagnating productivity results in the following issues:</p> <ol style="list-style-type: none"> <u>Inequity (micro goal not achieved)</u> <ul style="list-style-type: none"> • Immobility of ageing workers due to lack of skills and ageism will result in unemployment among ageing workers. This will widen generational income inequality between younger employed workers and older unemployed workers. <u>Productive inefficiency due to unemployment resulting from biasness (micro goal not achieved)</u> <ul style="list-style-type: none"> • Immobility of ageing workers due to ageism or biasness (Extract 4) → inefficient allocation of resource as despite being rich in experience, they are not fully and efficiently utilised. Economy is within the PPC (Pt A) rather than on the PPC (Pt B). 	
<p>Policies</p> <ul style="list-style-type: none"> • Education and change in mindsets of employers can result in better and proper management of the ageing workforce so that senior but experienced workers can be fully and efficiently utilised, → better 	

allocation of labour resource; reduce wastage and under-utilisation of experienced labour → increase productive and allocative efficiency.

- Evaluation: Changing mindsets and education is a long term policy and may not be successful as biasness is too entrenched
- Tap on gig economy to offer employment to seniors → increase mobility of ageing workers as the gig economy is facilitated by technology to better match workers' skills to jobs → reduce wastage → increase productive and allocative efficiency.
 - Evaluation: more pressure could fall on the government to provide sufficient healthcare benefits for ageing workers in the gig economy → does not resolve increase healthcare cost. Gig workers are less likely to contribute to CPF esp when income is low. May bring about income inequity
- Once ageing workforce is gainfully employed, income inequality can be reduced. Redistributive policies can also support the achievement of equity. For example, the progressive tax structure would collect more tax revenue from the higher income households and lower income households or workers who might not be able to upskill so effectively may pay lower taxes and also receive cash handouts/subsidies.

3. Allocative inefficiency given undesirable combination of goods/services (micro goal not achieved)

- Given an ageing workforce, more and more scarce resources are allocated to healthcare for seniors by firms and government result in trade-offs and misallocation of resources
 - An ageing workforce results in falling productivity due to ill health → increase healthcare cost for firms [Extract 3] → inability to allocate resources (e.g. profits) for investment (e.g. R&D) as more is spent on workers' healthcare
 - Ageing workforce with falling productivity leads to fall in national income → greater budget constraint. If government needs to spend more on healthcare, resources needs to be reallocated from elsewhere (e.g. education, defence or residential). Result in under production, consumption of some goods
 - Hence, a more allocative efficient combination of education and healthcare might be at point B rather than at point A.

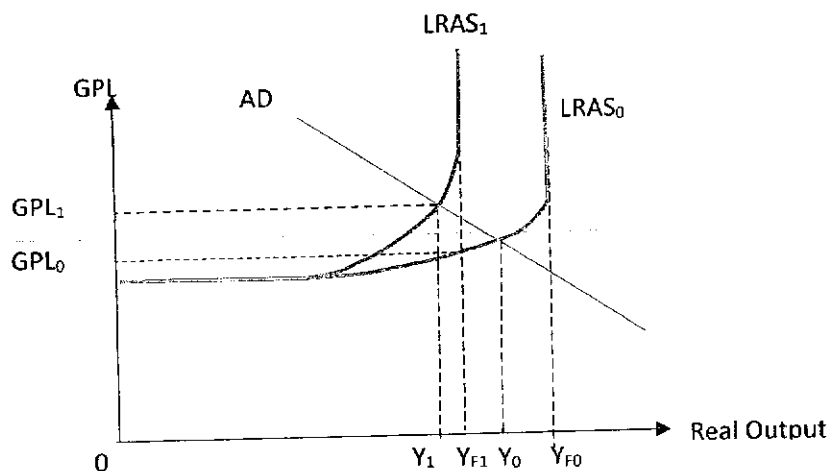


Policies

- Having complementary health programmes that promote healthy lifestyle. This will save on healthcare cost in the future.
- Healthier ageing workforce can reduce the provision of healthcare → more other goods/services can be provided → better combination of goods/services in society → increase allocative efficiency
 - Evaluation: If successful, allocative efficiency in resource allocation. Long term policy and requires mindset change → prolong effort results in misallocation of resources

4. Slowing/ negative potential growth and actual growth (macro goal not achieved)

- If productivity falls → contraction of the LRAS → negative potential growth (Y_{F0} to Y_{F1}) and actual growth (Y_0 to Y_1) in future → no sustained economic growth
 - According to Extract 3, at a national level, based on gross national income (GNI) per capita, productivity loss could represent a total loss of S\$3.3 billion in 2030.

**5. Structural unemployment (macro goal not achieved)**

Immobility of ageing workers due to lack of skills and ageism will also result in structural unemployment among ageing workers.

Policies

- Essentially, govt can lengthen the productive lifespans of the ageing workforce through
 - Upskilling of seniors so as to ensure there are proper matching of seniors' skills to jobs available → increase LRAS
 - Provide incentives to support businesses' efforts to invest in technologies that accommodate and enable older workers to work → increase productivity & productive capacity → increase LRAS

- Evaluation: Ageism persists → Upskilling may not necessarily mean that seniors are accepted as part of workforce → no improvement in productive capacity → Not successful despite the effort.

Conclusion

Given the policy options, government must decide which policy is most effective. Having complementary health programme and upskilling of seniors should be **more effective** than tapping on gig economy because tapping on gig economy is untested. It will take some time before the impact of gig economy is fully understood. There may also be a **trade-off** in the promotion of goals. For example, as more technology is adopted, elderly citizens who pick up skills will be able to see increase in wages but those who are unable to learn the new technology may see a fall in income if they become unemployed. This might worsen inequity.

Mark scheme

Knowledge, Application & Analysis		
L2	Thorough knowledge and an excellent analytic explanation of issues posed by an ageing workforce and the policy options to promote at least one micro and one macro goal. Good application to context.	5 – 7
L1	Answer demonstrates limited understanding of question requirements. Inadequate explanation with few valid points made. 1-2m: Answer was mostly irrelevant or inaccurate.	1 – 4
E2	Critically evaluates theories, perspectives and policy choices to arrive at a well-reasoned judgement.	2 – 3
E1	Unsupported evaluative statement(s) or judgements.	1

Question 2: A Global Recession is Imminent

(a)	With reference to Figure 2, explain any evidence that suggests that a global recession is imminent.	[2]
	<p>Any explanation:</p> <ul style="list-style-type: none"> ○ GDP growth rates of 4 out of 5 largest world economies have been slowing from 2016 to 2019. Slower growth would worsen consumer confidence and investor confidence, leading to a fall in consumption and investment respectively. If this trend continues, the growth rates might turn negative, resulting in a global recession. ○ GDP growth rates of 3 out of 5 largest world economies fell from 2018-2019. UK and Japan's growth rate increased only slightly but remained very low (less than 2%). Slower growth would worsen consumer confidence and investor confidence, leading to a fall in consumption and investment respectively. If this trend continues, the growth rates might turn negative, resulting in a global recession. ○ India experienced the sharpest contraction compared to all other countries. This can contribute significantly to a global recession since they might import less or invest less, thereby negatively affecting the Aggregate Demand of other countries. 	
(b)	Using the circular flow of income, explain how the 'credit slowdown' can worsen the economic crisis in India.	[4]
	<ul style="list-style-type: none"> ○ The circular flow of income illustrates the flow of money as well as goods and services between producers and consumers in an economy. The figure below shows an economy which consists of Households, Firms, Government as well as the Foreign sector. The circular flow of income below includes all withdrawals from and injections into the economy. ○ 'Credit slowdown' suggests a fall in both household consumption and investment expenditure. This leads to an autonomous reduction in injections at the given price level in the economy resulting in a situation where Injection < Withdrawals. ○ In response, there will be an unplanned rise in stock inventories due to the lowered demand. Firms will reduce production of goods and services and hire fewer units of factors of production (including labour, capital, raw materials, etc.). Factor owners will experience a fall in income. ○ Induced consumption on goods and services will fall. With the reduction in income, there will also be a fall in savings, taxes and import expenditure ie. a fall in withdrawal. ○ This process continues until a new equilibrium level of national income is reached at a lower level of income, where the total fall in withdrawals becomes equivalent to the initial fall in injection (i.e. W=J). 	

<p>(c) (i)</p>	<p>With reference to Extract 6, identify two types of unemployment present in India.</p>	<p>[2]</p>						
	<p>It is likely that India is experiencing both demand-deficient and structural unemployment.</p>							
<p>(c) (ii)</p>	<p>Explain two reasons why monetary policy would be of limited help in addressing the rising level of unemployment in India.</p>	<p>[4]</p>						
	<p>Question analysis:</p> <table border="1" data-bbox="343 1176 1292 1310"> <tr> <td>Command:</td> <td>Explain</td> </tr> <tr> <td>Content:</td> <td>Unemployment – different types, different policy solutions Expansionary monetary policy – intent, limitations</td> </tr> <tr> <td>Context:</td> <td>India – consider state of economy and existing challenges</td> </tr> </table> <p><u>Low level of confidence limits monetary policy</u> An expansionary monetary policy, i.e. a reduction of interest rates, typically serves the intention of reducing the cost of borrowing and to encourage higher level of consumption and investment expenditure. However, the lack of confidence on the part of both households and firms would mean they are unlikely to be willing to increase investment and consumption expenditure, even if interest rates (and the cost of borrowing) were lowered. Thus, an expansionary monetary policy would not generate the needed increase in C and I, and hence is unlikely to increase AD significantly. This would not help to address demand-deficient unemployment.</p> <p><u>Monetary policy does not address structural unemployment</u> Even if the intent of an expansionary monetary policy was met, it would still not address the root cause of structural unemployment. Low-wage and low-skill labourers, such as those in the construction sector, lack the requisite skills to land jobs in thriving industries. Supply-side policies which help to retrain or up-skill workers would be required to enable workers to acquire relevant skills for new industries and thereby address structural unemployment.</p>	Command:	Explain	Content:	Unemployment – different types, different policy solutions Expansionary monetary policy – intent, limitations	Context:	India – consider state of economy and existing challenges	
Command:	Explain							
Content:	Unemployment – different types, different policy solutions Expansionary monetary policy – intent, limitations							
Context:	India – consider state of economy and existing challenges							

(d)	<p>“The UN stressed the need to look beyond the short-term threat of recession to focus on longer-term goals including sustainability.” (Extract 5)</p> <p>Discuss the likelihood of green investment being successful in attaining sustainable growth in different economies.</p>	[8]						
<p>Question analysis:</p> <table border="1" data-bbox="347 461 1299 712"> <tr> <td>Command:</td> <td>Discuss, balanced perspective</td> </tr> <tr> <td>Content:</td> <td> <ul style="list-style-type: none"> o Macroeconomic goals – sustainable growth o Green investment – factors influencing the quantity and success of such investment o ADAS analysis </td> </tr> <tr> <td>Context:</td> <td>Different economies – attempt a broad comparison between developing and developed economies</td> </tr> </table> <p>Schematic plan</p> <p><u>Intro:</u> Define sustainable growth Different economies can refer to developed VS developing economies</p> <p><u>Body:</u> Perspective #1: The likelihood of success in <u>developed</u> economies with better access to funds</p> <ul style="list-style-type: none"> o Having been developed, these countries can now focus on green investments. Developing countries choose to focus on pursuing growth using traditional methods o With access to funding needed for R&D and the expansion of related industries, i.e. $\uparrow I \rightarrow \uparrow AD \rightarrow \uparrow RNY$ o $\uparrow I \rightarrow \uparrow LRAS$ in the long run o $\uparrow I$ is facilitated by availability of technology and labour expertise for R&D o Ability to export green products or green services $\rightarrow \uparrow X \rightarrow \uparrow RNY$ o Lower/manage the rate of depletion of resources; avoid environmental issues <p>Perspective #2: The likelihood of success in <u>developing</u> economies</p> <ul style="list-style-type: none"> o Despite the lack of access to green investment fund, there can be still opportunities for adapting green innovations (from other economies) to the local context; this is potentially less costly than conducting new research <p><u>Evaluative conclusion:</u> Judgment Substantiation – e.g. likelihood for success depends on conditions such (i) willingness/ impetus to undertake green investment; (ii) the success of R&D to yield green equipment or methods of production which are viable; or (iii) degree of relevance of green innovations to the key sectors which drive growth</p> <p>Suggested answer: <u>Intro –</u></p> <ul style="list-style-type: none"> o Sustainable growth refers to sustained economic growth without causing significant issues on future generation. 			Command:	Discuss, balanced perspective	Content:	<ul style="list-style-type: none"> o Macroeconomic goals – sustainable growth o Green investment – factors influencing the quantity and success of such investment o ADAS analysis 	Context:	Different economies – attempt a broad comparison between developing and developed economies
Command:	Discuss, balanced perspective							
Content:	<ul style="list-style-type: none"> o Macroeconomic goals – sustainable growth o Green investment – factors influencing the quantity and success of such investment o ADAS analysis 							
Context:	Different economies – attempt a broad comparison between developing and developed economies							

- While the benefits of green investment can apply to and would appeal to all countries, the developed and developing economies will differ in (i) their ability to channel resources towards green investment, (ii) the success of the green investment in achieving intended goals.
 - Green investment “refers to investments aligned with a commitment to the conservation of natural resources, the production and discovery of alternative energy sources, the implementation of clean air and water projects, or other environmentally conscious business practices”. (Ext 5) Firms are hence seeking to adopt greener method of production and/or develop new goods or services.

Perspective #1 –

- **Developed countries** are more likely to see higher investment expenditure, increasing the AD and eventually increasing real national income. This drives actual economic growth.
- In the long-run, the investment could expand the economies' productive capacity, increase the LRAS, and hence achieve potential economic growth.
- If economies are able to export green products (e.g. clean air and water projects) or green services (e.g. waste management systems), this could raise export revenue. Hence, higher investment expenditure and export revenue could, ceteris paribus, lead to a further increase in AD and hence real national income → i.e. sustained growth
- A successful transition to a 'low-carbon, sustainable approach to growth' can help to lower/manage the rate of depletion of natural resources. It could also help to avoid/reduce the severity of environmental issues, which have a negative impact on health, productivity and efficiency of economies of future generations.
- On the other hand, **developing countries** have more hurdles to contend with. Governments have to balance multiple competing needs (which could range from developing capacity in the health care, defence, education or infrastructural areas). Transitioning to greener methods of production may not be high on the governments' list of priorities.
- Even if they are keen to develop green technology or capabilities, firms in developing countries may face greater challenge in securing adequate funds.
- In order to meet nearer-term goals (such as achieving actual economic growth and creating jobs), developing countries may face an inevitable trade off with the longer-term goal of sustainability.

Perspective #2 –

- Even without deep resources for research, developing countries can use alternative strategies to still benefit from green investment. “Governments can facilitate technology transfer from more advanced economies possibly via inviting foreign direct investments.” (Ext 5)
- With higher investment inflow into the developing countries, this can increase AD and achieve actual economic growth in the short run. Similarly, with expansion of productive capacity in the long-run, potential growth too can be achieved. Since production is cleaner and greener, there can be sustainable growth.

Conclusion –

- It appears that developed economies are more likely to succeed in leveraging on green investment to achieve longer-term goals. They are

better poised to do so given the availability of funds and access to relevant technology. Notwithstanding, the desired outcomes for R&D cannot be guaranteed. Thus, the goal of sustainable growth may still be elusive.

