

NATIONAL JUNIOR COLLEGE
SH2 Preliminary Examinations for
General Certificate of Education Advanced Level
Higher 2

ECONOMICS

Paper 1

9757/01**22 August 2022****2 hour 15 minutes**

No Additional Materials are required.

READ THESE INSTRUCTIONS FIRST

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

Answer **all** questions.

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

This document consists of 7 printed pages and 1 blank page.



NATIONAL JUNIOR COLLEGE
Economics Department

Answer all questions.

Question 1: A winner in the pandemic – Amazon

Table 1: Retail revenue of the top ten largest Public Retailers (2010 and 2020)

US Retailer	Retail Revenue in 2010 (in US\$ billion)	Retail Revenue in 2020 (in US\$ billion)
Amazon	50	1,400
Walmart	179	339
The Home Depot	47	267
Costco	24	134
Lowe's	29	102

Source: *visualcapitalist.com*, accessed 29 June 2020

Extract 1: Market strategy of Amazon

Amazon is interesting not just because of its competitive scope, but also because of its market strategy. Michael Porter of Harvard Business School suggested in 1985 that companies need to choose not only whether to have either a broad market/ product focus or a narrow one, but also either a differentiation or cost leadership strategy. Other strategists would contend that you can mix the two as a hybrid.

A differentiation strategy is where the product or service is either perceived to be, or is, of superior customer value and has a definite price premium. A cost leadership strategy is where the price may be similar or usually lower than the competition, but costs are certainly lower.

In Amazon's case, the core strategy is clearly more a cost leadership one when compared with brick and mortar retailers. Amazon has massive warehousing facilities and processing capability, which give it physical economies of scale. That in turn gives it cost advantages. But in its service, it is differentiated – so it is something of a hybrid.

Amazon is ultra-keen on customer feedback, and Jeff Bezos, founder and chief executive officer of Amazon.com, Inc. has spread customer focus as a mantra throughout the organisation. Such service differentiation does not just bring loyalty but also encourages customers to buy more from Amazon.

The company is venturing into some perhaps unexpected new areas, for example, by exploiting its distinctive capability in handling large amounts of data and for new types of customer, sending a shiver down the spines of many large information technology (IT) companies.

Source: *accaglobal.com*, accessed 14 July 2022

Extract 2: Amazon charged with abusing EU competition rules

The European Commission has charged Amazon with abusing its dominant position in online retail to gain an unfair advantage over competitors. It said Amazon had used data on third-party sellers that use its marketplace to boost sales of its own-label goods. Third-party sellers are independent sellers who offer a variety of new, used, and refurbished items on Amazon's platform. The steps to

place an order with a third-party seller are the same as placing any other order on Amazon.com. You add items to your cart and complete your order through the Amazon checkout process. The Commission also launched a fresh probe into the possible preferential treatment of sellers that use the technology giant's logistics services.

Amazon rejected the charges, saying no firm 'cared more' for small businesses. It faces a potential fine as high as 10% of its global turnover if it is found guilty of breaching competition law – about US\$19 billion. In a statement, the European Union's (EU) Competition Commissioner Margrethe Vestager said it was vital that platforms with 'market power' did not 'distort competition'.

'Data on the activity of third-party sellers should not be used to the benefit of Amazon when it acts as a competitor to these sellers,' she added. 'With e-commerce booming, and Amazon being the leading e-commerce platform, a fair and undistorted access to consumers online is important for all sellers.'

In a statement Amazon insisted that – far from being anti-competitive – its own private-label products were good for customers and offered more choice. 'Amazon represents less than 1% of the global retail market, and there are larger retailers in every country in which we operate,' it said. 'No company cares more about small businesses or has done more to support them over the past two decades than Amazon.' It also pointed out that there are more than 150,000 European businesses selling through its online marketplace.

The charges come as the coronavirus crisis has driven huge sales for the retailer, as people increasingly turn to online shopping. In August, boss Jeff Bezos became the richest man in the world with a fortune of more than US\$200 billion after the firm's share price rocketed in the early months of the pandemic.

Source: bbc.com, accessed 19 November 2020

Extract 3: China's online shopping addiction is killing its green packaging drive

The e-commerce industry is trying to reduce plastic waste from the millions of packages it ships every day. If you worry about all the waste generated by the annual rush of holiday shopping and gift giving, it is nothing compared to the mountains of discarded packaging that comes from a single event in China.

On 11 November each year, the world's biggest consumer market goes into overdrive as e-commerce giants like Alibaba Group Holdings Ltd. and JD.com Inc. lure shoppers with huge bargains during the Singles' Day bonanza. Alibaba reported almost 500 billion yuan (US\$76 billion) of sales this year, nearly four times United States (US) Black Friday and Cyber Monday spending combined. Greenpeace, an independent global campaigning network that acts to change attitudes and behaviour to protect and conserve the environment, estimates that Singles' Day generated 52,400 metric tons of carbon dioxide (CO₂) from manufacturing, packaging and shipping in 2017. The national railway has to employ hundreds of high-speed trains to help with deliveries every year.

As President Xi Jinping pushes for stronger environmental protection and consumers grow more eco-conscious, the nation's e-commerce giants are under pressure to find greener ways to handle the annual extravaganza, starting with plastic. China's soaring use of the material has become one of the world's most pressing environmental issues but switching to other materials is costly for smaller businesses and the government has struggled to implement a plan to phase out single-use plastics.

E-commerce companies are trying to stem the tide. For Singles' Day this year, Alibaba's logistics arm Cainiao designed recyclable corrugated cardboard boxes that do not have to be sealed with plastic tape. The company offered the packaging to more than 500 sellers on Tmall, including brands like Nestle SA and Procter & Gamble Co. The so-called zipper boxes cost twice as much as their usual packaging. Cainiao says it used 190,000 plastic-free boxes and 3 million biodegradable bags to package Singles' Day orders this year. While that is a step forward, it is just a fraction of the total increase in packaging this year. Cainiao emblazons the boxes with dolphin images to 'raise awareness of how plastic pollutes the oceans'.

Still, without government regulation, companies are left to decide if they want to use more sustainable packaging. Online shopping has become such a key driver of China's domestic economy, especially during the pandemic, that authorities have been reluctant to institute rules that could hurt the industry. The environment ministry, which drives climate policies, doesn't have the power to mandate greener packaging.

Source: Bloomberg News, 21 December 2020

- (a) Compare the relative change in the retail revenue for Amazon, Walmart and Home Depot in 2010 and 2020. [2]
- (b) Using a diagram and a relevant elasticity concept, explain how the Amazon's differentiation strategy (Extract 1) may have contributed to the change in its revenue. [5]
- (c) With reference to Extract 1, explain a source of cost advantage experienced by Amazon. [2]
- (d) Identify and explain two possible barriers to entry faced by the potential competitors into the e-commerce market that Amazon is in. [3]
- (e) Discuss the likely impact of Amazon's dominant position in the industry on society. [8]
- (f) The 'mountains of discarded packaging' (Extract 3) that comes from online shopping addiction leads to economic inefficiency in resource allocation.