- o As developing countries often experience higher costs from environmental issues, they could be forced to adopt more sustainable production methods via low-cost green initiatives. Green innovations could be low cost too. This means developing countries could attain sustainable growth with lower cost of production.

Mark scheme

Knowledge, Application & Analysis		
L2	Thorough knowledge and an analytic explanation of how green investment can achieve sustainable growth, with reasoned analysis of the criteria to determine success in different economies. Good application to relevant context.	4 – 6
L1	Answer demonstrates some knowledge of how green investment can achieve sustainable growth. Inadequate analysis of the different perspectives of different economies. Inadequate explanation with few valid points; or the answer is mostly irrelevant or inaccurate.	1 – 3
E2	Critically evaluates the issues, perspectives and policy choices, to arrive at a well-reasoned judgement.	2
E1	Unsupported evaluative statement(s) or judgements.	1

(e) **Discuss the extent to which revitalising UK exports will be effective in addressing the economic slowdown in the UK.** [10]

Question analysis:

Command:	Discuss the extent
Content:	<ul style="list-style-type: none"> o Economic slowdown, i.e. low growth o Effectiveness of Revitalising UK exports <ul style="list-style-type: none"> - Strengths and limitations of revitalising UK exports vis-à-vis the criteria of 'effectiveness', i.e. ability to increase economic growth - Other policies might also be suggested as part of discussing the extent to which revitalising UK exports is effective
Context:	UK – consider the possible advantages that UK possesses, the challenges they may face

Schematic plan:

<p>Intro:</p> <ol style="list-style-type: none"> 1. Briefly describe the current key challenges in the economy 2. Briefly describe what revitalising US exports means – boost exports by improving competitiveness of exports (e.g. through SS policies) <p><i>Note: the focus of the question is not on HOW to revitalise exports so the focus is not on the analysis of policies to revitalise exports.</i></p> <p>Thesis: Revitalising exports could be effective in addressing the slowdown in UK</p> <ul style="list-style-type: none"> o Explain how increase in X could lead to increase in real NY o (Optional) Explain why other policies might not work and hence revitalising exports could be effective to address the slowdown in UK

Anti-thesis: Revitalising exports will **not** be effective in addressing the slowdown in UK

- Limitations of increasing X and increasing AD
- (Optional) Other policies might be more effective

Evaluative conclusion:

Judgment

Substantiation –

e.g. weigh both perspectives and suggest the extent to which revitalising UK exports will be effective in addressing the slowdown in UK.

Suggested answer

Intro –

The UK is not spared from the gloom that has clouded many economies in the world. With the lowered consumer and investor confidence, monetary policy is rendered ineffective. The uncertainty surrounding the terms of Brexit further compounds the confidence issue.

UK's overall share of global exports has been declining (Ext 8) and revitalising US exports could be effective to address the slowdown in the UK. This means boosting exports by improving competitiveness of exports. This could be done for example through supply-side policies.

Thesis –

- The export sector contributes strongly to GDP. Being able to increase X, particularly from developing economies, can then increase AD. This might also offset a reduction in X arising from Brexit.
 - *"Trade and exports have always been critical engines of the United Kingdom's economy" (Ext 8)*
- Potential to grow digital exports and services
 - *"Global trade is increasingly turning to services and going digital ... that trend presents important opportunities for the United Kingdom in emerging markets..." (Ext 8)*
 - *"Businesses need to reconfigure supply chains to take advantage of new technologies" (Ext 8)*
- If ~~supply-side~~ policies such as investing in technology to improve productivity could reduce the costs of production and hence the price of exports, as well as increase the quality of exports, there may be a significant increase in the demand for UK exports. By revitalising exports, X increases. Since $AD = C+I+G+(X-M)$, an increase in X will lead to an increase in (X-M) and hence AD. There will be a multiplied increase in real NY since income generates expenditure which then generates more income via the multiplier effect. (Note: An AD-AS diagram may be used to illustrate this effect)
- Given the advantage the UK currently enjoyed (Ext 8: UK companies enjoy a comparative advantage in a wide range of sectors), revitalising the export sector should yield positive results.

Anti-thesis –

- In spite of the government's best efforts to promote trade and to boost export competitiveness, the poor performance of the global economy (indicated in Ext 5) may mean there simply might not be sufficient global demand to generate a substantial rise in export revenue for the UK.

- The protectionist measures implemented in the US (Ext 5) may further weaken the demand for UK's exports. Hence, policies aimed at promoting trade would not be effective in addressing the slowdown.
- Although the pace of growth of consumption in China and emerging markets presents opportunities for the UK (Ext 8), an inability to innovate quickly enough to capture demand from such markets would result in the UK not reaping the intended benefit of boosting export revenue and hence reversing the economic slowdown. This threat is real, given the 'speed of innovation in the digital powerhouse that is China' (Ext 8).
- Even with government grants for research or infrastructure overhaul, such supply-side policies and the research efforts by firms may require (substantial amounts of) time to yield results. With time and speed of improvements being a critical factor in the race for export revenue from emerging markets, the policies may not work quickly enough. Thus, a boost for AD and hence RNY may not be attainable in the near term.
- To address the slowdown immediately and to prevent further job losses, an expansionary fiscal policy may still be required to shore up AD via increasing government expenditure. In view of the uncertainty and therefore reluctance of domestic consumers to spend, the government might need to increase government spending i.e. G. Since $AD = C+I+G+(X-M)$, an increase in G will lead to an increase in AD. There will be a multiplied increase in real NY since income generates expenditure which then generates more income via the multiplier effect.

Conclusion –

- On balance, revitalising UK exports will be effective in addressing the slowdown in the UK to a large extent.
 - Being a relative small economy, domestic consumption alone is hardly sufficient to fuel economic performance. Maintaining or expanding its edge in the export sector is critical for the UK to sustain economic growth and to create jobs.
- A combination of policies / policy approaches may be more effective.
 - Revitalising exports can promote growth through external demand but policies to continue encouraging internal demand as well as long term growth would be important. This could include increasing G to increase AD. Building of infrastructure or other supply side policies aimed at increasing productivity could also help to increase AS. These would yield longer term advantages for the UK economy.

Mark scheme

Knowledge, Application & Analysis		
L2	Thorough knowledge and an excellent analytic explanation of the merits and limitations of how revitalising exports could address the economic slowdown. Good application to context.	5 – 7
L1	Answer demonstrates limited understanding of question requirements. Inadequate explanation with few valid points made; answer was mostly irrelevant or inaccurate. For example, there may be regurgitation of several policies to deal with economic slowdown without clear recognition of context in UK.	1 – 4

	E2	Critically evaluates theories, perspectives and policy choices to arrive at a well-reasoned judgement.	2 – 3		
	E1	Unsupported evaluative statement(s) or judgements.	1		



ST ANDREW'S JUNIOR COLLEGE

PRELIMINARY EXAMINATIONS 2021 (JC2)

General Certificate of Education Advanced Level

Higher 2

ECONOMICS

9757/02

Paper 2

31 August 2021

2 hours 15 minutes

READ THESE INSTRUCTIONS FIRST

An answer booklet will be provided with the question paper. You should follow the instructions on the front cover of the answer booklet. If you need additional paper ask the invigilator for a continuation booklet.

Answer **three** questions in total, of which **one** must be from Section A, **one** from Section B and **one** from **either** Section A or Section B.

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

This document consists of 3 printed pages.

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[Turn Over]

Answer three questions in total.**Section A**

One or two of your three chosen questions must be from this section.

- 1** The sales volume of global smart wearables such as smartwatches and fitness trackers is forecast to grow from 400 million units in 2020 to more than 600 million units by 2024. This growth is driven by increasingly cheaper sensors which are critical in the production of smart wearables, the rise of the middle class in developing economies and consumers' increasing interest in health. Apple's revenue of smart wearables surged to \$10 billion at the end of 2020. Apple's smart wearables are aesthetically and technologically more advanced compared to its competitors.
- (a) Explain the likely combined impact of demand and supply factors on the global smart wearables market. [10]
- (b) Assess the likely effects of a rise in price of Apple's smart wearables on the revenue earned by both Apple and other retailers who sell related goods. [15]
- 2** In response to the Covid-19 situation in Singapore, the government implemented measures such as the Circuit Breaker and Safe Management Measures for food establishments. The government has also provided support for these firms through wage subsidies under the Jobs Support Scheme as well as through rental waivers. Through these months, some firms have managed to survive, even thrive, while others have chosen to close for good.
- (a) Explain how the above events have affected the level of profits of food establishments. [10]
- (b) Discuss how food establishment owners would likely respond to the above changes in profits. [15]
- 3** Tobacco products have become more expensive here following a 10 per cent increase in excise duty on all tobacco products. Users are unaware of the health implications of consuming these products and unconcerned about how consuming these products will affect those around them.
- (a) Explain how the consumption of tobacco products results in market failure. [10]
- (b) Assess the effectiveness of the policies employed by the Singapore government to ensure that the market for tobacco products operates efficiently. [15]

Section B

One or two of your three chosen questions must be from this section.

- 4 In Singapore, the overall prices of goods and services are rising at a modest pace over the last five years. The nominal monthly income among households here rose from S\$8,846 in 2016 to S\$9,023 in 2017.
- (a) Explain how increases in the prices of goods and services as well as increases in household income will affect standard of living. [10]
- (b) Discuss the extent to which Singapore's economic performance depends on maintaining a low and stable inflation rate. [15]
- 5 The top priority for many countries is to reinvigorate their economies, but the quality of that growth is vital. To improve lives and well-being in the short-term, growth needs to be inclusive, with benefits felt by the whole population.
- Discuss the effectiveness of the current policies that Singapore has adopted to achieve inclusive and sustainable growth. [25]
- 6 (a) Explain the consequences of a persistent balance of trade deficit. [10]
- (b) Discuss whether policies aimed at correcting a balance of trade deficit might cause difficulties for a country. [15]

~End of Paper~



ST ANDREW'S JUNIOR COLLEGE

PRELIMINARY EXAMINATIONS 2021 (JC2)

General Certificate of Education Advanced Level

Higher 2

ECONOMICS

9757/02

Paper 2

Suggested Answers

31 August 2021

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Question 1

Global smart wearables sales volume is forecast to grow from 400 million units in 2020 to more than 600 million units by 2024. This growth is driven by increasingly cheaper sensors which are critical in the production of smart wearables, the rise of the middle class in developing economies and consumers' increasing interest in health. Apple's revenue of smart wearables surged to \$10 billion at the end of 2020. Apple's smart wearables are aesthetically and technologically more advanced compared to its competitors.

- (a) Explain the likely combined impact of demand and supply factors on the global smart wearables market. [10]
- (b) Assess the likely effects of a rise in price of Apple's smart wearables on the revenue earned by both Apple and other retailers who sell related goods. [15]

(a)

Question Analysis

Command Word	Explain
Content	Factors – Demand and Supply Factors Sales – Equilibrium Price and Equilibrium Quantity
Context	Global market for smart wearables

Schematic Plan

Define sales as $P_e \times Q_e$
Briefly explain how market equilibrium is attained through the interaction of demand and supply.

Identify Demand and Supply Factors

- [DD] Income, Tastes and Preferences → Increase in DD
- [SS] Fall in COP → Increase in SS

Using demand and supply analysis, explain the combined effect of the 3 changes on the global market for smart wearables. This includes:

- Drawing of DD-SS diagrams to illustrate simultaneous shifts
- Explaining the market adjustment process
- Stating the effect on P_e , Q_e and how this results in the projected increase in sales.

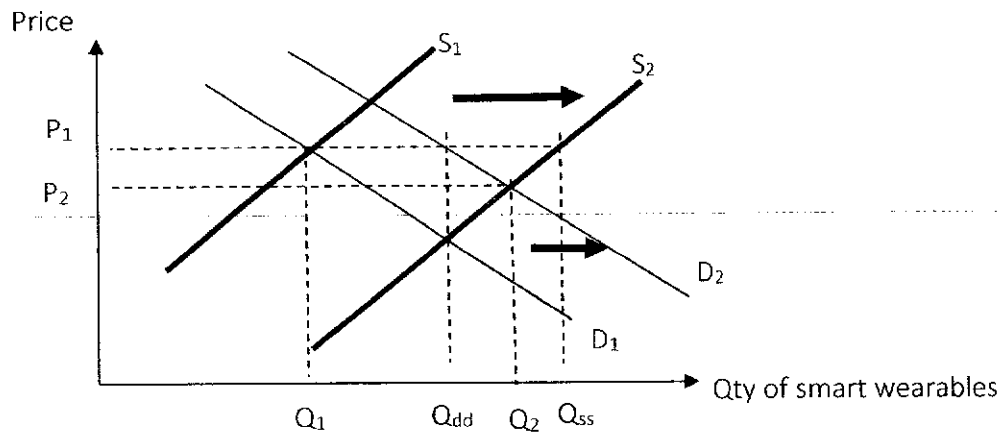
Introduction

- The P_e and Q_e of the global market for smart wearables are attained through the interaction of demand and supply. As demand and supply change, so will the P_e and Q_e of a good/service.

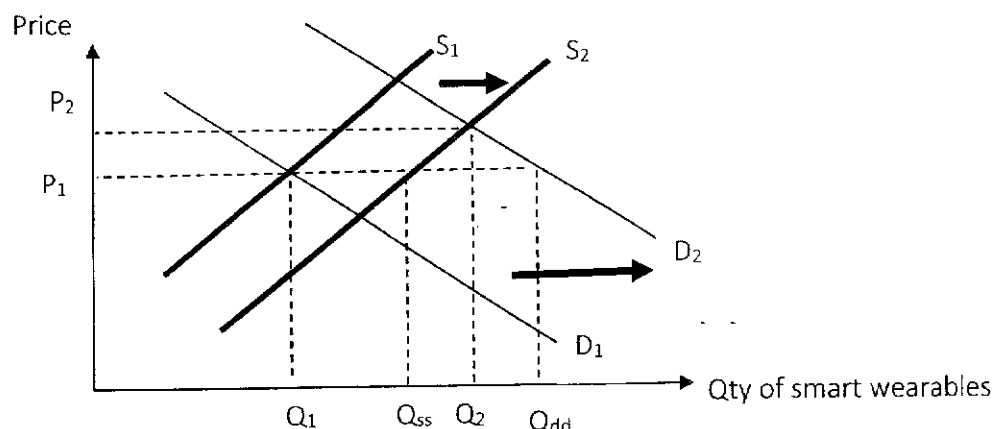
Body

- The global market of smart wearables is projected to grow due 1) an increase in demand for smart wearables and 2) increase in supply of smart wearables.

- Increase in global demand
 - The rise of the middle class in developing economies suggests that there is an increase in income and purchasing power of the consumers in the developing countries. Smart wearables are likely to be normal goods i.e. demand for it increases as income increases.
 - With consumers' increasing interest in health, there is also a change in taste and preference towards smart wearables.
 - **Rising income and increased taste and preference for health-related smart wearables will increase demand for smart wearables.**
- Increase in global supply
 - As sensors increasingly become inexpensive, this means that the cost of production of smart wearables are falling. With lower cost of production, supply of smart wearables should rise.
- In the case where increase in supply outweighs the increase in demand, the equilibrium quantity will increase but equilibrium price will decrease.
- At the old equilibrium price (P_1), there will be a downward pressure on price given surplus. Consumers will increase quantity demanded whereas producers will decrease quantity supplied until $Q_{ss} = Q_{dd}$ at a lower P_2 and higher Q_2 of smart wearable globally



- In another case, where increase in demand outweighs the increase in supply, both the equilibrium quantity and price will increase. At the old equilibrium price (P_1), there will be an upward pressure on price given shortage. Consumers will decrease their quantity demanded whereas producers will increase quantity supplied until $Q_{ss} = Q_{dd}$ at a higher P_2 and higher Q_2 of smart wearables.



Conclusion

In both cases, global equilibrium quantity of wearables will surely increase. However, change in equilibrium price is uncertain.

Based on observation, price of wearables is still very high in general. Hence, it is more likely that the global equilibrium price of wearable will increase.

This is because while sensors have become cheaper, the price of sensors are still unlikely to fall too drastically. The technology and development of sensor takes time and still require huge amount of investment for constant improvement i.e. cost of producing sensors is still high. Cost of producing wearables are will remain high too.

On the other hand, since most developing countries are populous, the rise of the middle class should cause a significant increase in demand for wearables. This is reinforced by the heightened interest in health. Hence, overall, the increase in demand will be greater in magnitude than increase in supply.

Marking Scheme

Level	Knowledge, Application, Understanding, Analysis
L3 (8-10)	Accurate identification and well elaborated explanation of how three demand and supply factors led to changes in equilibrium quantity and price. Accurate and developed explanation on price adjustment process. Consistent and good application to the context of the global market for smart wearables.
L2 (5-7)	Under-developed explanation of at least two factors or analysis might lack balance with only either demand OR supply side well-explained Or Inaccurate and underdeveloped explanation on price adjustment process
L1 (1-4)	3-4m: Shows some knowledge of the reasons behind the projected growth of sales with inadequate or incorrect identification and explanation of how each factor changes demand or supply. 1-2m: Answer is mostly irrelevant or contains conceptual errors.

(b)

Question Analysis

Command Word	Discuss
Content	Relevant elasticities
Context	Apple smart wearables Related Markets <ul style="list-style-type: none"> • Sports gear • Competitors' wearables

Schematic Plan

Introduction: Identify the markets to consider <ol style="list-style-type: none"> 1. Market for Apple smart wearables 2. Market for sportswear (complement) 3. Market for competitors' wearables (e.g. Xiaomi smart wearables)(substitutes) 	
Body 1: Rise in price of Apple wearables on Apple's revenue depending on PED for Apple wearables	
Body 2: Rise in price of Apple wearables has impacts on revenue of other related goods, depending on the XED for related goods	Body 3: Rise in price of Apple wearables has no / minimal impacts on revenue of other related goods. Rather change in revenue is due to other factors e.g. sensor prices and income change
Conclusion	

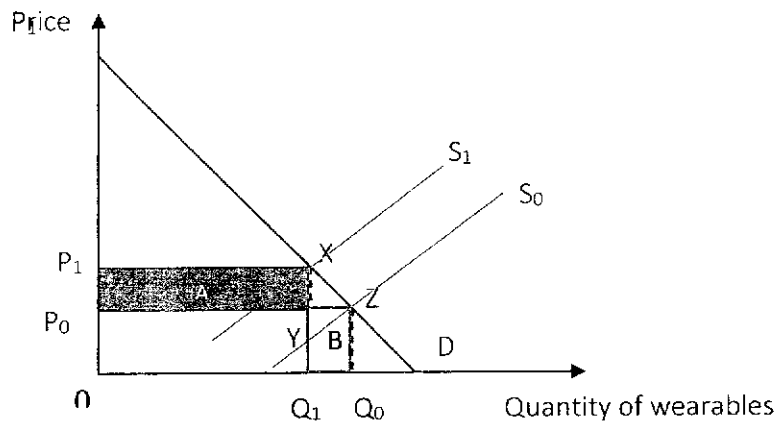
Introduction:

How the rise in price of Apple smart wearables will impact Apple's revenue and revenue of other retailer of related good is dependent on the shifts of demand or supply, and also relevant elasticity concepts such as price elasticity of demand and income elasticity of demand. The three markets to be examined are: Apple smart wearables, Apple's competitors in the smart wearables markets and sportswear retailers.

Body 1: Rise in price of Apple wearables on Apple's revenue**Case 1: PED < 1**

Generally, **the demand for Apple wearables is likely to be inelastic (PED < 1)**. This is because given its superiority in technology and design quality, wearables of other brands are hardly close substitutes.

With reference to the diagram, the rise in revenue given an increase in price (area A) is larger than the fall in revenue given the less than proportionate fall in quantity demanded (area B). Hence, a rise in price of Apple wearables will result in an increase in revenue.

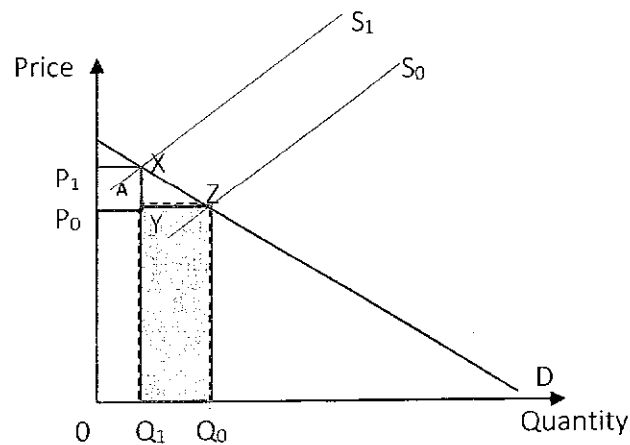


Demand for Apple wearables is generally price inelastic

OR

Case 2: $PED > 1$

Apple customers are more price sensitive to the rise in price of Apple wearable ($PED > 1$) due to the fact that these wearables take up a significant portion of their income. In this case the rise in revenue given an increase in price (area A) is less than the fall in revenue (area B) given the more than proportionate fall in quantity demanded. Hence, a rise in price of Apple wearables will result in a decrease in revenue.



Demand for Apple wearables is price elastic for a segment of consumers

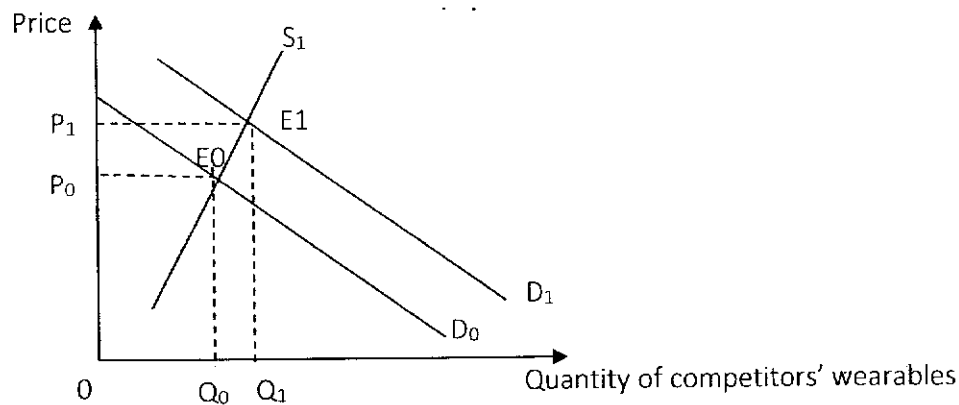
Body 2: Rise in price of Apple wearables has impacts on revenue of other related goods

Competitors' wearables (substitutes)

Case 1: XED positive and >1

Value of XED for competitors' wearables may be positive and >1 for some consumers.

This means competitors' wearables are close substitute of Apple wearable to these consumers. Hence, the rise in price of Apple wearables will result in a more than proportionate rise in demand for competitors' wearables. Competitors' revenue will increase/ bigger ($0P_1E_1Q_1$) due to the rise in both equilibrium price from P_0 to P_1 and equilibrium quantity from Q_0 to Q_1 .



OR

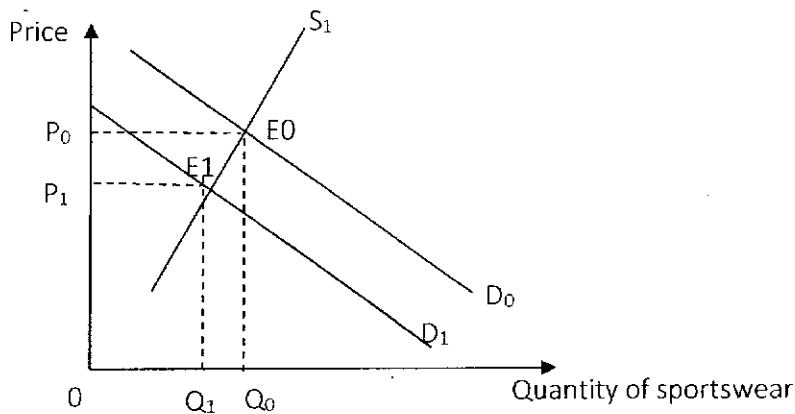
Case 2: XED positive and <1

However, the value of XED for competitors' wearables is more likely to be <1 . This is because Apple is superior in aesthetic and technology compared to other competitors; there are few close substitutes. The rise in price of Apple wearables will thus generally not cause many people to switch to other brands of wearables. Hence, there will be little increase revenue of competitor brands.

Sportswear (complement)

Case 1: XED negative and >1

Similarly, value of XED for sportswear is negative and >1 for some consumers. This means sportswear are close complements to Apple wearables for these consumers. Hence, the rise in Apple wearables, will result in a fall in demand for sportswear. Revenue of sportswear retailers will fall as a result ($OP_1E_1Q_1$) due to the fall in both equilibrium price from P_0 to P_1 and equilibrium quantity from Q_0 to Q_1 .



Or

Case 2: XED negative and <1

The value of XED for sportswear is likely to be <1 . This is because sportswear are not necessarily needed when one uses Apple wearables. Hence even when quantity demanded for Apple wearable fall given a rise in price, the demand for sportswear may not be significantly fall. Hence, there will be little fall in revenue of sportswear retailers.

Evaluation and Conclusion:

The above analysis is based on ceteris paribus assumption. There could also be other factors that affect the demand and/or supply of wearables, for example, change in population demographics or new information related to the safety of wearables that affect the demand for them.

Hence, changes to revenue of other retailers of related products can also be due to other reasons:

- Lower cost of production due to cheaper sensors
- Increase income due to rise of middle class
- Increase interest in health

Lower cost of production due to cheaper sensors → lower price of wearables

Demand for other smart wearables is likely to be price elastic as they are close substitutes to one another. In addition, smart wearables are in generally not a necessity and take up a large proportion of income. A lower cost of production due to cheaper sensors will result in a lower equilibrium price of wearables. Given value of PED for competitors' wearable >1 , the fall in revenue given a fall in price is smaller than the rise in revenue given the more than

proportionate rise in quantity demanded. Overall, revenue will also increase even for retailers of other brands of wearables.

Increase in income due to rise in middle class

Wearables are normal goods hence value of YED is positive and >1 . With greater purchasing power, demand for wearables will increase generally. Hence, revenue will also increase even for retailers of other brands of wearables.

Increase interest in health

In this case, both the retailers of sportswear and other brands of wearables may experience an increase in revenue. This is regardless of whether sportswear and wearables are complements.

The overall impact on each market is dependent on the direction and extent of shift of the demand and supply curves, as well as relevant elasticities of demand for each good.

Marking Scheme

Level	Knowledge, Understanding, Analysis and Application
L3 (8 – 10)	Well-developed with precise and cohesive explanations. Able to demonstrate both breadth and depth in explanation by thoroughly analysing how a rise in price of Apple smart wearables can have a different impact on revenue of Apple and retailers of other related goods. Answer correctly applies the relevant elasticity concepts (PED, XED, and YED).
L2 (5 – 7)	Use of some appropriate economic concepts which are largely free from conceptual errors. Answer demonstrate insufficient breadth and depth in explanation how a rise in price of Apple smart wearables can have a different impact on revenue of Apple and retailers of other related goods. Answer correctly applies some of the relevant elasticity concepts (PED, XED, and YED).
L1 (1 – 4)	Answer is a weak attempt to elaborate on the elasticity concepts and its impact on revenue of relevant markets. Comprises of a smattering of points on elasticity concepts which is poorly elaborated or has conceptual inaccuracies.
Evaluation	
E3 (4 - 5)	Synthesises economic arguments to arrive at well-reasoned judgements and decisions such as in a good summative conclusion. Well-supported evaluative judgement on the different impacts of the different events on different markets.
E2 (2 – 3)	Judgment provided on the different impacts on different markets with some attempts at substantiation.
E1 (1)	Judgment provided but no substantiation.

Question 2

In response to the Covid-19 situation in Singapore, the government implemented measures such as the Circuit Breaker and Safe Management Measures for food establishments. The government has also provided support for these firms through the Jobs Support Scheme in which the government co-funds the wages of employees, as well as through rental waivers. Through these months, some firms have managed to survive, even thrive, while others have chosen to close for good.

- (a) Explain how the above events have affected the level of profits of food establishments. [10]

<p>Introduction:</p> <ul style="list-style-type: none"> - Explain how profit is determined → TR-TC
<p>Body 1: Explain how revenue have reduced</p> <ul style="list-style-type: none"> - Explain how the circuit breaker (CB) and Safe Management Measures (SMM) have reduced revenue
<p>Body 2: Explain how cost have reduced</p> <ul style="list-style-type: none"> - Explain how the Jobs Support Scheme and rental waivers have reduced cost
<p>Body 3: Impact on profits</p> <ul style="list-style-type: none"> - Profits fall if fall in revenue > fall in cost
<p>Conclusion:</p> <ul style="list-style-type: none"> - As a result of the fall in profits, some firms are still able to earn normal/supernormal profit while others now earn sub-normal profit.

Introduction

Food establishments typically seek to maximise profits and to do so, they are likely to aim to produce at the output/ price level where marginal cost (MC) is equals to marginal revenue (MR). Profits is the difference between total revenue (TR) and total cost (TC).

Body

Reduced Revenue

Given CB and SMM, people are less able and willing to dine out. This in turn causes the demand for dining at food establishment fall. Hence, AR and MR of food establishment will fall.

Reduced Costs

With Job Support Scheme and rental waivers, these will reduce average variable cost (AVC) and average fixed cost (AFC) respectively. This is because wages are variable costs and Job Support Scheme co-fund wages of employees. On the other hand, rental are fixed cost and will be incurred regardless on the level of output. Hence rental waiver will reduce the AFC. Since Average cost (AC) = AFC + AVC, the AC will also fall. Since there is a fall in AVC, the marginal cost (MC) of food establishments will fall accordingly too.

(Note: We normally assume that wages are variable costs since more wait-staff/chefs can be hired and for longer hours during peak periods. Therefore, labour costs vary with output. If there is no business, hourly-paid workers may not be hired at all and labour costs may be simply 0. However, it is also possible to assume that wages are fixed costs if fixed salaries are paid, regardless of output produced. For larger restaurants, there may be a fixed salary paid to staff hired on long term contracts, regardless of whether the restaurant stays open for business. If the assumptions are explained properly, the answer would be acceptable.)

In light of these multiple developments in the industry, food establishments would need to adjust their output level and price level, as they try to profit maximise. Depending on the extent of the change in AR/MR and AC/MC, food establishments will have varying level of profits.