Assess the most appropriate measures to deal with this economic inefficiency in resource allocation. [10]

[Total: 30]

Question 2: Trade Policies between Singapore, ASEAN and China

Extract 4: India has good reason to reject the Regional Comprehensive Economic Partnership

India dropped out of the Regional Comprehensive Economic Partnership's (RCEP) negotiations in November 2019 after participating in 28 of 31 rounds of talks over a six year period. India's withdrawal, announced last year in a joint leader's statement issued at the end of an Association of Southeast Asian Nations (ASEAN) summit in Bangkok, said that India had 'significant outstanding issues which remain unresolved.'

Indian textiles, agriculture and dairy sectors, which employ hundreds of millions of workers, are seen as the most vulnerable to Chinese and other RCEP signatory imports. Under the pact, India would have been required to steadily drop tariff levels. China already enjoys a huge trade surplus with India, which hit US\$48.6 billion in the 2019 – 2020 fiscal year period, according to Indian official statistics.

RCEP proponents say it will help signatory nations to emerge faster from the pandemic's economic devastation including through greater participation in and access to regional supply chains. But Indian political leaders counter that they are protecting domestic interests from cheap and, in China's case, often state-subsidised cheap imports.

Indian industry is already vexed by a sharp increase in imports from China that have adversely impacted small and medium-sized factories in particular. At the same time, India's exports are often blocked by non-tariff barriers imposed by China, Indian trade groups and associations claim. Indian textile, steel and tire industries, all protected in varying degrees from foreign imports, would likewise face sudden stiff competition from RCEP nations.

Source: Asia Times, 15 November 2020

Table 2: Current account balance as % of GDP, 2016 – 2020

	2016	2017	2018	2019	2020
China	1.7	1.5	0.2	0.7	1.7
India	-0.5	-1.5	-2.4	-1.1	1.3
Singapore	17.7	17.3	15.2	14.5	17.1

Source: World Bank national accounts data, and OECD National Accounts data files

Extract 5: Easier, cheaper for Singapore companies to do business regionally with RCEP

Companies will soon find it easier and cheaper to conduct business in the region when the newly-inked, region-wide free trade pact takes effect, said Trade and Industry Minister Chan Chun Sing. Speaking to reporters after signing the RCEP, Mr. Chan said the agreement provides businesses with better intellectual property protection and enables them to consolidate their production across participating countries, which will lead to cost-savings and time-savings. Consumers, too, will see benefits with a more competitive range of products to choose from, as well as cost-savings passed down from the elimination of tariffs on most goods traded among participating countries, said Mr. Chan.

The RCEP was signed virtually by all ten ASEAN members and key partners Australia, China, Japan, South Korea and New Zealand on the last day of the annual year-end ASEAN Summit hosted by Vietnam, which also handed over the chairmanship of the grouping to Brunei. Together, the RCEP countries account for 30% of the global economy and one-third of the world's population. Singapore's trade value with the other 14 RCEP members has grown steadily over the years, reaching 50.4% or S\$515.2 billion of the Republic's global trade last year.

The agreement's key benefits include tariff elimination for at least 92% of goods traded among members, and allowing businesses to invest in fellow RCEP countries without having to meet conditional performance requirements. As a result, businesses handling chemicals, plastics and processed food could see cost savings for their exports especially to China, Japan and South Korea. Express consignments and perishable goods also have to be cleared by customs within six hours of arrival.

There will also be greater clarity and transparency for firms seeking government projects, with members agreeing to publish laws, regulations and procedures on such opportunities. RCEP members are also obliged to share information that may be relevant to small and medium enterprises so that they can benefit from the agreement.

As for concerns some have raised about benefits being tilted in favour of larger economies, like China, Mr. Chan said the signing of the RCEP will bring about mutual benefits for both Chinese companies venturing beyond the domestic market, as well as for non-Chinese companies who want to enter China. It will also allow for both the Chinese and regional markets to be seen as an integrated market, which will make the grouping more attractive to global investors and enhance the competitiveness of its exports to the rest of the world, he added.

Source: The Straits Times, 15 November 2020

Extract 6: Singapore to be a reliable node in global supply chain and build internal resilience

Singapore has to build its reliability as a node in the global supply chain, while also keeping an eye on the resilience of its own internal supply networks, said Senior Minister of State for Trade and Industry Chee Hong Tat. This is especially so since the coronavirus pandemic has affected many businesses and employees around the world.

'The global economy is experiencing both a supply and demand shock. Supply chains have been disrupted, as countries imposed lockdowns and export bans. Even as countries are gradually reopening their economies, travel restrictions remain,' Mr. Chee said. 'To enhance supply chain resilience, some countries may respond by restricting exports – especially for essentials, such as food and medical items – while others will strengthen their interdependence with other economies. As a small and open economy, Singapore's response cannot be the former. We must continue to look outward and find our relevance in the new world.'

He added that Singapore is keeping its ports and production lines open to ensure that trade flows unimpeded, which shows that it is reliant in times of crisis. He brought up the example of mask manufacturer Medicom, which is headquartered in Montreal. It announced in June that it would locate its new surgical mask manufacturing facility here. Mr. Chee said: 'These investments will create a diversity of good jobs in research, product development, manufacturing and commercial functions.'

But internally, Singapore also needs to constantly review its sources for essential items, he added. For instance, it is establishing new networks and diversifying supply sources and markets in food to ensure long-term food security. Singapore is also working on building local capabilities, such as in urban farming and agri-food technology, he added.

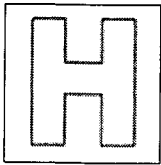
But ultimately, workers and companies have to prepare for changes in the global supply chain by taking advantage of opportunities in the digital economy. Businesses can go overseas through e-commerce platforms, for instance. Workers can also upskill themselves through continual training.

Source: The Straits Times, 2 July 2020

- (a) With reference to Extract 4 and Table 2, explain two reasons why India is against the removal of import tariffs. [4]
- (b) Using a diagram and Extract 5, explain how the removal of import tariffs would impact consumer surplus. [3]
- (c) With reference to Extract 6:
- (i) Explain how an increase in foreign direct investment may impact the balance of payment in Singapore in the short run and the long run. [3]
- (ii) Explain why an increase in foreign direct investment may lead to an increase in the rate of unemployment in Singapore. [2]
- (d) Discuss the relative benefits of diversification for a resilient supply chain as compared to specialisation of exports to an economy engaging in international trade. [8]
- (e) Discuss whether participation in the RCEP would likely enhance the living standards of an economy. [10]

[Total: 30]

BLANK PAGE



NATIONAL JUNIOR COLLEGE
SH2 Preliminary Examinations for
General Certificate of Education Advanced Level
Higher 2

ECONOMICS

Paper 2

9757/02

25 August 2022

2 hour 15 minutes

No Additional Materials are required.

READ THESE INSTRUCTIONS FIRST

An answer booklet will be provided with this question paper. You should follow the instructions on the front cover of the answer booklet. If you need additional answer 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 question or part question.

This document consists of **3** printed pages and **1** blank page.



NATIONAL JUNIOR COLLEGE
Economics Department

Answer **three** questions in total.

Section A

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

- 1** Microchips are a crucial element in the manufacturing of final goods such as cars and consumer electronics. COVID-19 pandemic in 2020 had lockdowns which resulted in bottlenecks in the supply chain for semiconductors and changed preferences to work-from-home. Global economic growth is projected at -4.9% in 2020.
- (a) Explain why a significant shortage of microchips exists during COVID-19 pandemic in 2020. [10]
- (b) Discuss whether consumers or producers are more likely to bear the cost of the change in microchip prices. [15]
- 2** (a) Explain why some consumer electronics megastores in Singapore like Courts and Harvey Norman would price match other consumer electronics megastores by charging the same prices for same products, but smaller consumer electronics stores in the neighbourhood would not. [10]
- (b) Discuss whether demand or supply factors are more important in explaining the coexistence of big businesses and small independent businesses. [15]
- 3** Children who grow up in lower-income families have less access to quality education. Singapore government will start to level the playing field by providing more assistance to those in danger of being left behind during pre-school years. In addition, the government will also double spending on the pre-school sector to \$1.7 billion by 2022.
- Discuss the factors that the Singapore government should consider in its decision to intervene in the pre-school education market. [25]

Section B

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

- 4** The Bank of Korea slashed its benchmark interest rate to a record low of 0.75% in an emergency move following similar actions by the Federal Reserve and other central banks to combat economic damage from the coronavirus outbreak.

Source: The Straits Times, 16 March 2020

- (a) Explain the factors that affect Singapore's choice of exchange rate policy as its main policy to achieve internal stability in the economy. [10]
- (b) Discuss whether a fall in world interest rates would have a positive impact on Singapore's economy. [15]

- 5** Amid the COVID-19 pandemic, investment will remain weak for an extended period. Prolonged recession will shrink the labour force and the lending capacity of financial systems. These have damaged the supply side of many economies, with many economies facing recession and cost push inflation.

- (a) Explain how a sustained period of low aggregate demand might damage the supply side of an economy. [10]
- (b) Discuss whether demand management or supply-side policies are more effective in helping an economy to recover from the effects of the pandemic. [15]

- 6** The United States (US) officially named China a 'currency manipulator', intensifying tensions between the world's two largest economies. The announcement by US Treasury follows a sharp fall in the value of the Chinese yuan against the US dollar. China is the world's biggest user of energy, components and grain. The Chinese yuan's fall will impact economies it has strong trading links with.

Source: BBC News, 6 August 2019

- (a) Explain the possible causes of a fall in the value of a country's currency. [10]
- (b) Discuss the extent to which the value of the Chinese yuan might impact Singapore's economy. [15]

BLANK PAGE

Question 1: A winner in the pandemic – Amazon

Suggested Solution and Mark Scheme

<p>(a) Compare the relative change in the retail revenue for Amazon, Walmart and Home Depot -between 2010 and 2020. [2]</p>	<p>Similarly, All three firms have seen an increase in their retail revenue between 2010 and 2020. Difference: However, the rate of increase in the retail revenue for the three firms are different, with Amazon experiencing the fastest increase (2,800%), followed by The Home Depot (466%) then Walmart (90%).</p>
<p>(b) Using a diagram and a relevant elasticity concept, explain how the Amazon's differentiation strategy [Extract 1] may have contributed to the change in its revenue. [5]</p>	<ul style="list-style-type: none"> Amazon worked on differentiating their services, for e.g. priorities were placed on customer feedback and services were prompt [in Extract 1] and this has the effect of changing the taste and preferences of consumer towards the services provided by Amazon. This will lead to an increase in demand for their services, c.p. as shown by the shift from ARo to AR, in where equilibrium price and quantity will increase, Figure 1, and hence, increase in Amazon's revenue as shown by the area OPoAQo to OP'1cQ1. Their differentiation strategy promotes customer loyalty who believes that the high standard of services could not be found in the services provided by their rivals, that is the service offered by Amazon is not easily substitutable, and hence, the value of PED for Amazon's services will be less than one, as illustrated by the increase in the gradient of the demand curve (AR1). With $PED < 1$, hence, Amazon could increase the price of their products/services, leading to a less than proportionate decrease in quantity demanded. Hence its revenue will increase. Diagram showing the increase in demand, fall in PED (increase gradient of AR curve) and the area of increased in revenue.
<p>(c) With reference to Extract 1, explain a source of cost advantage experienced by Amazon. [2]</p>	<p>This suggests that technical economies of scale (indivisibility) can be achieved when Amazon taps on the larger warehousing facilities and processing capability [Extract 1] and share the high costs of capital equipment over large output (in this case, the increasing number of users/customers), resulting in a fall in the long run average cost.</p>
<p>(d) Identify and explain two possible barriers to entry faced by the potential competitors into the e-commerce market that Amazon is in. [3]</p>	<p>Or</p> <ul style="list-style-type: none"> In the case of e-commerce market, Extract 2 states that Amazon had used data on third-party sellers that use its market-place, which is a control of key resource, to boost sales of its own-label goods. Amazon used critical information taken from data on their third party sellers that use its market-place to analyse consumers' preferences and what they are spending their money on which could help Amazon increase its market share and higher profits. These higher profits earned by Amazon could create a natural barrier to entry to prevent potential competitors from entering the market due to their lower demand of its potential rival and not being profitable. <p>And</p>

<ul style="list-style-type: none"> According to Extract 2, the Commission also launched a fresh probe into the possible preferential treatment of sellers that use the tech giant's logistics services. Such practice by Amazon will prevent potential competitors from making profits from having fewer third-party sellers using their platform to sell their goods as these third parties that uses Amazon's logistics services will also have preferential treatment selling on Amazon. 	<p>(e) Discuss the likely impact of Amazon's dominant position in the industry on society. [8]</p> <p>Introduction:</p> <ul style="list-style-type: none"> Amazon, being a dominant firm in the industry may have both desirable and undesirable impact on society. <p>Body (1): Undesirable impact of dominant firms such as Amazon on society</p> <p>(i) Higher prices may be charged to consumers in markets with dominant firms such as Amazon.</p> <ul style="list-style-type: none"> With Amazon's large market share in the industry, their dominance might imply the industry is less competitive leading to possible abuse of market power as mentioned in Extract 2. The demand curve facing the dominant firm is downward sloping and the firm will have greater price setter power with the lack of competitors in the industry. While Amazon may charge lower prices to consumers in the short run, however, in the long run, the smaller e-commerce firms may not survive the competition of lower prices and are forced to leave the industry due to their inability to enjoy economies of scale to charge lower prices than Amazon. This may result in greater market dominance and market power for Amazon. Amazon might be able to raise prices and exploit consumers welfare due to few competitors available to offer alternatives to consumers. The e-commerce market would become more allocatively inefficient as seen in Figure 1 above where the lower PED value for its demand will result in its prices rising higher than its marginal cost (MC) in the US. Amazon, an oligopolistic firm, will have a downward sloping and relatively price-inelastic demand (AR) curve as seen in figure 1, and have the significant ability to set prices. A profit-maximising firm will produce at an output Qm where $MR = MC$ at price Pm. This is because at output before Qm, MR exceeds MC and thus each additional output of the firm adds more to revenue than to cost and thus increases the firm's profits. A profit-maximising firm will thus increase production till Qm where $MR = MC$. At output levels beyond Qm, MC exceeds MR and thus a profit-maximising firm will not produce beyond Qm as each additional output beyond Qm reduces the firm's profits instead. In figure 1, the firm has restricted output to Qm in order to charge relatively higher prices at Pm. At output Qm, the firm is also likely to be making supernormal profits indicated by the area PmxyAC. It should be noted that the price Pm is at a significant mark-up above the MC at output Qm due to the relatively price-inelastic firm's demand curve, which indicates the significant price-setting ability of a dominant firm. This had had to allocative inefficiency and a deadweight loss to society (area xab).
--	---