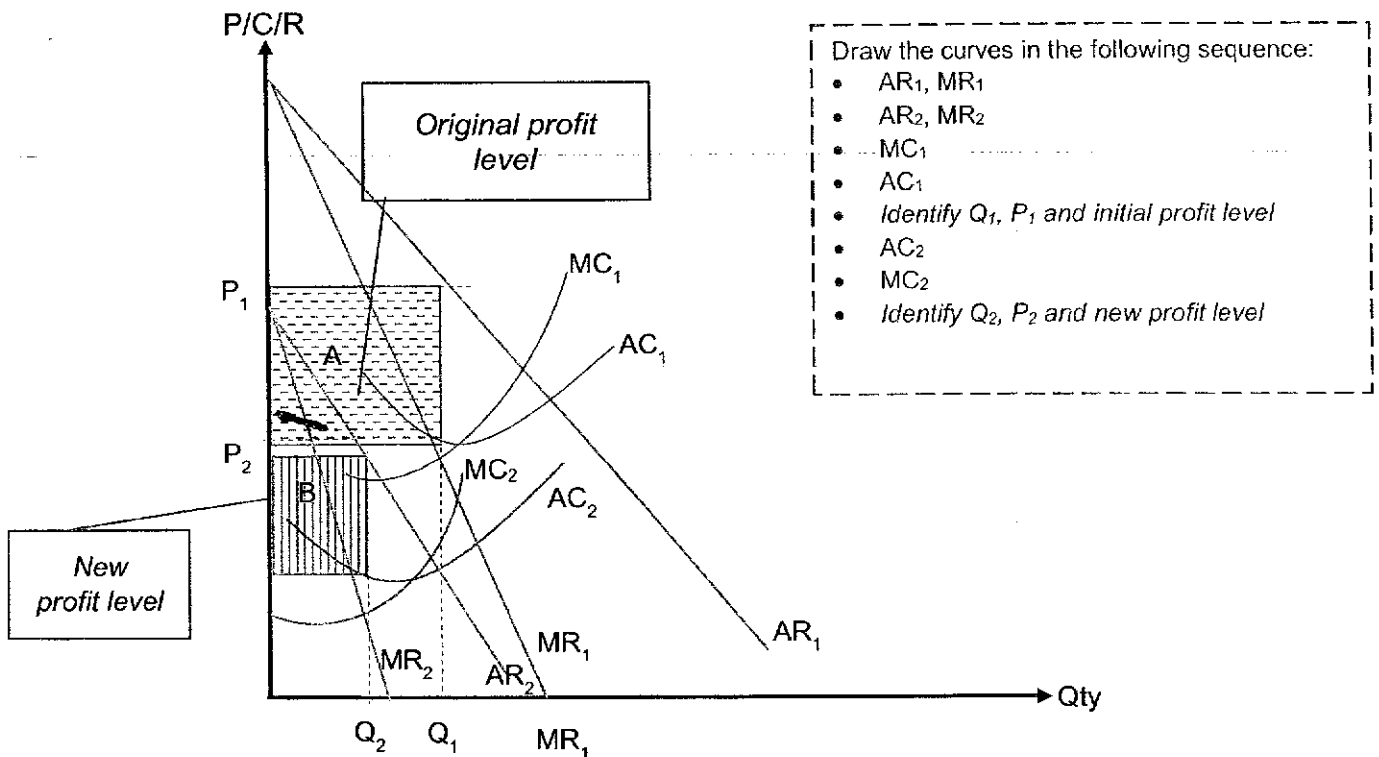
Case 1: $\downarrow AR/MR < \downarrow AC/MC$

Since firms seek to profit-maximise, they would seek to produce up to the point where $MR_1=MC_1$ and this occurs at output OQ_1 . The firm would charge an initial price of OP_1 . The level of profits made initially would be equal to area A shown below.

As shown in diagram below, there would be a decrease in both the AR & MR curve (AR_1 to AR_2 & MR_1 to MR_2) as a result of the fall in demand experienced. Additionally, given that both variable costs and fixed costs decreased due to the co-funding and rental waivers provided, the AC & MC curves would shift down (AC_1 to AC_2 & MC_1 to MC_2).

As a result, assuming that firms seek to profit-maximise, they would now produce up to the point where $MR_2=MC_2$ and this occurs at the new lower output of OQ_2 . The firm would now charge a lower price of OP_2 . The level of profits made now would be equal to area B shown below.

In this case, supernormal profit can still be earned albeit a smaller one as firms try to maximise their profits.



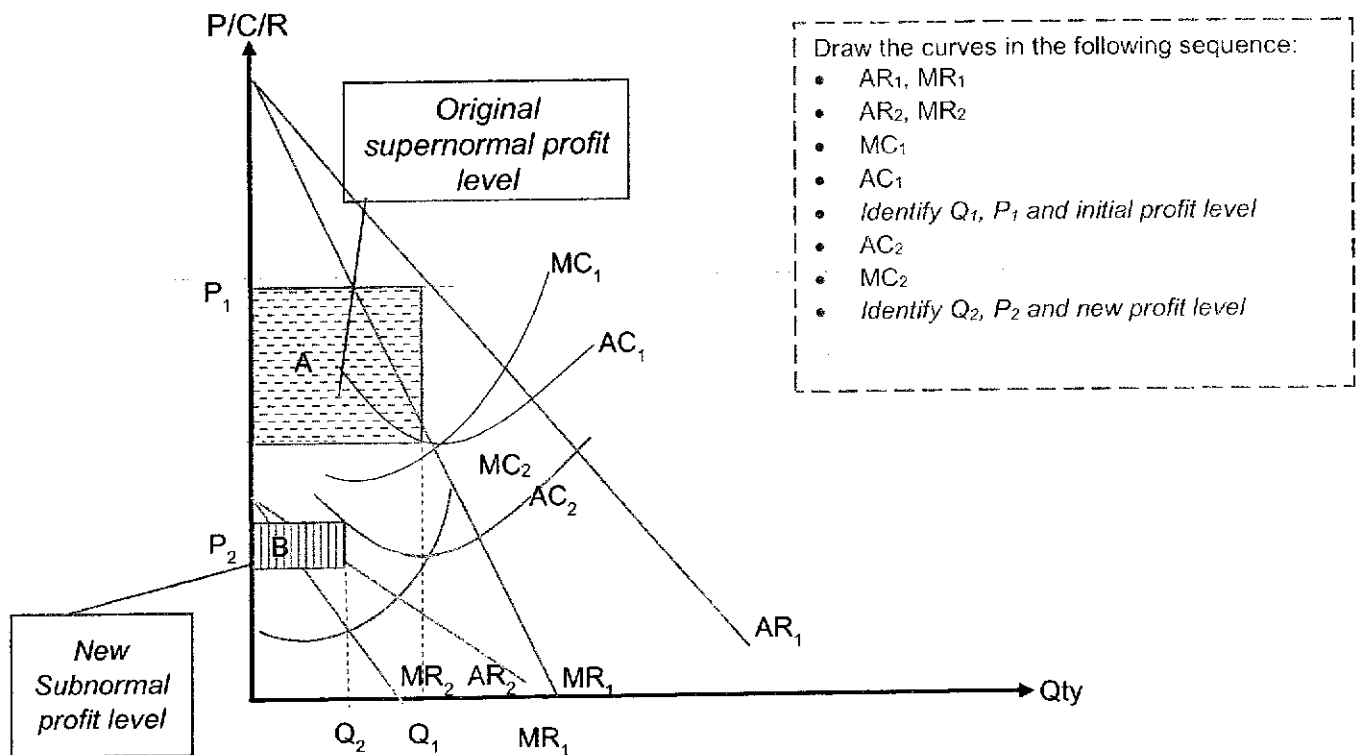
Case 2: $\downarrow AR/MR > \downarrow AC/MC$

Since firms seek to profit-maximise, they would seek to produce up to the point where $MR_1=MC_1$ and this occurs at output OQ_1 . The firm would charge an initial price of OP_1 . The level of profits made initially would be equal to area A shown below.

As shown in diagram below, there would be a decrease in both the AR & MR curve (AR_1 to AR_2 & MR_1 to MR_2) as a result of the fall in demand experienced. Additionally, given that both variable costs and fixed costs decreased due to the co-funding and rental waivers provided, the AC & MC curves would shift down (AC_1 to AC_2 & MC_1 to MC_2).

As a result, assuming that firms seek to profit-maximise, they would now produce up to the point where $MR_2=MC_2$ and this occurs at the new lower output of OQ_2 . The firm would now charge a lower price of OP_2 . As total revenue is below total cost, the firm would actually be making a level of subnormal profits which would be equal to area B shown below.

In this case, subnormal profit will be earned even as firms profit maximise



Conclusion

Profits will definitely fall. However, some firms are still able to earn normal/supernormal profit while others now earn sub-normal profit.

Level (Marks)	Knowledge, Application, Understanding, Analysis
L3 (8 – 10)	Answer shows thorough knowledge and an excellent ability to explain how the fall in AR/MR, and AC/MC would lead to a change in profits. Answer also accurately identifies relevant events to show the fall in AR/MR and AC/MC. There is accurate distinction of FC and VC given the events (i.e. identification/explanation of whether rents and wages are fixed or variable costs)
L2 (5 – 7)	Answer shows some knowledge and a good ability to explain how the fall in AR/MR, and AC/MC would lead to a change in profits. Answer identifies some relevant events to show the fall in AR/MR and AC/MC. There may not be distinction of FC and VC given the events.
L1 (1 – 4)	High L1 given to an answer that shows some knowledge of shutdown condition but explanation is severely lacking or mistakes are aplenty/irredeemable. Low L1 given to an answer which is mostly irrelevant or inaccurate.

- (b) Discuss how food establishment owners would likely respond to the above changes in profits. [15]

<p>Introduction:</p> <ul style="list-style-type: none"> - Given the various changes in profits, firms have to make decisions. - All firms are assumed to continue with the aim of maximising profit. 	
<p>Body 1: Firms could shut down in SR</p> <ul style="list-style-type: none"> - For firms earning subnormal profits, they have to make decision whether to continue business or shut down. Shut down if $AR < AVC$ in the SR. 	
<p>Body 2: Surviving Firms could undertake strategies to increase revenue (AR/MR) in LR</p> <ul style="list-style-type: none"> - Surviving firms can provide takeaway/delivery to increase their demand and thus revenue 	<p>Body 3: Surviving Firms could undertake strategies to reduce cost (AC/MC) in LR</p> <ul style="list-style-type: none"> - Firms can reduce their labour costs by reducing the number of staff e.g. wait staff or by incorporating technology - Firms can change their ingredient supplier to incur lower variable costs - Firms can offer discounts to lower price and thus increase Qd to increase revenue (assuming $PED > 1$)
<p>Conclusion:</p> <ul style="list-style-type: none"> - Effectiveness of these strategies can be limited in increasing profits 	

Introduction

Given the various changes in profits, food establishments owners have to make decisions. All firms are assumed to continue with the aim of maximising profit. In the short run, firms earning subnormal profit have to decide whether to continue business or shut down. In the long run, only firms earning at least normal profit are around. However, in response to the fall in profit, firms will have to make decisions aim to increase revenue and/or reduce cost as they try to profit maximise.

Body 1: Firms could shut down in the SR

In the event that firms are earning subnormal profit, they have to decide whether to shut down or continue business. The decision to continue or shut down depends on whether 1) $TR > TVC$ or 2) $TR < TVC$ respectively.

A firm operating in the short run incurs two types of costs – TFC and TVC by hiring fixed and variable factors of production respectively.

TR > TVC

Suppose a firm initially earns \$2000 in total revenue, incurs \$1000 as fixed costs and \$400 as variable costs. It is earning \$600 super-normal profits. Since $TR > TVC$, the firm will not shut down. It will continue its operation. This is because its loss will be even greater (i.e. \$1000, the full fixed costs) if it chooses to shut down.

TR < TVC

In another case, suppose the firm still earns \$2000 in total revenue, incurs \$1000 as fixed costs and \$2400 as variable costs, this may lead the manager to shut the firm down since $TR < TVC$. The loss of shutting down will be smaller (\$1000, the full fixed costs) than if it continues operating and incurring a subnormal profit of -\$1400 [$\$2000 - (\$1000 + \$2400) = \1400]. This shows that rise in variable costs does determine whether the firm should shut down or not.

Evaluation:

However, information on TR, TFC and TVC may not be easily available. This may make decision hard to make and result in business incurring losses for a much longer time frame than it should.

Body 2: Firms could undertake non-price strategies to increase revenue (AR/MR)

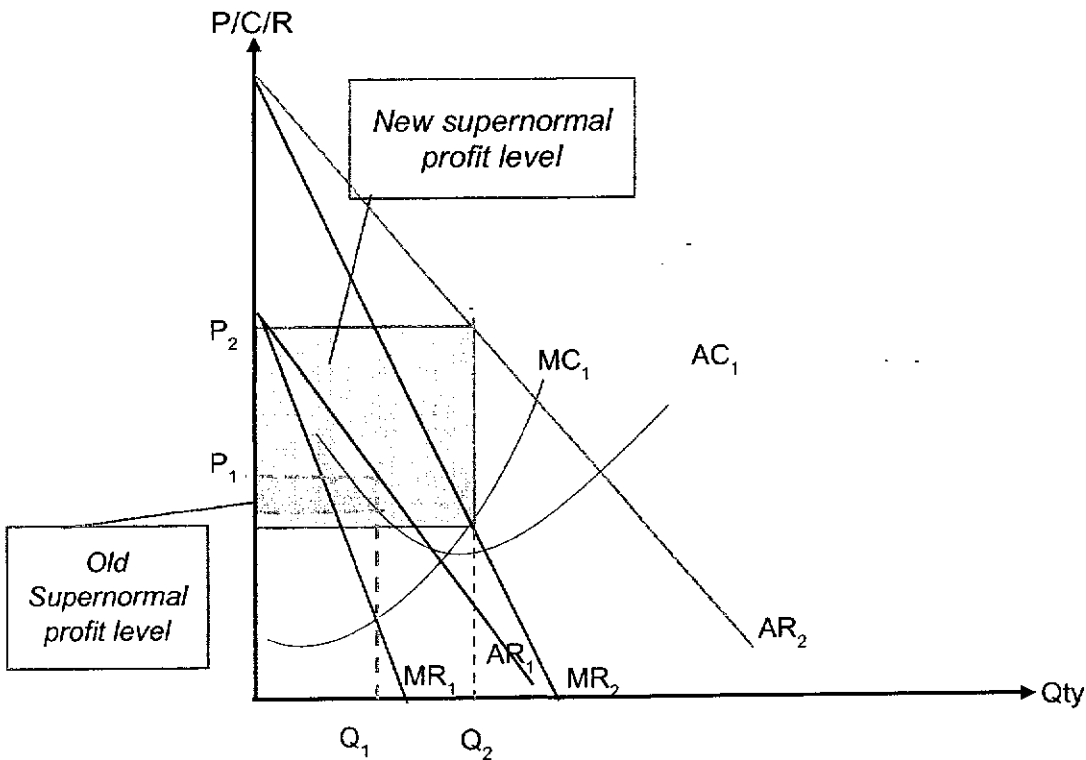
In the long run, only firms earning normal or supernormal profits will be in business. Given CB and SMM, surviving firms can turn to provide takeaway/delivery by partnering up with delivery services such as Foodpanda and Grab. For some food establishment. Doing so could even allow them to increase customer based as they expand beyond their physical shop space and hence increase their demand.