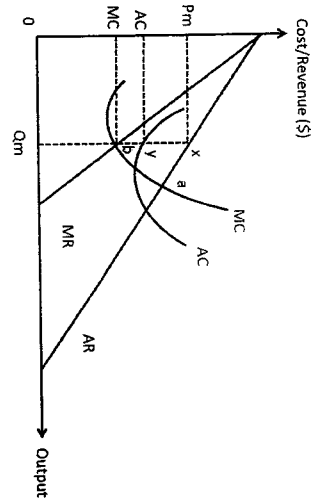


Figure 1: Price and Output of Firm in Market with Significant Barriers to Entry

- There would be less choices for consumers since the variety of products will also fall. Dominant firms may also not have the incentive to innovate, again hurting consumers welfare.
 - (ii) Dominant firms such as Amazon could be x inefficient. Dominant firms could also be X-inefficient. This may occur when the dominant firm became complacent due to lack of competition and hence produce at a higher average cost instead. It will not be producing on its long run average cost curve. Without the competitive pressure on profit margins, the dominant firm could be lax about cost controls, it could over-remunerate its staff by giving them huge perks and bonus packages or hire more staff than necessary. The firm produces at a cost that is above their long run average cost and still continue to make supernormal profits in the long run because of the barriers to entry that limited competition in the market. The firm is said to suffer from X-inefficiency.
 - (iii) Dominant firms may lead to greater inequity
 - With Amazon's ability to set higher prices and ability to enjoy internal economies of scale, Amazon can earn supernormal profits in the long run due to the high barriers to entry it set up as mentioned in part (d).
 - Amazon is owned by a select few, namely the shareholders which make up a minority of the population. Hence, if Amazon continues to earn supernormal profits in the long run and dividends are paid to the shareholders at the expense of consumers. Wealth would be concentrated at the hands of the shareholders who are initially already better off than the majority of the population. Extract 2 mentioned that Jeff Bezos, founder of Amazon, became the richest man in the world with a fortune of more than \$200bn after the firm's share price rocketed in the early months of the pandemic.
 - This leads to a greater income inequality and thus, may cause unfair distribution of economic welfare, leading to greater inequity, at the expense of consumers.
- Body (2): Desirable impact of dominant firms such as Amazon on society
- (i) Consumers can enjoy lower prices and a higher quantity demanded. This leads to higher consumer surplus enjoyed where consumer surplus is the difference

between how much consumers in the market are prepared to pay and how much they actually pay.

- Amazon may bring benefits to the consumers of e-commerce in the U.S. in terms of lower prices due to the internal economies of scale enjoyed by the firm as discussed in part (c).
- The cost-savings could be passed on to consumers in the form of lower prices. Consumers enjoy lower prices, and purchase a higher quantity demanded. This will result in higher consumers' surplus.

- (ii) Innovation can be carried out by large and dominant firms such as Amazon.
- Amazon places great priority on consumers service [Extract 1].
 - Large firms such as Amazon have higher ability to engage in intensive R&D and innovation due to the supernormal profits earned in the long run.
 - Amazons engage in intensive R&D to develop new processes and service differentiation and enhance existing ones. This results in dynamic efficiency benefitting society. Dynamic efficiency can be defined as the situation in which firms are technologically progressive (through investing in research and development for the purpose of product and process innovation) in order to reduce the average cost of production or to meet the changing needs and wants of consumers over time. Examples include, Amazon investing in larger warehousing facilities and processing capability to meet the rising demand and to capitalize on its ability to gain internal economies of scale as discussed in part (c). Extract 2 also mentioned that Amazon has created their own label goods that are more align to consumers' taste and preferences.
 - These resulted in a better quality and a wider variety of products to cater to the different tastes and preferences of consumers. This translates to higher consumer welfare.

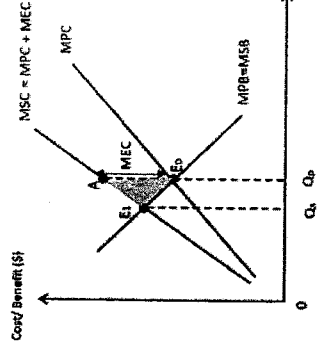
Evaluative Conclusion:

- Whether dominant firms such as Amazon has more positive impact on society depends on the level of contestability of the market.
- If the e-commerce has high contestability, these dominant firms such as Amazon will likely benefit the society due to the incentive to innovate their processes and differentiate their services they provide and at lower prices to keep potential entry of firms at bay. This way, they achieve productive and dynamic efficiency for society and increases consumers welfare.
- However, if there is low contestability in the e-commerce industry, for example, if Amazon is able to reap significant internal EOS, the firms would likely not be beneficial to society. There would be a lack of incentive to pass on the cost savings to consumers or to use invest the supernormal profit gained into R&D without any real threat of competition. This way, it will lead to allocative inefficiency and income inequality in society.

Marking Scheme:

12 marks	For an answer that demonstrates knowledge and understanding and has application and analysis:
4-5 marks	At least GOOD breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of

- External costs are not borne by the online shoppers - these are not reflected in the prices charged for the goods and services. Negative externalities occur when private consumption/ production creates an external cost to society that affects third parties as a 'spill-over effect' that is not internalised by private households and/ or firms.
- Since MEC to society is not internalised by the consumers of online shoppers, there is divergence between MPC and MSC, as seen in Figure 3 below, the actual costs to society is where $MSC = MPC + MEC$.
- Online shopping consumers behaviour (that led to discarded packaging) only consider their private cost of consumption. MEC is not internalised, leading to a greater private consumption, where $MPC = MPB$ at Q_p units, than the social optimal level of output, where $MSC = MSB$ at Q_s units of consumption in Figure 3.
- There is over-consumption of $Q_s - Q_p$ units of online shopping. This results in allocative inefficiency and deadweight/welfare loss to society of area $A_{E_1E_2}$.



- The government would implement policies to reduce the negative effects of discarded packaging caused by overconsumption of online shopping on the natural environment to achieve allocative efficiency in resource allocation and increase social welfare.

Body (2):

- Measure (1): Government could impose an indirect tax on the expenditure on online shopping
- The aim of such indirect specific taxes (for example, expenditure tax) is to get online shopping addicts to internalize the negative cost imposed on the environment caused by packaging wastes.
 - The amount of tax that the government should impose should equate to marginal external cost (MEC) at Q_s .
 - As seen in Figure 4, the tax will increase the marginal cost of online shopping as illustrated by an upward shift of the MPC curve from MPC to $MPC + tax$.
 - Consumers will thus consume online shopping at $MPB = MPC + tax$, thereby decrease their consumption from Q_p to Q_s as illustrated in Figure 4.
 - As Q_s is the socially optimal output where allocative efficiency is achieved and there is no welfare loss, the market failure is addressed.
 - Thus, taxation discourages excessive online shopping so as to reduce their MEC to reduce the tax they have to pay.

<p>✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing.</p> <p>The answer should also be supported by: Well-labelled and well referred to diagram(s) / Tool(s) of analysis drawn with precision (where appropriate). Evidence(s). Logical structure.</p>	<p>For an answer that demonstrates knowledge but lacks understanding, application and analysis:</p> <ul style="list-style-type: none"> • INSUFFICIENT breadth that considers the following economic concept(s). Point(s) chosen may be of relevance but may not be of significance in answering the question. • INSUFFICIENT depth in economic analysis that may reflect the following: <ul style="list-style-type: none"> • Lack of accuracy in the use of economic concepts, lack of clarity in elaboration, and lack of precision in the use of economic terminologies, language and phrasing.
<p>L1 1-3 marks</p>	
<p>For an evaluation that contains</p> <ul style="list-style-type: none"> • A synthesis of earlier economic arguments to arrive at relevant judgements/decisions (i.e. answer the question). • Well-explained criteria-based evaluative comments supported by accurate and clear analysis to provide fairness in views. • A good summative conclusion. 	
<p>For an evaluation that contains</p> <ul style="list-style-type: none"> • Relevant but unexplained evaluative judgement(s)/statement(s) i.e. evaluative judgement(s)/statement(s) not supported by analysis or • A relevant unexplained conclusion 	
<p>E2 2 marks</p>	
<p>E1 1 mark</p>	
<p>The "mountains of discarded packaging" [Extract 3] that comes from online shopping addiction leads to economic inefficiencies in resource allocation. Assess the most appropriate measures to deal with this economic inefficiency in resource allocation.</p> <p>[10]</p> <p>Introduction:</p> <ul style="list-style-type: none"> • With the e-commerce giants like Alibaba Group Holdings Ltd. and JD.com Inc. luring shoppers with huge bargains during the Singles' Day bonanza, Alibaba reported almost 500 billion yuan (\$76 billion) of sales this year, nearly four times U.S. • The "mountains of discarded packaging" that comes from online shopping addiction leads to economic inefficiencies in resource allocation. That is, there is negative externalities that arise from the over-consumption of online shopping. <p>Body (1): Explain how the "mountains of discarded packaging" that comes from online shopping addition leads to economic inefficiencies in resource allocation.</p> <ul style="list-style-type: none"> • With reference to Extract 3, Greenpeace estimates that Singles' Day generated 52,400 metric tons of CO2 from manufacturing, packaging and shipping in 2017. The generation of CO2 from these activities due to online shopping addiction results in pollution of the environment. This is the external cost of consumption imposed on the environment. 	
<p>(f)</p>	

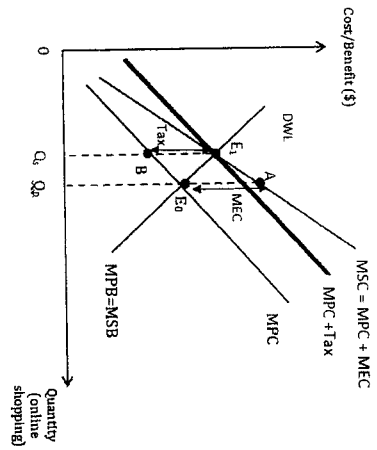


Figure 4: Impact of taxes

Limitations of taxation

- It is difficult to estimate the exact MEC as the impact of discarded packaging waste on the environment is intangible and hard to quantify.
- Hence, the government may under-tax or over-tax, hence underconsumption or overconsumption still persists, which does not eliminate the deadweight loss to achieve allocative efficiency. For instance, if the government were to under-tax, the consumption will still be between Q_{sQp} and not fall Q_s .

Measure (2): Government could implement a regulation to phase out single-use plastics and encourage the switch to other materials.

- With regulation against the use of single-use plastics, a material used mainly in packaging, the demand for plastics will decrease.
- At the same time of the phasing out of plastics, government should encourage these online shopping platforms to switch to other materials. This can be seen in Extract 3, where Alibaba's logistics arm Cainiao designed recyclable corrugated cardboard boxes that don't have to be sealed with plastic tapes. This is also known as the zipper bag. Alibaba has also offered this packaging to more than its resellers such as Nestle SA and Procter and Gamble Co to use. Cainiao also used 190,000 plastic-free boxes and 3 million biodegradable bags to package their Singles' Day orders this year.

Limitations of Regulation / Legislation of phasing out single-used plastics
 Regulation is a blunt tool, which may incur high costs of monitoring to be effective, such costs includes the cost of checking on firms to ensure that they are abiding by the regulations and prosecuting them in case of non-compliance.

Evaluative conclusion:

- In the short run, it will be more appropriate to use indirect taxes as a measure to reduce the inefficiency in resource allocation in the online shopping market as it is relatively quick to implement and the least costly way to reduce the over-consumption. Taxation forces the consumers to internalize the external costs to the socially optimal level.

- The government will also be able to use the revenue collected from the tax to incentivize firms to use alternative methods of packaging to reduce carbon emissions caused by the single-used plastics used in packaging.
- Regulation / Legislation to reduce the use of single-use plastics in packaging might take a longer time to achieve success in this case as it will effectively force the firms to reduce or stop the use of single-use plastics.
- However, government has to ensure that businesses have the ability to switch to other materials which are more environmentally friendly but not at the expense of their profitability. It is stated in Extract 4 that online shopping has become such a key driver of China's domestic economy, especially during the pandemic, that authorities have been reluctant to institute rules that could hurt the industry.

Marking Scheme:

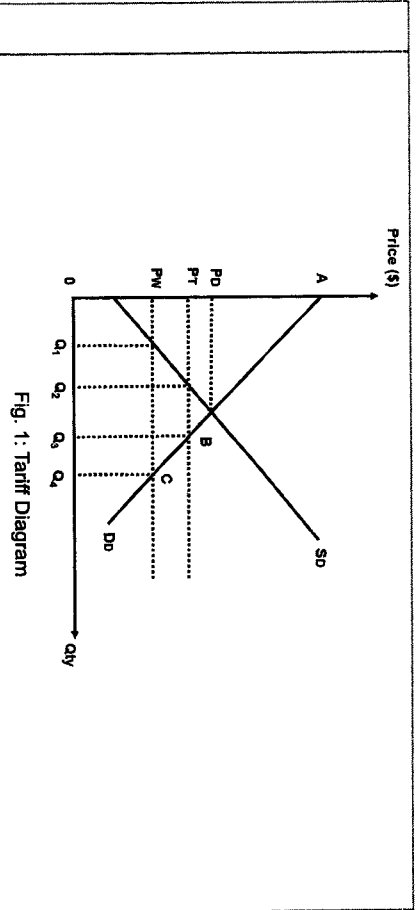
Level	Descriptors
L2 5-7 marks	<p>For an answer that demonstrates knowledge, understanding, application and analysis:</p> <p>At least GOOD breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of relevance and significance in answering the question.</p> <p>At least GOOD depth in economic analysis that reflects the following in MOST explanations.</p> <ul style="list-style-type: none"> ✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing. <p>The answer should also be supported by: Well-labelled and well-referred to diagram(s) drawn with precision (where appropriate). Relevant examples and accurate use of facts. Logical structure.</p>
L1 1-4 marks	<p>For an answer that demonstrates knowledge but lacks understanding, application and analysis:</p> <p>INSUFFICIENT breadth that considers the following economic concepts. Point(s) chosen may be of relevance but may not be of significance in answering the question.</p> <p>INSUFFICIENT depth in economic analysis that may reflect the following:</p> <ul style="list-style-type: none"> ✓ Lack of accuracy in the use of economic concepts, lack of clarity in elaboration, and lack of precision in the use of economic terminologies, language and phrasing. <p>The answer should also be supported by: Diagram(s) that may not be well-labelled, may not be well-referred to and may not be drawn with precision (where appropriate). Example(s). Logical structure.</p>