To facilitate takeaway and delivery online, many of these food establishments also invested in digital marketing to create online stores with more convenient payment mode or uses social media e.g. Instagram to reach out to bigger and newer segment of customer bases (e.g. younger customers) rather than the usual working crowd.

Other food establishments even turn to innovations in menu. E.g. some restaurants offer complimentary cakes, hand written notes, meal kits to allow customers to cook via instructions. All the strategies mentioned above aim to increase AR/MR. With reference to the diagram below, this may help the firm to turn subnormal profits to supernormal profit at the new profit maximising point. Maximising price and quantity is P2 and Q2 respectively. Profit is the blue shaded area.

Evaluation:

The ability undertake the above strategies may not be as easy as it sound. The needed entrepreneurial skills, digital skills and innovation need time to develop and may not be available for the firms at all. Moreover, these strategies may not be successful at all. With economic uncertainty, consumers may choose to prepare their own meal as they are still cheaper and significantly reduce their demand for takeaways. In this case, the firms' strategies may not be enough to increase demand at all.



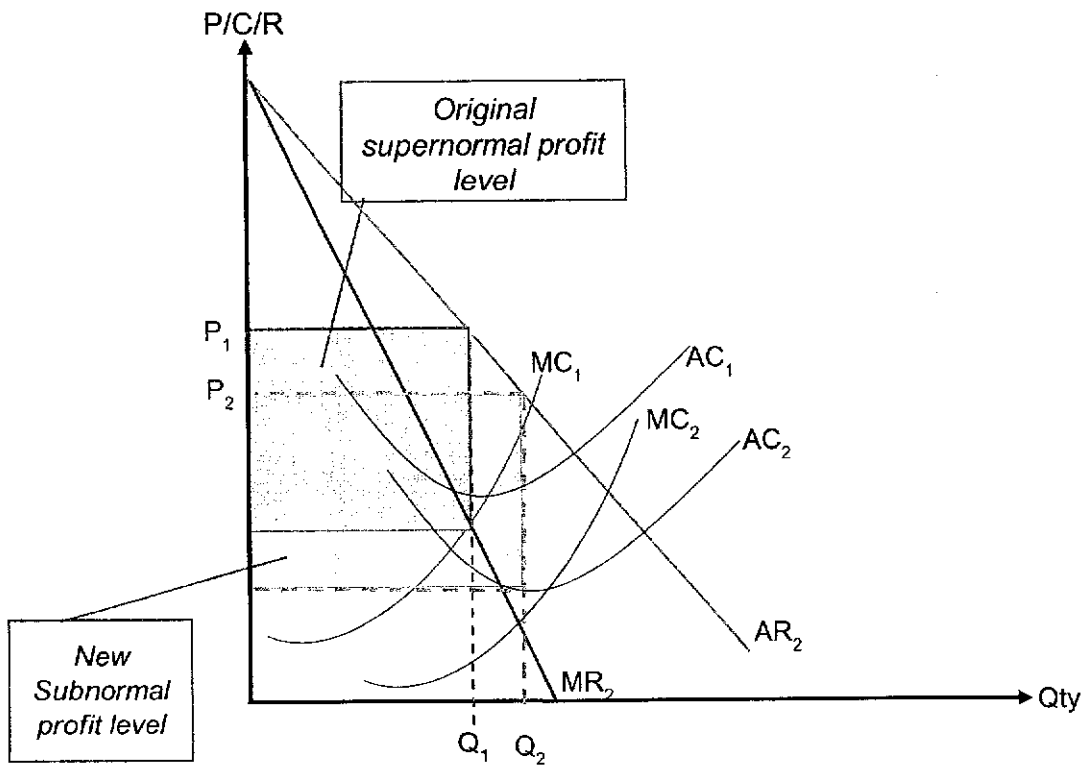
Body 3: Firms could undertake price strategies by reducing cost (AC/MC)

Besides strategies to increase revenue, firms can undertake strategies to further reduce cost in the long run. Firms can reduce their labour costs by reducing the number of staff e.g. wait staff or by incorporating technology. As firms innovate on menu suitable for CB and SMM, firms can change their ingredient supplier to incur lower costs. These should help to reduce both AC and MC in the long run.

With reference to the diagram below, at the new profit maximising point, firms can charge a lower price P_2 and increase quantity Q_2 in the form of discounts. Profit is bigger with the blue shaded area.

Evaluation:

Firms cannot reduce cost infinitely. In fact, cutting wages of labours can have other social implications like much lower standard of living and poverty experienced by labours. Hence, this is not a sustainable strategy. It is still better to look towards strategies to increase AR/MR.



Conclusion

In times of a pandemic, it may require actions by both the firms and the government. While firms can try to adopt strategies as mentioned above given their available resources, the impact of the pandemic may prove too big for firms to handle. Hence, government has to step in offer financial support such as the Job Support Scheme and rental waivers. However, these cannot go on infinitely given limited resources. Rationally, firms that cannot meet at least their TVC should shut down so that resources can be allocated to firms that are structurally stronger. For those firms that are able to carry on, the strategies they decide to tap on should seek to increase the total revenue or to lower their total costs. In considering the use of these strategies, they would need to weigh the costs and benefits of doing so and whether there are further constraints to be overcome. If there are net benefits of using the strategies, firms should proceed to do so.

Level (Marks)	Knowledge, Application, Understanding, Analysis
L3 (8 – 10)	Answer shows thorough knowledge and an excellent ability to explain both the SR and LR firms' decision in response to the different types of profit. Answer is theoretically accurate. Suitable examples were brought up to support arguments.
L2 (5 – 7)	Answer shows some knowledge and ability to explain either the SR or LR firms' decision in response to the different types of profit earned. Answer is mostly theoretically accurate but there may be undeveloped explanation of facts and theory. May lack suitable examples to back up the arguments.

L1 (1 – 4)	Answer shows little knowledge and ability to explain both the SR and LR firms' decision in response to the different types of profit earned. Answer is largely inaccurate theoretically. Meek attempts at suggesting examples to support answers. There may be basic errors in theory, in adequate explanations or contain only a few valid points. The answer could be mostly irrelevant or inaccurate.
E3 (4 – 5)	Strong conviction of the stand provided, largely based on sound economic argument/reasoning having considered the relevant situations. Best answers will contain real-life scenarios to support stand taken.
E2 (2 – 3)	Attempt at providing a simple justification of the stand and may or may not be based on economic argument/reasoning. Reasoning may be flawed or unconvincing.
E1 (1)	Merely a stand provided.

Question 3

- 3 Tobacco products have become more expensive here following a 10 per cent increase in excise duty on all tobacco products. Users are unaware of the health implications of consuming these products and unconcerned about how consuming these products will affect those around them.
- (a) Explain how the consumption of tobacco products results in market failure. [10]
- (b) Assess the effectiveness of the policies employed by the Singapore government to ensure that the market for tobacco products operates efficiently. [15]

Question Analysis

Command Word	Explain how
Concepts	Market Failure
Context	Market for tobacco products

Schematic Plan

Introduction: Using Cost and Benefit framework	
Body 1: ➤ Negative externality MEC of cigarette consumption results in divergence of MPC and MSC Overconsumption of tobacco products at the socially optimal level Welfare loss results	Body 2: ➤ Imperfect information True MPC > perceived MPC Overconsumption of tobacco products at the socially optimal level Welfare loss results
Evaluation - Summative conclusion	

Suggested Answer:**Introduction:**

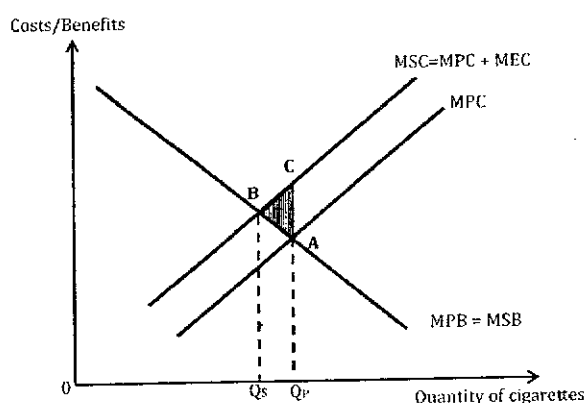
Tobacco products are deemed as demerit goods. Demerit goods are goods and services that are deemed to be socially undesirable by the government and which the government feels that will be over-consumed if left to the free market due to consumers' failure to recognize the full costs resulting from the consumption of the good.

The two sources of market failure in tobacco products are negative externalities and imperfect information.

Body 1:

Left to the free market, the lack of consideration of negative externalities by tobacco consumers would lead to overconsumption and hence overallocation of resources leading to DWL. When consumers consume tobacco products such as cigarettes, they might generate negative externalities. For example, second hand smoke from cigarettes may cause 3rd party to suffer from respiratory problems and incur medical cost. Since the marginal social cost (MSC) is a summation of marginal private cost (MPC) and marginal external cost (MEC), the

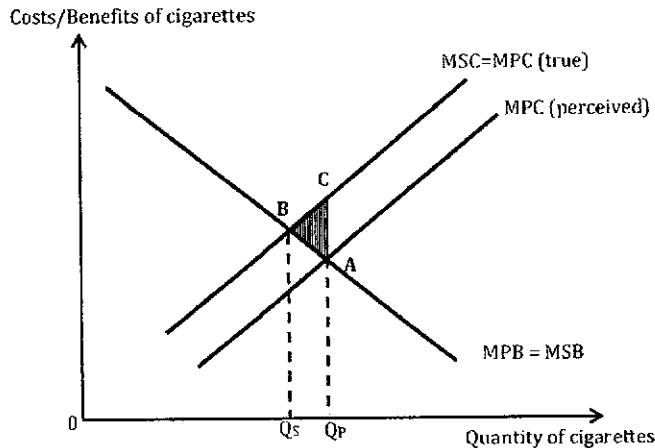
MSC incurred from consuming tobacco products exceeds the MPC at every quantity, causing MSC to diverge from MPC. Example of MPB would be the additional relieve of stress and the additional sense of pleasure to curb nicotine addiction as the smokers lit up an additional pack of cigarettes. On the other hand, an example of MPC would be the additional cost that the consumer has to pay for an additional cigarette pack which is equivalent to the price of cigarette pack. If there is no government intervention in the market for tobacco products, consumers of cigarettes who look into their self-interest by maximising their own utility/satisfaction would consume the amount of Q_P where $MPB = MPC$. However, the socially optimum output is deemed to be Q_S where $MSB = MSC$. Since actual market output Q_P is greater than Q_S , there is an over-consumption of $Q_S Q_P$, leading to overallocation of resources to the market of tobacco products. Due to overallocation of resources, the amount of cigarettes over-consumed, $Q_S Q_P$, generates a social cost of $Q_S B C Q_P$ which exceeds its social benefits of $Q_S B A Q_P$, resulting in a deadweight loss of area ABC for the society.



Body 2:

Left to the free market, the lack of awareness of the true cost of consuming tobacco products would lead to overconsumption and hence overallocation of resources leading to DWL. This is because due to imperfect information, the smokers would not be able to understand or appreciate the full extent of the ill effects on their own health that can result from the consumption of tobacco products. Many of the myopic smokers without much information of harmful substance nicotine may have perceived lower health risks. Hence the perceived MPC is lower than the true MPC.

If there is no government intervention in the consumption of tobacco products e.g. cigarettes, consumers will consume at Q_P (where $MPB =$ perceived MPC) as they would only look into their own self-interest by maximising their own utility. However, the socially optimum quantity is Q_S where $MSB = MSC$. The quantity over-consumed, $Q_S Q_P$, would have generated a social cost of $Q_S B C Q_P$, which exceeds its social benefit of $Q_S B A Q_P$. Thus consuming Q_P instead of Q_S results in a deadweight loss of area ABC for the society due to overconsumption and overallocation of resources to the market of tobacco products. When dealing with the information failure in this market, government often implement educational campaigns to educate the public on the consequences of cigarette consumption.

**Mark Scheme:**

Level	Knowledge, Understanding, Application and Analysis
L3 (8 – 10)	Thorough knowledge of demerit goods with well-drawn and well-explained diagrams showing how the consumption of tobacco products result in market failure. Application to the context of the market for tobacco products with good examples. Clear analytic explanation of both causes of market failure.
L2 (5 – 7)	Lack of application or incorrectly used diagrams to show how the consumption of tobacco products result in market failure. Lack application to the context of the market for tobacco products with a lack of examples. Undeveloped explanation of both causes of market failure.
L1 (1 – 4)	Unable to use appropriate economic theory OR Descriptive answer lacking in economic tools of analysis.

(b) Assess the effectiveness of the policies employed by the Singapore government to ensure that the market for tobacco products operates efficiently.[15].

Question Analysis

Command Word	Evaluate
Concepts	Policies to address market failure
Context	Market for tobacco products

Schematic Plan

Introduction: Define and explain the different forms of government intervention E.g. Taxes, ban, public education Explain how these GI help to achieve AE
Body 1: Policies that govt adopted with evaluation of each policy <ul style="list-style-type: none"> • Tax • Ban • Education • Regulation.
Evaluation

Overall effectiveness

Suggested Answer:**Introduction:**

Define and explain the different forms of government intervention

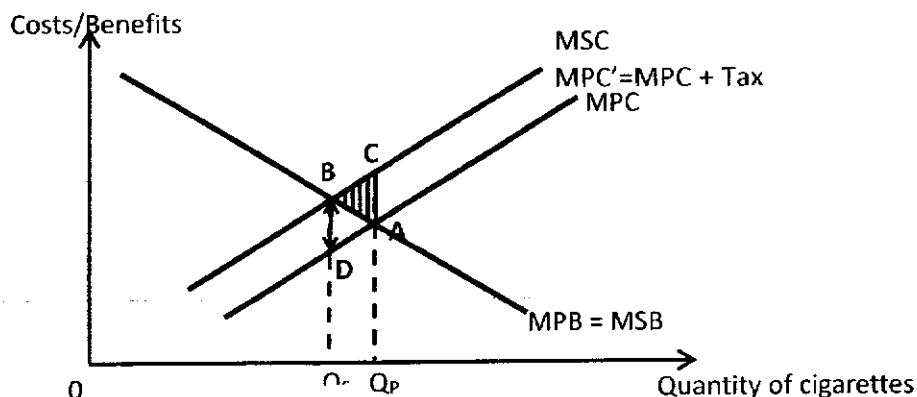
E.g. Taxes, ban, public education

Explain how these GI help to achieve AE

Development:**Body:**

i. Taxes

- Used to **internalise external cost**
- Shift **MPC left to coincide MSC or move closer to MSC**
- Assumption: **tax=MEC at 0Qs**, Government has correct information about the amount of MEC
- Reduce overconsumption to 0Qs where **MPB=MPC +tax which is equivalent to MSC=MSB**

**Disadvantages**

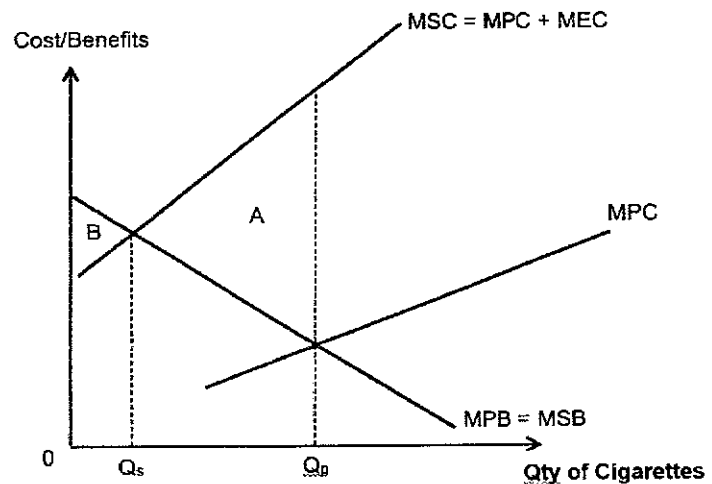
It is hard to ascertain the amount of MEC to determine the right amount of tax. Whether the government is able to gather information to formulate policy is also dependent on government's data collection mechanism or budget available.