Evaluation

<p>E2 2-3 marks</p>	<p>For an evaluation that contains A synthesis of earlier economic arguments to arrive at relevant judgements/decisions (i.e. answer the question). Well-explained criteria-based evaluative comments supported by accurate and clear analysis to provide fairness in views. A good summative conclusion.</p>
<p>E1 1 mark</p>	<p>For an evaluation that contains Relevant but unexplained evaluative judgement(s) / statement(s) i.e. evaluative judgement(s) / statement(s) not supported by analysis. OR A relevant conclusion.</p>
<p>[Total: 30]</p>	

2022 SH2 Prelim CSQ 2 Suggested Answer Outline

<p>(a) With reference to Extract 4 and Table 2, explain two reasons why India is against the removal of import tariffs. [4]</p>	<p>Any Two well-explained argument for protectionism (i.e. against the removal of import tariffs) below with clear reference to Extract 4 or Table 2:</p> <p>Protect Domestic Employment</p> <ul style="list-style-type: none"> India is against the removal of import tariffs on industries such as the 'textiles, agriculture and dairy sectors' (Extract 4) as this would result in increase in its domestic unemployment as such sectors employ 'hundreds of millions of workers'. [1] With the removal of import tariffs in such sectors, the lowered relative price of tariff-free imports from countries such as China would lead to a more than proportionate increase in quantity demanded of imports given that such goods are likely price-elastic in demand with the great availability of substitutes from other countries. This would thus lead to an increase in import expenditure, and ceteris paribus, would lead to a fall in aggregate demand (AD), which would lead to a fall in derived demand of labour, causing cyclical unemployment in India. [1] <p>Protect Balance of Payment</p> <ul style="list-style-type: none"> As seen in Table 2, India has a current account deficit up to 2019 and thus may be against the removal of import tariffs to protect against an overall balance of payment deficit. [1] By reducing import expenditure, it will help India avoid depleting its foreign exchange reserves, thus allowing India to be able to intervene to sell foreign currencies to appreciate its exchange rate when necessary for example to deal with possible concerns of imported inflation or boost foreign investor's confidence in India. [1]
<p>(b) Using a diagram and Extract 5, explain how the removal of import tariffs would impact consumer surplus. [3]</p>	<ul style="list-style-type: none"> There will thus be an increase in consumers' surplus where consumers will benefit from 'cost-savings passed down' (Extract 5), where the lowered cost of import tariff which is removed is passed down to consumers in terms of lower prices of imported end consumer goods. [1] With an import tariff, equilibrium price in the economy would be at P_r and quantity demanded will be at Q_3 as seen in Figure 1. With the removal of import tariffs, there will be an increase in quantity demanded by consumers from Q_3 to Q_4 as well as fall in equilibrium price from P_r to P_w as seen in Figure 1 thus leading to a greater difference between the price consumers are willing to pay and actually pay. [1] Thus, there is an increase in consumers' surplus is seen in Figure 1 from area ABP_r to ACP_w. Well-labelled and well-referenced diagram. [1]

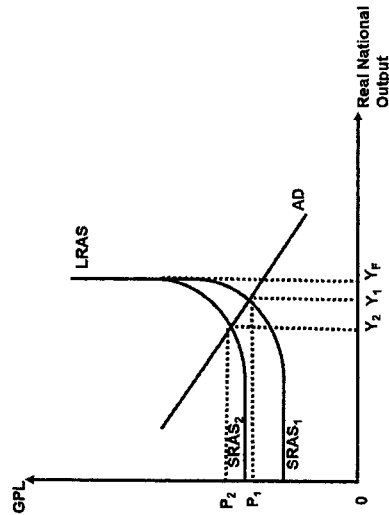


<p>(c) With reference to Extract 6: (i) Explain how an increase in foreign direct investment in the short run and the long run. [3]</p>	<ul style="list-style-type: none"> In the short run, an increase in foreign direct investment (FDI) will mean more debit transactions increasing the long term capital flows thus worsening the country's capital and financial account, despite leading to an improvement in the overall balance of payment (BOP) position. [1] Increased FDI also suggests repatriation of profits by the FDI from Singapore back to the FDI's countries of origin in the long run. [1] The increase in debits would worsen Singapore's primary income account, thus worsening the current account and thus worsening of Singapore's BOP in the long run. [1]
<p>(ii) Explain why an increase in foreign direct investment may lead to an increase in the rate of unemployment in Singapore. [2]</p>	<ul style="list-style-type: none"> FDI in Singapore will lead to an increase in demand for high skilled labour as seen in how increase in FDI created 'a diversity of good jobs in research, product development, manufacturing and commercial functions', causing structural shift in the economy. [1] Low skilled labour in Singapore thus lacks the necessary skills to be employed in such jobs and thus the jobs skills mismatch will lead to an increase in structural unemployment in Singapore. [1]
<p>(d) Discuss the relative benefits of diversification for a resilient supply chain as compared to specialisation of exports to an economy engaging in international trade. [8]</p> <p>Introduction</p> <ul style="list-style-type: none"> State that the benefits to an economy can be indicated by the economy's achievement of the macroeconomic goals as well as improvement to the economy's standard of living (SOL). 	

- Diversification will help ensure resilience against supply-side shocks which may affect the internal stability of an economy.
- Specialisation may allow countries to benefit from cost advantages from internal economies of scale as well as gains from trading according to theory of comparative advantage.

Body

- Benefit to an Economy with Diversification for a resilient supply chain
- The COVID-19 pandemic has demonstrated both 'supply and demand shock' to the global economy (Extract 6). This has caused disruptions to supply chains as 'countries imposed lockdowns and export bans'. For an economy that is reliant on the global economy for imports such as Singapore, this vulnerability will result in compromise to its internal stability.
- By 'diversifying supply sources' specially for essential items (Extract 6), Singapore as an economy is able to ensure that it is able to have access to imported inputs from cheaper sources that are less likely to be affected by lockdowns thus managing the price of such imported inputs. This will thus help mitigate any significant increase in imported cost of production to the economy.
- This helps to keep the economy SRAS from worsening, thus helping to curb any possible import price-push inflation due to possible supply shocks or export bans with diversification of supply sources.
- This also helps to maintain internal stability in terms of actual economic growth, as firms reliant on imported inputs will respond to the lower cost of production by lowering prices as well as increasing production.



- Benefit to an Economy with Specialisation
- For an export-reliant economy such as Singapore, there would be greater benefit gained from specialisation to tap on gains from trade according to theory of comparative advantage.
- Given Singapore's high-skilled labour as well as large proportion of capital endowments, it is likely that Singapore has a lower opportunity cost and thus comparative advantage in high-tech and capital-intensive industries. Thus as the global economy shifts to provide

greater opportunities in the 'digital economy' as well as 'e-commerce' which Singapore has a comparative advantage in, Singapore will be able to gain from specialising according to her comparative advantage in these high-tech and capital-intensive industries.

- By specialising according to comparative advantage, an economy will thus increase its exports, assuming mutually beneficial terms of trade. Ceteris paribus, the increase in its export revenue would thus lead to an improvement in its aggregate demand (AD). The increase in AD would thus lead to a more than proportionate increase in national income via the multiplier process, thus leading to actual economic growth. The increase in derived demand for labour at each multiplier stage also would help lower cyclical unemployment in the economy.
- The increase in export revenue would also lead to increase in credit items in the economy's balance of trade account, thus leading to an overall improvement in its balance of payment position.

Evaluative Conclusion

- Whether or not an economy should diversify for a resilient supply chain or specialise depends on the nature of the economy. For an economy that is largely dependent on export for growth such as developing economies, then there are higher relative benefits to specialisation. For an economy that is largely dependent on imports due to lack of natural resources, then such economies should focus more on diversifying for a resilient supply chain.

Marking Scheme:

<p>L2 4-6 marks</p>	<p>For an answer that demonstrates knowledge and understanding and has application and analysis: At least GOOD breadth that considers the following economic concepts in explaining multiple and balanced perspectives; viewpoints, relationships and factors. MOST points chosen should be of relevance and significance in answering the question. At least GOOD depth in economic analysis that reflects the following in MOST explanations. ✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing. The answer should also be supported by: Well-labelled and well referred to diagram(s) / Tool(s) of analysis drawn Evidence(s). Logical structure.</p>
<p>L1 1-3 marks</p>	<p>For an answer that demonstrates knowledge but lacks understanding, application and analysis: • INSUFFICIENT breadth that considers the following economic concept(s). Point(s) chosen may be of relevance but may not be of significance in answering the question. • INSUFFICIENT depth in economic analysis that may reflect the following:</p>

<ul style="list-style-type: none"> Lack of accuracy in the use of economic concepts, lack of clarity in elaboration, and lack of precision in the use of economic terminologies, language and phrasing. 	<p>E2 2 marks</p> <p>For an evaluation that contains A synthesis of earlier economic arguments to arrive at relevant judgements/decisions (i.e. answer the question). Well-explained criteria-based evaluative comments supported by accurate and clear analysis to provide fairness in views. A good summative conclusion.</p>
<p>E1 1 mark</p> <p>For an evaluation that contains Relevant but unexplained evaluative judgement(s)/statement(s) i.e. evaluative judgement(s)/statement(s) not supported by analysis or A relevant unexplained conclusion</p>	<p>(e) Discuss whether participation in the RCEP would likely enhance the living standards of an economy. [10]</p> <p>Introduction</p> <ul style="list-style-type: none"> State that participation in the RCEP will bring about greater integration of economies in the ASEAN region in terms of trade in goods and services as well as foreign direct investment (FDI). With an increase in trade and FDI, there will likely be an improvement to aggregate demand (AD) of an economy which may contribute to improvement to the material standard of living (SOL) of an economy. However, with trade and FDI, there may be concerns of vulnerability to internal stability due to large inflow of imports as well as income inequity which may compromise on the material and non-material aspects of SOL. <p>Body</p> <p>1. Improvement to material SOL with RCEP</p> <ul style="list-style-type: none"> RCEP will lead to 'tariff elimination for at least 92 per cent of goods traded among members', thus leading to improved price competitiveness of a countries exports. With lowered tariffs, price of exports are lower to the foreigners. For countries that export goods that are relatively price-elastic such as manufactured goods that have substitutes that are exported by other countries, the lower price of exports will lead to a more than proportionate increase in quantity demanded of exports, and thus increase in export revenue. Ceteris paribus, this increase in export revenue will lead to an increase in an economy's AD. In addition, RCEP helps facilitate FDI across member countries as member nations are able to 'invest in fellow RCEP countries without having to meet conditional performance requirements'. RCEP members nations also agree to 'share information' that may be relevant to help small and medium enterprises engage in FDI. With an increase in FDI, an economy's AD increases. In addition, the likely accumulation of capital assets with FDI as well as transfer of new ideas and technology will likely enhance an economy's productive capacity, leading to further improvement in LRAS. Thus, with the increase in non-inflationary economic growth, the household's disposable income in the economy increases. The increase in real purchasing power and thus ability to

<p>consume more goods & services will thus indicate an improvement to an economy's material SOL.</p>	<p>2. Worsening of material and non-material SOL with RCEP</p> <p>a) Material SOL</p> <ul style="list-style-type: none"> With tariff elimination of the RCEP, some member nations may suffer from increase in imports instead. This is seen in the case where India refused to participate in RCEP due to concerns of 'sharp increase in imports from China' which are likely to 'adversely impact 'small and medium-sized factories'. With a larger extent of increase in import expenditure as compared to export revenue, AD is likely to fall instead of increase and thus leading to a fall in national income and material SOL instead. This is especially so for developing economies who may need to protect their infant industry from competition from relatively more mature industries of developed economies. <p>b) Non-Material SOL</p> <ul style="list-style-type: none"> FDI if there were to bring in new ideas and technology may result in structural shifts in an economy. This may lead to some workers being structural unemployed. For example, in the case of Singapore where the economy is restructuring to tap on opportunities by moving up the global supply chain and tapping on 'opportunities in the digital economy', the low-skilled workers in Singapore may face the threat of structural unemployment. As these low-skilled workers face a lower demand for their labour services and thus fall in their wages, this may contribute to a worsening of income inequity in Singapore. Worsening income inequity may compromise on social cohesion in an economy and thus compromise on an economy's non-material SOL. <p>Evaluative Conclusion</p> <ul style="list-style-type: none"> Whether or not RCEP will enhance an economy's SOL depends on the nature of the economy. For example, countries that are more reliant on external sources such as trade and FDI for growth are more likely to benefit from material SOL. For example, as a small and open economy such as Singapore, where her trade value with the other RCEP members has grown steadily and accounts for 50.4 per cent of her global trade. Whether or not RCEP will enhance an economy's SOL also depends on the government's ability to address any threats to SOL brought about by RCEP. 						
<p>Marking Scheme:</p>	<table border="1"> <thead> <tr> <th>Level</th> <th>Descriptors</th> </tr> </thead> <tbody> <tr> <td>L2</td> <td>For an answer that demonstrates knowledge, understanding, application and analysis:</td> </tr> <tr> <td>5-7 marks</td> <td>At least GOOD breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of relevance and significance in answering the question.</td> </tr> </tbody> </table> <p>At least GOOD depth in economic analysis that reflects the following in MOST explanations.</p>	Level	Descriptors	L2	For an answer that demonstrates knowledge, understanding, application and analysis:	5-7 marks	At least GOOD breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of relevance and significance in answering the question.
Level	Descriptors						
L2	For an answer that demonstrates knowledge, understanding, application and analysis:						
5-7 marks	At least GOOD breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of relevance and significance in answering the question.						