Furthermore, tobacco products are addictive in nature. Demand is price inelastic. Hence, the fall in quantity demanded is less than proportionate to the increase in price.

Over the years, the tax on tobacco products have been revised. Revenue earned from tobacco tax can be used to fund other social projects including anti- smoking education/campaigns.

ii. Ban of e-cigarettes / smoke free zones

- Used to **reduce consumption to zero** in some cases, e.g. prohibition of smoking in hospitals and schools
 - The latest policy is to prohibit smoking in all public areas within Orchard Road
- Ban on **e-cigarettes, vaporisers and shisha**
- **Consumption will not be reduce to zero amount of output instead of the actual amount of output 0Qp where MPB=MPC**
- **Ban will only be justified when the result is a lower DWL than before the ban.** This means that there is significant marginal external cost due to the consumption of tobacco products in these cases.



Disadvantages

Effectiveness of ban depends on whether government is able to enforce the ban and have resources to monitor well

In Singapore, government has the resources (or budget) to fund the high monitoring costs. People caught violating the ban are fined. This makes the policy a credible one.

iii. Public education

- Graphic images/warnings on the danger of smoking are required to be displayed on cigarette packs
- Smoking cessation counselling is offered in schools to counsel students in secondary, colleges and polytechnic.
- Public education is appropriate to correct information failure for consumers who are unaware of the health problems caused by consumption of tobacco products. This should bring $MPC_{\text{perceived}}$ closer to MPC_{true}
- Reduce overconsumption to $0Q_s$ where $MPB = MPC_{\text{true}}$

Disadvantages

Effectiveness of education/campaign is dependent on the receptiveness of consumers to government movements. Some people continue to consume tobacco products despite knowing the information. The decision to smoke may not be based entirely on MPB and MPC rationally. Decision to continue smoking may be driven by social pressure i.e. the desire to feel being part of an important group.

iv. Regulation

- Raising minimum age for the purchase, use, possession of tobacco products from 19 to 21 on Jan 2021
- Acts like a quota where the consumption is limited to $0Q_s$ where $MSB = MSC$

Disadvantages

Like ban, the effectiveness depends on whether government is able to enforce the ban and have resources to monitor well. It often proves easy to side step this regulation as tobacco products can still be resold to those below the minimum age.

Conclusion

- Make a stand → All policies are effective but taxes and total ban/regulation are more effective in short run while public education is more effective in the long run. Therefore,

Singapore government should complement policies to effectively ensure market for tobacco products to operate efficiently.

- Justification → The disadvantage of public education which takes a long time to take effect could be overcome by short term policy such as taxes/total ban.
- Justification → However, shorter term policy such as taxes/total ban are not sustainable as it requires a lot of resources to monitor and hence to overcome this disadvantages, a more sustainable policy would be public education which solve the root cause of problem.
- Exemplify to contextualise to **Sg context**:
 - Singapore being a country which has a rigorous education system, the time needed to help educate the youngsters to prevent onset of smoking is shorter as compared to other countries.
 - Furthermore, in the short run, in Singapore where income level of consumers are rising, price of each cigarette packs might only constitute a smaller proportion of income spent on smoking and hence even if there is tax, PED for tobacco products is less than one. Hence, taxation may not be as effective as total ban or regulation on the legal age for smoking.

OR

There is no one best policy to ensure that the market for tobacco products operate more efficiently.

Tobacco products are still deemed as demerit goods and the issue of overconsumption still persists despite the abovementioned policies. Hence, it proves difficult to achieve allocative efficiency in the market for tobacco product. Nonetheless, with the abovementioned policies, the Singapore government should be able to improve the outcome of the market for tobacco products.

Notwithstanding so, the government still needs to constantly review its policies. This is especially given emergent new tobacco products such as e-cigarettes and vaporisers, which are position to be trendier and healthier. In fact, Singapore government has been adaptive to changes in the tobacco product market. Singapore has been reviewing and updating its policies on tobacco products.

Mark Scheme:

Level	Knowledge, Understanding, Application and Analysis
L3 (8 – 10)	Answer shows in depth knowledge of at least 3 distinctively different policies to achieve allocative efficiency in the market for tobacco products. Each policy is well- evaluated, supported by sound economic analysis.
L2 (5 – 7)	Answer shows some knowledge of at least 2 distinctively different policies to achieve allocative efficiency in the market for tobacco products. There may be some attempt to evaluate the policies to show balanced arguments which are supported by sound economic analysis. Answer may be undeveloped.
L1 (1 – 4)	Descriptive answers lacking in tools of analysis.
Evaluation	
E3 (4 – 5)	Critically evaluates the various policies to achieve allocative efficiency in the market for tobacco products Synthesises economic arguments to arrive at well-reasoned judgements on the effectiveness of policies.

E2 (2 - 3)	Some attempt at evaluation or a summative conclusion. Relevant to the question but judgements may not focus on the effectiveness of policies.
E1 (1)	Unsupported evaluative statement(s) or judgements. One that lacks explanation.

4 In Singapore, the overall prices of goods and services are rising at a modest pace over the last five years. The nominal monthly income among households here rose from S\$8,846 in 2016 to S\$9,023 in 2017.

(a) Explain how increases in the prices of goods and services as well as increases in household income will affect standard of living. [10]

(b) Discuss the extent to which Singapore's economic performance depends on maintaining a low and stable inflation rate. [15]

a)

Question Analysis

Command Word	Explain how
Concepts	Increase in general price level and income – impacts
Context	Nil

Schematic Plan

Introduction: Explain the meaning of price increases and income increase Explain and define SOL			
Body 1: Explain if $GPL \uparrow <$ Income \uparrow Real income rises Material SOL rises	Body 2: Explain if $GPL \uparrow >$ Income \uparrow Real income falls Mat SOL falls	Body 3: Explain how inflation may have redistributive effects and hence SOL may be affected differently for different groups of people	Body 4: Explain impact on non-material SOL
Conclusion			

Introduction

Standard of living (SOL) refers to the well-being of an average person in the country and generally refers to the material and non-material aspects of life. Material aspect of life is concerned with the access to and quantity of goods and services. Non-material aspect of life is concerned with the quality of goods and services.

Increase in general price level (GPL) of goods and service suggests that consumers will have to increase their expenditure, given a fixed amount of income, to maintain a certain level of SOL. An increase in real income rather than nominal income, may suggest that purchasing power increases and may be able to purchase a greater quantity of goods and services.

Body 1: Real income rise if nominal income rise faster than inflation → higher mat SOL

The increase in income is in nominal terms. Whether material SOL increases or falls depends on the rates of increase between nominal income and GPL (i.e. inflation rate) since:

Rate of change (%) in real income = Rate of change (%) in nominal income – Inflation rate (%)

In the event where nominal income rises faster than GPL, there will still be an increase in real income.

If nominal income increases by 2% while inflation rate increases by 0.5%, there is still a 1.5% increase in real income. This suggests that there is an increase in purchasing power to buy more quantity and higher quality of goods and services. Hence there will be an increase in material SOL.

Body 2: Real income fall if income rise slower than inflation → lower mat SOL

On the other hand when where nominal income rises slower than GPL, there will still be a decrease in real income. If nominal income increases by 2% while inflation rate increases by 3 %, there is 1% decrease in real income. This suggests that there is a decrease in purchasing power. Lower quantity of goods and services can be bought. Households may even opt for inferior goods. Hence there may be a decrease in material and non-material SOL.

Body 3: Inflation redistributes income from one group to another → higher/lower mat SOL

Inflation also redistributes income and make some households better off and others worse off.

• **Variable income earners and fixed income earners**

Variable income earners such as real estate agents will see their incomes rise in pace with inflation and therefore their real incomes will be relatively stable. Real income will not be eroded by inflation at all. They will thus be able to maintain their SOL, particularly material SOL

Households with fixed income or those who do not see their income increase in pace with unanticipated inflation (e.g. on fixed wage contracts), will be the ones to experience a fall in material SOL. This will be especially the case when these households are living near poverty.

• **Savers/ Lenders vs. Borrowers**

Some households are savers while others are borrowers. Savers tend to lose out as they see the real value of their savings gets eroded by inflation. Furthermore, assuming no change in nominal interest rate, the real interest they receive from their savings will fall in value, savers' material SOL may fall.

On the other hand, assuming no change in nominal interest rate (e.g. mortgage rates), borrowers may experience a fall in value of the real interest that they pay given the inflation. This will allow them to use their remaining of the real income on goods and services. This could help to mitigate any fall in material SOL.

Anticipated inflation

However, if consumers anticipate the rise in goods and services, they may bring forward their purchases of some goods and services, regardless of whether increase in income is faster or slower. Doing so, they will be able maintain their material SOL. For example, households may choose to bring forward their purchase of electrical appliances and renovation work in anticipation of higher prices. Hence their material and non-material SOL may not be negatively affected if they are able to make such adjustments to their consumption.

Body 4: Impact on non-material SOL → lower non-material SOL

If Inflation occurs and households are unable to respond quickly or their purchasing power are lower, they will be worse off as a result. This may also result in lower non-material SOL as households may experience anxiety over their higher cost of living and their inability to consume some goods and services. They may also face uncertainty if they are unsure whether they will be able to continue to afford these goods and services.

Conclusion

Changes in households' material SOL is hardly conclusive in general when the rise in GPL is faster than the rise in nominal income. If rise in GPL is much slower than the rise in nominal income, then SOL can improve instead. Hence it is important to keep rise in GPL as low as possible. Furthermore, there is no information about the non-material SOL and hence the impact on SOL cannot be deduced from the limited information.

Marking scheme

Level	Knowledge, Understanding, Application and Analysis
L3 (8 – 10)	Thorough knowledge of the relationship between inflation (%), nominal income change (%), and real income change (%). Answer shows at least 2 scenarios i.e. SOL can both increase <u>and</u> decrease with examples.
L2 (5 – 7)	Some knowledge of the relationship between inflation (%), nominal income change (%), and real income change (%). Answer shows one-sided view that SOL can either increase or decrease with examples. Answer may not have recognised redistributive effects of inflation.
L1 (1 – 4)	Unable to identify theory or done without explanation. Descriptive answers lacking in tools of analysis.

b) Discuss the extent to which Singapore's economic performance depends on maintaining a low and stable inflation rate. [15]

Question Analysis

Command Word	Discuss the extent
Concepts	Low and stable inflation rate impacts economic performance
Context	Singapore

Schematic Plan

<p>Body 1: Thesis</p> <ul style="list-style-type: none"> ➤ Low inflation can help boost export competitiveness and investments (less uncertainty) ➤ Result in increased X and I, improve BOT ➤ Result in actual and potential growth, lower unemployment 	<p>Body 2: Anti-Thesis</p> <ul style="list-style-type: none"> ➤ Other factors can also boost economic performance <ul style="list-style-type: none"> ➤ Government policies (e.g. fiscal policy and supply side policy) ➤ Productivity levels ➤ Free trade agreements (optional)
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Introduction

Define economic performance:

Measurement of performance is done with reference to how well the indicators match up to the ideal targets or whether macroeconomic objectives are achieved.

Macroeconomic objectives include Sustainable Economic Growth, Price Stability or Low Inflation Rate, Full Employment of Resources and Favourable Position on Balance of Trade.

Body 1: Thesis:

To a large extent, Singapore's economic performance depends on maintaining a low and stable inflation rate As a small and open economy, these are especially important to Singapore due to its high reliance on FDI as well as external demand for our exports as the main drivers of our economic growth

- Increased economic certainty - helps to estimate the real return of potential projects more accurately so as to make informed choices with regards to investment. Thus with a low and stable rate, firms are encouraged to increase investment.
- May help keep COP low which would enhance a country's export competitiveness, boost exports & FDI, thereby **strengthening its BOT**.
- Thus, this can stimulate AD via increased X & FDI, increasing NY via multiplier effect
- Resulting in both **actual & potential growth, higher employment & rising material SOL**.

Thus, a low and stable inflation rate helps Singapore to achieve all its macroeconomic goals.

Body 2:

However, a low and stable inflation rate might not always help Singapore to achieve all its macroeconomic goals.

Hence, to a small extent, Singapore's economic performance depends on maintaining a low and stable inflation rate because Singapore's economic performance depends on other factors.

- In times of slow economic growth due to weak external performance given weak global performance (e.g in times of a pandemic), discretionary policies are needed to boost economic performance besides a low and stable inflation. E.g. the use of expansionary fiscal policy to increase AD and national income via multiplier effect. This helps to maintain actual economic growth.

- Changing conditions such as aging population with stagnating productivity, climate change, as well as hostile trade/political tensions can hinder Singapore's economic performance. Ensuring low and stable inflation is not a targeted solution to these problems. Other policies are also needed. E.g.
 - Supply side policies can also help to increase skills training for workers so that senior workers can prolong their productive years. This will also help to improve the quality of the labour force and increase LRAS (i.e. productive capacity) and achieve potential economic growth; ensuring sustained growth.
 - Given that climate change slows economic growth as resources are depleted, it is imperative for government and firms to focus on sustainable growth via cleaner and greener means rather than cheaper but dirtier old methods of production. Investment in cleaner technology will increase actual growth in the short run and increase LRAS (i.e. productive capacity) in the long run. Ultimately, this will create sustainable growth.
 - Despite competitive exports, hostile trade environment (e.g. protectionism) will not allow Singapore to enjoy high demand for its exports and trade surplus (X-M). Singapore needs to maintain political goodwill. By signing free trade agreements, they will Singapore to maintain positive growth in trade. As Singapore trades based on its comparative advantage, exports revenue can continue to grow. Trade surplus can be enjoyed. This results in AD and NY via multiplier effect. This results in actual economic growth

Evaluative Judgment:

Regardless, Singapore is a small country and will always be dependent on trade and FDI. Therefore, to a large extent, low inflation is very important for Singapore. This is because a low and stable inflation helps to boost export competitiveness. Exports are also a big component of our GDP, be it manufacturing or services sectors. Singapore's exports are about 2 times of its GDP (172.1% in 2016, World Bank). Investments are also dependent heavily on low and stable inflation as firms will increase spending on capital goods if there is a more positive economic outlook brought about by price stability. Hence, a low and stable inflation rate is critical for Singapore to achieve a healthy BOT and economic growth which would also result in low unemployment. This means that for Singapore, any changes in its inflation rate will have significant impact on its economy.

Alternative

Singapore's economic performance also depends on many other factors, not just export price competitiveness via a low and stable inflation. Therefore, Singapore's economic performance depends only to a small extent on maintaining a low and stable inflation rate. For instance, while Singapore's exports can be very competitive, Singapore needs to ensure that external trade environment remains positive. Quality of its exports can fall as a result of an aging and low productivity workforce. Hence, government's supply side policies, particularly by providing grants to firms to do R&D as well as skills training of its workers are important too. These policies can also help to improve the economic situation, increase Investments and Exports, and hence help to achieve good economic performance. Furthermore, in uncertain times such as during a worldwide pandemic, there could be supply chain disruptions which would hurt trade and Singapore's exports. All of these have significant impact on Singapore's economy and could result in Singapore not achieving its macroeconomic goals of healthy BOT, low unemployment and sustainable economic growth, despite maintaining a low rate of inflation.

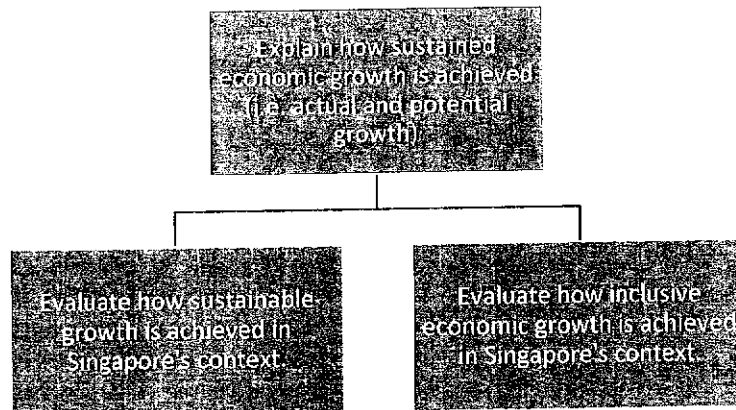
Mark Scheme:

Level	Knowledge, Understanding, Application and Analysis
L3 (8 – 10)	Answer shows in depth knowledge of the extent to which Singapore's economic performance depends on maintaining a low and stable inflation rate, i.e. lower and stable inflation rate can boost Singapore's economic performance and other factors can also boost Singapore's economic performance.
L2 (5 – 7)	Answer shows some knowledge of the extent to which Singapore's economic performance depends on maintaining a low and stable inflation rate, i.e. lower and stable inflation rate can boost Singapore's economic performance and other factors can also boost Singapore's economic performance. Or One-sided answer.
L1 (1 – 4)	Descriptive answers lacking in tools of analysis.
Evaluation	
E3 (4 – 5)	Critically evaluates the importance of low and stable inflation that is supported by sound economic analysis.
E2 (2 – 3)	Evaluates the importance of low and stable inflation that may not be supported by sound economic analysis.
E1 (1)	Unsupported evaluative statement(s) or judgements. One that lacks explanation.

- 5 The top priority for many countries is to reinvigorate their economies, but the quality of that growth is vital. To improve lives and well-being in the short-term, growth needs to be inclusive, with benefits felt by the whole population.

Discuss the effectiveness of the current policies that Singapore has adopted to achieve inclusive and sustainable growth. [25]

Schematic plan:



Intro

- Define inclusive and sustainable growth
- Briefly explain how Singapore uses a variety of policies e.g. expansionary fiscal policy and supply-side policy to achieve actual and potential economic growth.
- The attainment of both actual and potential growth is essential to achieve sustainable and inclusive economic growth.

Body

Sustained growth

- Explain and evaluate how Singapore uses demand management policies to achieve **actual and potential growth**
 - Expansionary FP to deal with current recession brought about by pandemic
 - Exchange rate policy (modest and gradual appreciation in usual times, depreciation in a recession)
 - Supply side policy
 - o Jobs Support Scheme
 - o SkillsFuture/ tightening influx of migrant workers/digitalisation/ raise female labour participation rate/raise retirement age and birth rate

Sustainable growth

- Explain and evaluate policies that Singapore uses to achieve sustainable growth
 - Environmental policies such as carbon tax/ building of dykes/using cleaner energy sources /adopting energy efficient process → reduce environmental degradation

Inclusive growth

- Explain and evaluate policies that Singapore uses to achieve inclusive growth
 - Progressive wage system → Raise labour productivity amongst low-wage sector
 - Workfare income supplement scheme, Silver support scheme → transfer payments for the lower-income group, needy retirees
 - Providing access to essential services such as education, healthcare and housing via subsidies and other assistance

Conclusion/ Evaluation

- Judgment
- Criteria for judgment, with substantiation

Introduction: Define inclusive and sustainable growth

Inclusive growth is a sustained rate of economic growth that creates opportunity for all segments of the population and distributes the benefits of increased prosperity, both in monetary and non-monetary terms fairly across society. Sustainable economic growth refers to a sustained rate of growth that can be achieved without causing other significant economic problems, such as depleted resources and environmental problems, high inflationary pressure or debt burden for future generations.

In recent years, the issues of rising income inequality and climate change inevitably make the pursuit of inclusive and sustainable growth respectively more important. Singapore has adopted, in addition to fiscal and supply-side policies that achieve actual and potential growth, various policies such as progressive wage system, SkillsFuture, grow digital schemes and environmental initiatives such as carbon tax and energy efficiency processes to achieve inclusive and sustainable growth.

Body

Sustained economic growth is fundamental to achieving both inclusive and sustainable growth. To achieve both inclusive and sustainable growth, Singapore must ensure sustained growth first. i.e the attainment of both actual and potential economic growth over a period of time.

Actual Growth

A key policy for Singapore to achieve sustained economic growth has been **fiscal policy that focuses on capital accumulation**. Government spends on infrastructure e.g. facilities that provide essential services such as water desalination, defence and public transport. This will increase government expenditure (G). With the current recession Singapore is experiencing, the government has implemented expansionary FP. For example, **Singapore Rediscover vouchers** were distributed to residents to encourage them to spend on tourist attractions. This results in an increase in Consumption. The increase in G and C in turn increases Aggregate Demand (AD).

Singapore also manages monetary policy through the exchange rate, with the primary objective of ensuring price stability as a sound basis for sustainable economic growth. Through a modest and gradual appreciation, the price of imports are kept low to prevent cost-push inflation. With price stability, there is greater investor confidence which helps to increase I and AD. The current policy stance is **zero appreciation**. This has resulted in a slight depreciation of the SGD against some currencies. As price of exports falls in foreign currencies and price of imports rises in SGD, assuming Marshall Lerner condition holds, there is an increase in (X-M). This also helps to boost AD.

Assuming these efforts are successful and can offset the fall in AD brought about by the current pandemic, real national income will increase by a multiplier effect, and **actual economic growth** is attained in the short run.

To help save jobs in the recession, the government has also implemented the **Jobs Support Scheme** where wage subsidies are provided to firms. This has helped to reduce the costs of production for firms, thereby increasing SRAS. This helps to dampen the fall in NY brought about by the significant fall in AD due to the pandemic.

Potential Growth

The increase in G on infrastructure as well as the increase in I can also lead to an **increase in productive capacity** in the long run. Potential growth is achieved as the long run Aggregate Supply (LRAS) increases. Besides fiscal policy, Singapore has always been using targeted **supply-side policies** to increase AS. Supply side policies can reduce unit cost of production in the short run, and raise productivity as well as productive capacity in the long run. The result is the attainment of actual economic growth in the short run and potential economic growth in the long run respectively.

Having a small population implies Singapore has a tight labour supply. Hence to ensure sustainable economic growth without high inflationary pressure due to high wages, Singapore adopts policies centred on **raising overall labour productivity and adoption of capital and technology** in production. **SkillsFuture** is one of the key policies in ensuring a skilled and relevant workforce. SkillsFuture provides the resources and information for all Singaporeans develop new skills, continue their education and training so that they can improve their skills and incomes throughout their careers. With higher productivity, workers will see increase in wages that commensurate with their productivity.

However SkillsFuture may not be effective in getting lower-skilled workers to upskill. It can be difficult to change the mind-set of workers and encourage them to go for retraining. It is also difficult to forecast the future economic needs and hence come up with appropriate and relevant courses.

In the rapid adoption of technology and digitalisation, the government may also find it difficult to control the income divide as producers or high income earners experiences higher rates of income growth compared to the lower-income group. With the adoption of better technology, there is also the issue of structural unemployment that affects the lower-skilled workers more, worsening inclusive economic growth.

Sustainable growth

To mitigate the effects of global warming threatening the sustainability of Singapore, Singapore embarked on a few environmental initiatives. For example, the Singapore government has been focusing various infrastructure investments to ensure sustainable growth such as building of dykes to strength the coastlines of Singapore from rising sea levels. Another new environmental initiative is the use of carbon tax.

The Singapore government imposed a **carbon tax** of S\$5 per tonne of greenhouse gas emissions will from 2019 as a tool to reduce carbon emissions. A carbon tax has been progressively accepted as a transparent and accountable way of making polluters internalise the external cost of the negative externalities of producing energy, and collecting revenue from the large emitters of harmful greenhouse gases (GHG). The tax revenue collected from this scheme will be specifically to support further green initiatives for the industry. A cleaner, more sustainable Singapore also attracts more investment, increasing AD and actual economic growth. Thus this helped Singapore achieve sustainable economic growth.

Furthermore Singapore being a leader in environmental innovation such as carbons trading electronic platform, NEWater and energy efficient processes and buildings could export these technology breakthroughs thus increasing productivity and reducing unit cost of production thus increase SRAS. It also increases productive capacity by improving both quantity and quality of factors of production, increasing LRAS and achieving potential economic growth.

However carbon tax will add to the cost of production and the burden will fall on both producers and consumers. Environmentalists may see the landing price point of \$5 as marginal compared to the prices set in other countries such as Sweden and Norway, where rates go as high as S\$186 per tonne of emissions. The small amount of tax might not incentives heavy polluters from adopting cleaner sources of energy or technology hence it might now be effective in bring down the amount of greenhouse gases significantly.

Inclusive growth

Singapore has always worked towards inclusive economic growth by ensuring the affordability and an adequate supply of basic housing, healthcare and education to ensure equal opportunities for all. Targeted subsidies are also given to **provide a more equal access to essential services to ensure more productive employment opportunities for the lower income group**, achieving more inclusive economic growth. The government also provide

more merit goods such as basic housing and primary education to provide more security and quality of life for the lower-income group that might not have benefited much from economic growth.

Complimenting government's provision of essential goods and services to the lower income group, the progressive tax system where higher-income individuals are taxed at a higher tax rate while lower-income individuals are taxed at a lower tax rate also helps to reduce the income gap.

In recent years, the Singapore government has widened its support for a wider group of lower income people, particularly the seniors in view of the aging population. The following are some policies:

- Workfare income supplement scheme/ Silver support scheme/ Pioneer /Merdeka generation can help achieve more inclusive growth

The workfare income supplement (WIS) scheme **supplement the incomes and CPF savings of lower-wage Singaporean workers**, as well as to encourage them to work regularly. WIS is targeted at workers whose earnings are in the bottom 20%, with some support for those slightly above. The continual employment will lead to more inclusive economic growth as more individuals stay employed and financially independent, reducing burden on government support.

The Silver Support (SS) Scheme is part of a wider suite of schemes (e.g. healthcare subsidies, GST voucher) that the Government has put in place in recent years to give seniors greater assurance in retirement. It provides a quarterly cash supplement to seniors who had low incomes during their working years and now have less in retirement.

A key limitation of the above policies would be the burden on the government budget in funding these policies. As raising corporate tax will make it less attractive for domestic investments and foreign direct investment and further hampered economic growth and job creation, the Singapore government has to resort to increasing goods and services tax which is a regressive tax to ensure sustainable economic growth. However tax rebates, GST offset credits to lower income group were implemented to reduce the impact to ensure overall inclusive growth.

- Progressive wage model can help achieve more inclusive growth

Singapore implemented Progressive Wage Model (PWM), which aims to lift workers' wages as they upgrade their skills and improve productivity. There is clear career progression and pay scale which helped motivate workers to undergo training and receive higher wages. It is mandatory for the cleaning, security and landscape industries and is likely to expand to more sectors. Schemes such as the progressive wage system implemented across more industries will reduce occupational immobility of the workers especially those in lower-skilled manufacturing and service industries. Low wage workers, after training on the job can now take up jobs in the same or other sectors where wages are higher. Therefore, attending retraining courses will also help low-wage workers receive higher income in future, achieving inclusive growth. Progressive wage model is also advantageous as any wage increase is driven by productivity and is hence sustainable and will not lead to wage-push inflation.

However there are limitations to the PWM as it is not easy to apply to industries that are bigger and more diverse such as the food and beverages industry. Making PWM mandatory will require various sector agencies to work together to ensure the model's scalability across the industry, and these take time to be developed and applied. Businesses also need time to adjust human resource practices and for existing contracts of outsourced services to be completed so that new contracts take on the new manpower costs.

Evaluation/Conclusion

In conclusion, Singapore has adopted a wide range of new policies to bring about inclusive and sustainable economic growth.

However to achieve an inclusive economy that is sustainable as well, Singapore has to strike a balance and may be required to prioritise other macroeconomic objectives from time to time depending on the circumstances facing the economy.

For example, during a recession such as one caused by the covid-19, it might be more necessary to provide more support to severely-hit firms and individuals to ensure survival and better chance of recovery than to ensure more equity.

In another example, the Singapore government might be more rational to prioritise needs of the economy above preserving biodiversity for sustainable economic growth if there is significantly higher net benefit to do so. For example, the government may be in favour of building of the cross-island rail line that will cut directly below a reservoir due to the higher long-term economic benefits of doing so, compromising environmental goals for economic reasons.

Inclusive growth should not be achieved at the expense of future generation therefore avoidance of large fiscal debt is necessary even in the overriding decision to achieve inclusive economic growth for current population. It is necessary for Singapore to strike a balance between inclusive and sustainable economic growth. To ensure sustainable economic growth, Singapore has to increase goods and service tax which is regressive in nature to increase tax revenue collected which may compromise inclusive economic growth. However active rebates to the lower income group may help to mitigate the impact on this group to achieve a more inclusive and sustainable economic growth.

Mark scheme

Level	Descriptors	Marks
L3	High L3 <ul style="list-style-type: none"> • The answer should contain all of ALL of the following: <ul style="list-style-type: none"> ○ Explanation of at least 3 current policies that contribute to actual/potential growth, sustainable AND inclusive economic growth ○ Evaluation of these policies • Given the time constraint, the answer could not be improved significantly. • The answer demonstrates thorough knowledge and an excellent ability to explain facts and theory in a precise, logical and reasoned manner (an analytic explanation) and is coherent and well-structured. • The answer demonstrates good application to the context of Singapore 	18 – 20
	Low L3 <ul style="list-style-type: none"> • The answer should contain MOST of the following: <ul style="list-style-type: none"> ○ Explanation of at least 3 current policies that contribute to actual/potential growth, sustainable AND inclusive economic growth ○ Evaluation of at least 2 of these policies • The answer demonstrates good knowledge of relevant facts and theory. • There is a reasoned (analytic) structure to the whole answer. • There is consistent attempt to apply to a relevant context. 	15 – 17
L2	High L2 <ul style="list-style-type: none"> • Answers consists some attempt of application of AD-AS framework 	12 – 14

	<ul style="list-style-type: none"> • Answer is relevant to question but policy is incompletely explained. It should contain: <ul style="list-style-type: none"> ○ Explanation of at least 2 policies that contribute to actual/potential growth, sustainable OR inclusive economic growth ○ Some attempt to evaluate at least 1 policy • There is application of economic principles to the context of Singapore. 	
	<p>Low L2</p> <ul style="list-style-type: none"> • Accurate but undeveloped explanation of policy. The answer should contain: <ul style="list-style-type: none"> ○ Explanation of at least 1 policy that contributes to actual/potential growth, sustainable OR inclusive economic growth ○ Lack of or little attempt at evaluation of policy 	9 – 11
L1	<p>High L1</p> <ul style="list-style-type: none"> • Smattering of points that show weak understanding of question requirements. • An incomplete answer with question requirement partially addressed (e.g. did not link to inclusive or sustainable growth). • Poor application of content knowledge with several conceptual errors. 	4 – 8
	<p>Low L1</p> <ul style="list-style-type: none"> • Few valid points offered. • Answer was mostly irrelevant or inaccurate. 	1 – 3
E3	<ul style="list-style-type: none"> • A judgment with clear attempt to consider relevant criteria for evaluating the current policies in Singapore to achieve both inclusive and sustainable economic growth, and with consideration of relevant context. 	4 – 5
E2	<ul style="list-style-type: none"> • A judgment with some attempt to consider possible factors affecting the evaluation of current policies in Singapore to achieve both inclusive and sustainable economic growth 	2 – 3
E1	<ul style="list-style-type: none"> • An unexplained judgment. 	1

- 6 (a) Explain the consequences of a persistent balance of trade deficit. [10]
- (b) Discuss whether policies aimed at correcting a balance of trade deficit might cause difficulties for a country. [15]

(a)

Command	Explain
Content	Negative effects of persistent BOT deficit
Context	NA

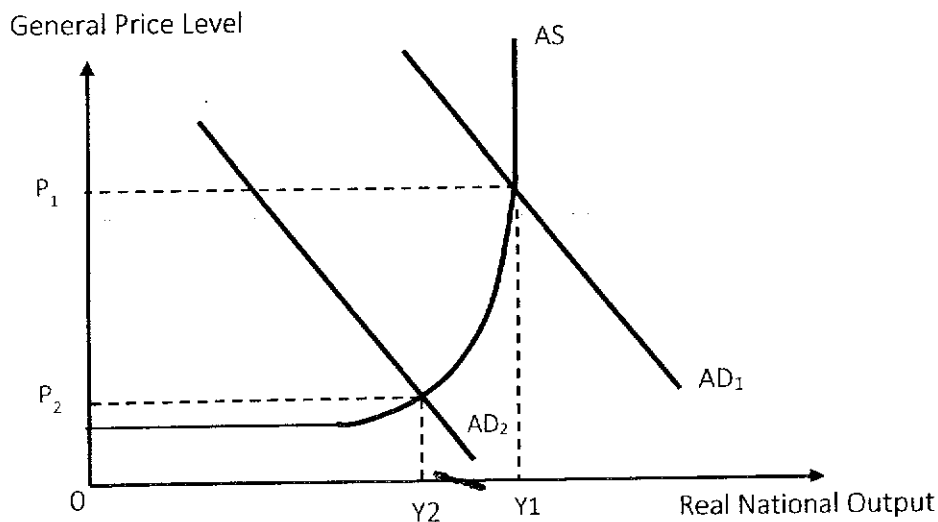
Introduction

A balance of trade deficit occurs when the total international *receipts* from the export of goods and services are less than its total international *payments* for the import of goods and services in a given year.

Body

A balance of trade deficit generally has a contractionary effect on the economy. This is because assuming that the persistent balance of trade deficit is increasing, it would reduce the level of aggregate demand.

(Note: it would be possible to also explain that AD is low due to persistent BOT deficit)



A persistent and growing trade deficit means that $(X-M)$ is falling. Since $AD = C+I+G+(X-M)$, the fall in aggregate demand, *ceteris paribus*, will cause a fall in national output from Y_1 to Y_2 through the multiplier process since a fall in income would lead to a fall in induced consumption which would lead to a further fall in income. The fall in national output and income would lead to fall in demand for labour. This would lead to an increase in unemployment as the output gap widens to Y_2Y_1 .

The fall in AD also causes a fall in general price level from P_1 to P_2 . A persistent fall in general price level might lead to deflation. Deflation can bring about negative sentiments in the economy which might further worsen the fall in national income if consumers and firms hold back their spending.

A trade deficit also suggests the economy is relatively uncompetitive and it cannot export as many goods as we import. A persistent trade deficit may create pessimism among consumers and producers and may further trigger contraction in both consumption and investment

expenditure. This further reduces AD since C and I are also components of AD. Therefore, economic growth slows down as consumers' and investors' confidence further deteriorates.

If the persistent trade deficit is too large, it will cause a depreciation in the exchange rate. For example, if the trade deficit is caused by falling demand of a country's exports, there will also be a corresponding fall in the demand for the country's currency, leading to depreciation. If the trade deficit is caused by increasing demand for imports, there will be an increase in the supply of the country's currency in the foreign exchange market as consumers purchase foreign currency. This also leads to depreciation. However, with the depreciation, imported inflation may result if the economy is heavily dependent on imports, leading to higher cost of living and higher cost of production. This would be detrimental to both actual and potential economic growth.

If the country does not have a freely floating exchange rate, when a country has a balance of trade deficit, it has to use its gold and foreign currency reserves to finance the deficit. This cannot continue indefinitely as the stock of official reserve assets is limited. When the country runs out of means to finance its deficit, it might have to borrow from international organisations such as International Monetary Fund (IMF) or from other countries. In this case, there will be a rise in external debt.

Marking Scheme

Level	Knowledge, Application, Understanding, Analysis
L3 (8-10)	Accurate identification and well elaborated explanation of consequences of a persistent trade deficit, with good reference to macroeconomic goals.
L2 (5-7)	Shows understanding of a persistent trade deficit. But under-developed explanation of consequences or analysis might lack elaboration. Macroeconomic goals might not be well recognised. <i>Or</i> Inaccurate and underdeveloped explanation.
L1 (1-4)	3-4m: Shows some knowledge of a persistent trade deficit and consequences. 1-2m: Answer is mostly irrelevant e.g. causes of a persistent trade deficit rather than the consequences of a trade deficit.

(b)

Command	Discuss
Content	Whether policies to correct BOT deficit would create difficulties <ul style="list-style-type: none"> • (Explain policies to create BOT deficit and how they work well (i.e. they do not create difficulties) and • Explain how these policies may result in unintended consequences (i.e. they create difficulties)
Context	NA

Introduction: Overview of policies to correct BOT deficit		
Expenditure-Reducing Policies	Expenditure-Switching Policies	Supply-Side Policies
Thesis: Explain how policies work and how therefore they might not cause difficulties		
Anti-thesis: Explain how policies might create difficulties due to unintended consequences (e.g. trade-offs with other macro goals)		
Synthesis: Whether policies to correct BOT deficit would create difficulties would depend on the type of policies adopted, the root cause of the BOT deficit and the nature of the economy.		

Introduction

When faced with a large and persistent balance of trade deficit, governments generally adopt the following types of policies:

- Expenditure-Reducing Policies
- Expenditure-Switching Policies
- Supply-Side Policies

Body

Expenditure-Reducing Policies

An expenditure-reducing policy aims to reduce the demand and limit spending on imports by reducing overall expenditure in the economy. This results a fall in aggregate demand and in turn, national income falls.

When national income falls, the demand for imports will also fall, since import expenditure is income induced. This in turn reduces the balance of trade deficit. An expenditure-reducing policy involves the use of

- (a) Contractionary Fiscal Policy, and/or
- (b) Contractionary Monetary Policy

Contractionary Fiscal Policy involves the reduction of government spending or increase in taxes. For example, governments might reduce their spending on infrastructure, reducing G in AD. They could also increase personal income tax, thereby reducing disposable incomes and C; or increase corporate income tax, thereby reducing post-tax profits and hence I.

Contractionary Monetary Policy involves the increase in interest rates which would lead to a rise in costs of borrowing and hence a fall in C and I.

All of these would lead to a fall in AD and hence NY. If the country has a large marginal propensity to import, the fall in import expenditure following a fall in NY might be significant. This would then help to reduce the BOT deficit.

Thesis: May not cause difficulties

In the event that the country is at full employment level of income and is experiencing high inflationary pressure, the downward pressure on general price level may improve the price

competitiveness of exports and increase quantity demanded for exports. Assuming the demand for exports is price elastic, this will result in a rise in export earnings. Hence, in this case the correction of trade deficit helps to bring about price stability. Furthermore, since the economy is at full employment level, the fall in AD will not cause a fall in real national income and hence will not conflict with the macroeconomic objectives of achieving economic growth and full employment.

Antithesis: May cause difficulties

However, if the economy is not at full employment level, expenditure reducing policies that cause a fall in AD may further contract the economy and cause unemployment. In addition, there will be deflationary pressure in the economy.

Expenditure-switching policies

Expenditure-switching policies are implemented to switch the expenditure of domestic customers away from imports towards domestically produced goods.

The aim of this policy is to change the relative price of domestic goods and foreign goods so that people will substitute foreign goods with domestic goods. An expenditure-switching policy involves the use of

- (a) Exchange Rate Policy, and/or
- (b) Import Controls.

Thesis: May not cause difficulties

Exchange rate policy would involve devaluing a country's currency. This would lead to a fall in the price of exports in foreign currency and a rise in the price of imports in domestic currency. Assuming that Marshall Lerner condition holds ($PED_x + PED_m > 1$), the BOT will improve.

Antithesis: May cause difficulties

In the short run, depreciation may actually increase the balance of trade deficit. The demand for exports and imports tends to be price inelastic in the short run due to contractual obligations as well as the need for time to source for substitutes and to change consumption patterns. In such a situation, the depreciation of the currency might actually increase the balance of trade deficit.

In addition, depreciation might cause inflation. Depreciation can result on cost push and imported inflation because of the rise in prices of imported raw materials and prices of imported goods and services respectively. This is especially true when a country is highly dependent on imports. When the price of imports rise, the cost of production rises and SRAS falls. This leads to a rise in general price level and also a fall in national output. The fall in national output also leads to a fall in demand for labour, thereby leading to a rise in unemployment. Furthermore, if the country is near the full employment level, an improvement in BOT might lead to demand-pull inflation.

Thesis: May not cause difficulties

Import controls could involve the use of import quotas. This would restrict the number of imports and hence reduce M. Assuming X remains unchanged, the BOT will improve.

Antithesis: May cause difficulties

While import controls have an expenditure-switching effect on the balance of trade, there are negative effects too. Import controls lead to distortion in resource allocation, which leads to inefficiency. They breed inefficient domestic producers because of reduced competition from abroad. There is hence little incentive for domestic producers to seek more efficient methods of production to reduce the price of goods. In addition, the welfare of citizens is reduced because import controls distort market forces, resulting in higher domestic prices and thus

prevent consumers from benefiting from all the advantages of international specialisation and trade (such as products of better quality and lower prices for goods or services). Import controls may result in retaliation and trade wars as other countries whose exports were affected by the given country's policies may similarly impose restrictions on the country's exports of goods or services. This could then result in a decline in opportunities for export-led growth for the countries involved in the dispute. The fall in X might then eventually worsen the BOT deficit instead.

Supply side Policies

Thesis: May not cause difficulties

The inefficiency caused by expenditure switching can be overcome if the government can introduce measures to lower the costs of production and boost the productivity of the factors of production.

For example, the improvement in the quality of the labour force can raise the labour productivity and hence lead to a rise in LRAS. Also, assuming the increase in labour productivity would bring about a fall in per unit labour cost, cost of production decreases and this causes an increase in SRAS. This would bring about a fall in the general price level of domestically produced goods and services and in turn lead to a rise in the price competitiveness of exports. Assuming that demand for exports is price elastic, this will increase export revenue and reduce the balance of trade deficit.

Government may correct the balance of trade deficit by giving export incentives like tax exemption on exporting industries and investment grants to help the export sector to modernise and increase efficiency, increasing the price competitiveness of exports and therefore, increasing the volume of exports. Assuming that demand for exports is price elastic, this will increase export revenue and reduce the balance of trade deficit.

All in all, the economy will also experience both potential and actual growth.

Antithesis: May cause difficulties

Supply Side Policies might require substantial funding if subsidies and grants are given to firms to encourage them to innovate and increase productivity. This results in opportunity costs since the net benefit of the next best alternative (which might be better healthcare services if the government spent on healthcare instead) would have to be foregone.

There is also a time lag in the implementation of supply-side policies, which may compromise the effectiveness of such policies in improving the BOT deficit as economic conditions are very dynamic.

Conclusion

Whether policies aimed at correcting a balance of trade deficit might cause difficulties for a country or not would depend on **what type of policies are adopted, what the root cause of the BOT deficit is and the nature of the economy.**

If the country is at Yf and experiencing a high rate of inflation which is the reason for their BOT deficit, an expenditure reducing policy would be effective and less likely to result in difficulties. However, if the country is already in a recession and the persistent balance of trade deficit is a result of the loss of competitiveness of the country's goods and services, then structural changes of the economy using supply side policies may be more useful to reverse the trend in the balance of trade. Using expenditure reducing policies in such a situation will lead to many difficulties, and the recession would be worsened.

In general, using supply side policies to correct trade deficit also seem to cause less difficulties for a country, compared to policies like expenditure reducing and expenditure switching policies. Unfortunately, in most cases, these supply side policies are long term policies and are costly. The government needs to increase its spending e.g. on subsidies on training and incentives for research and development. As such, these policies can drain the government's resources, diverting resources away from other areas of competing needs.

In recent years, countries such as US appear more inclined to use expenditure switching to correct their persistent trade deficit despite the difficulties that could arise. This could partly be due to the fact that such policies can be implemented more quickly and are subjected to less budget constraints. Such policies might not cause as much difficulties for large countries like the US which can be more reliant on their own economies for growth. However, countries like Singapore will find that adopting such policies will cause many difficulties for their economies. This is because they are highly reliant on imports and it would not be practical for them to encourage domestic consumers to switch to consuming domestically produced goods.

Level	Knowledge, Understanding, Analysis and Application
L3 (8 – 10)	Well-developed with precise and cohesive explanations. Able to demonstrate both breadth (ie both thesis and anti-thesis) and depth in explanation by thoroughly analysing the difficulties that could arise from policies aimed at correcting BOT deficits.
L2 (5 – 7)	Use of some appropriate economic concepts which are largely free from conceptual errors. Answer demonstrates insufficient breadth and depth in explanation the difficulties that could arise from policies aimed at correcting BOT deficits.
L1 (1 – 4)	Answer is a weak attempt to explain the difficulties that could arise from policies aimed at correcting BOT deficits. OR Answer may be irrelevant to the question
Evaluation	
E3 (4 - 5)	Synthesises economic arguments to arrive at well-reasoned judgements and good summative conclusion on the extent to which policies aimed at correcting a balance of trade deficit might cause difficulties for a country e .g. ranking of policies, considering the country's circumstances etc.
E2 (2 – 3)	Some explanation of a judgment provided on the extent to which policies aimed at correcting a balance of trade deficit might cause difficulties for a country.
E1 (1)	Judgment provided but no substantiation.