	<p>✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing.</p> <p>The answer should also be supported by: Well-labelled and well-referred to diagram(s) drawn with precision (where appropriate). Relevant examples and accurate use of facts. Logical structure.</p>
<p>L1 1-4 marks</p>	<p>For an answer that demonstrates knowledge but lacks understanding, application and analysis:</p> <p>INSUFFICIENT breadth that considers the following economic concepts. Point(s) chosen may be of relevance but may not be of significance in answering the question.</p> <p>INSUFFICIENT depth in economic analysis that may reflect the following :</p> <ul style="list-style-type: none"> ✓ Lack of accuracy in the use of economic concepts, lack of clarity in elaboration, and lack of precision in the use of economic terminologies, language and phrasing. <p>The answer should also be supported by: Diagram(s) that may not be well-labelled, may not be well-referred to and may not be drawn with precision (where appropriate). Example(s). Logical structure.</p>
<p>Evaluation</p>	
<p>E2 2-3 marks</p>	<p>For an evaluation that contains</p> <p>A synthesis of earlier economic arguments to arrive at relevant judgements/decisions (i.e. answer the question). Well-explained criteria-based evaluative comments supported by accurate and clear analysis to provide fairness in views. A good summative conclusion.</p>
<p>E1 1 mark</p> <p>OR</p>	<p>For an evaluation that contains</p> <p>Relevant but unexplained evaluative judgement(s) / statement(s) i.e. evaluative judgement(s) / statement(s) not supported by analysis.</p> <p>A relevant conclusion.</p>

1 Microchips are a crucial element in the manufacturing of final goods such as cars and consumer electronics. COVID-19 pandemic in 2020 had lockdowns which resulted in bottlenecks in the supply chain for semiconductors and changed preferences to work-from-home. Global economic growth is projected at -4.9% in 2020.

(a) Explain why a significant shortage of microchips exists during COVID-19 pandemic in 2020. [10]

(b) Discuss whether consumers or producers are more likely to bear the cost of the change in microchip prices. [15]

Part (a) suggested answer

Introduction

- The events mentioned in the preamble caused an increase in demand and a decrease in supply of microchips thus resulting in a shortage of microchips.

Body:

Demand for microchips

- Due to the pandemic, global growth is projected to be at -4.9%. This means that most economies would be in a recession in 2020. There will be a decrease in the demand for car (output), the derived demand for microchips will decrease.
- However, the pandemic also brought about lockdowns and work from home arrangements. Due to the work from home arrangement, there is a change in taste and preference towards consuming more electronic products such as laptops, monitors and printers. As microchips is an input factor to manufacture the electronic products, with the increase in the demand for laptops (output), the demand for microchips will increase.
- The fall in income and the change in taste and preference have contradictory effects on the demand for microchips.
- The overall increase in demand for the microchips is illustrated by the rightward shift of the demand curve from D_0 to D_1 in Figure 1.

Fall in supply of microchips

- The supply of microchips has fallen due to the supply shock/government policy.
- With the COVID-19 lockdowns across different countries, the government policy has caused the supply of microchips to decrease as the producers are faced with supply chain disruptions and production constraints. Hence, supply of microchips decreases and is illustrated by the leftward shift in supply from S_0 to S_1 in Figure 1.

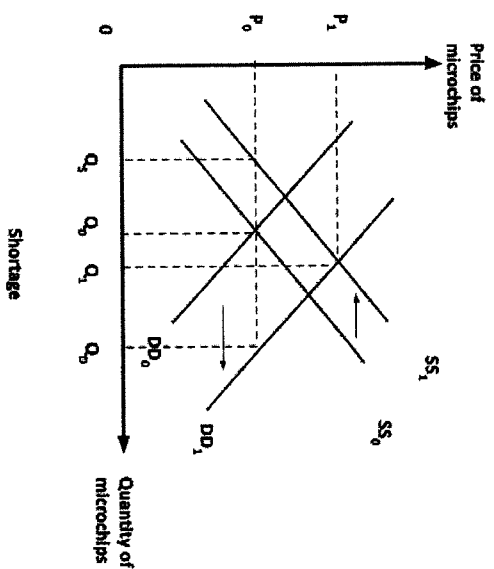


Fig 1: Market for microchips

Significant shortage of microchips

- The shortage of microchips is significant due to large increase in demand and large fall in the supply of microchips.
- Hence, the large extent of rightward shift in demand and leftward shift in supply have resulted in significant shortages of microchips.

Conclusion

- There is a significant shortage of microchips, due to the high demand and fall in supply.

Mark scheme	For an answer that demonstrates knowledge, understanding, application and analysis:
L3 8 - 10	<p>EXCELLENT breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of relevance and significance in answering the question.</p> <p>EXCELLENT depth in economic analysis that reflects the following in ALL explanations.</p> <ul style="list-style-type: none"> ✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing. <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> Well-labelled and well-referred to diagram(s) / tool(s) of analysis drawn with precision (where appropriate). Relevant examples and accurate use of facts. Logical structure.
L2 5 - 7	<p>For an answer that demonstrates knowledge and understanding but lacks application and analysis:</p> <p>At least GOOD breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of relevance and significance in answering the question.</p> <p>At least GOOD depth in economic analysis that reflects the following in MOST explanations.</p> <ul style="list-style-type: none"> ✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing. <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> Diagram(s) / Tool(s) of analysis that may not be well-labelled, may not be well-referred to and may not be drawn with precision (where appropriate). Example(s). Logical structure.
High L1 3 - 4	<p>For an answer that demonstrates knowledge but lacks understanding, application and analysis:</p> <p>INSUFFICIENT breadth that considers the following economic concept(s). Point(s) chosen may be of relevance but may not be of significance in answering the question.</p> <p>INSUFFICIENT depth in economic analysis that may reflect the following:</p> <ul style="list-style-type: none"> • Lack of accuracy in the use of economic concepts, lack of clarity in elaboration, and lack of precision in the use of economic terminologies, language and phrasing.
Low L1 1 - 2	<p>For an answer that:</p> <ul style="list-style-type: none"> Is irrelevant in analysis but may contain an introduction that addresses the question or contains no economic analysis but may contain a few statements that are relevant to the concepts required to answer the question. Contains fundamental conceptual errors in analysis.

Part (b) suggested answer

Introduction

- The increase in microchips costs will be a burden on the consumers of cars and consumer electronics and cause a fall in consumers' surplus.
- The cars and consumer electronics manufacturers also have to bear part of the increase in costs, though the full impact on the cars and consumer electronics manufacturers also requires a closer look at the impact of increase in price of microchips on their total revenue of car and consumer electronics.
- Whether or not the consumers or the producers of cars and consumer electronics bear a greater burden depends on the relative price elasticity of demand and price elasticity of supply.

Body

- Body 1: Explain the impact of increase in microchips costs on the consumers and producers of microchips
- The increase in price of microchips will have an impact on the consumers of microchips (smartphone/laptop/car manufacturers) and the producers of microchips.
 - For consumers of microchips (smartphone/laptop/car manufacturers), there is lack of substitutes available for microchips and high degree of necessity to use microchips to produce their output. Hence, demand for microchips is relatively price-inelastic, as illustrated by the demand curve DD in Figure 1 below.
 - In contrast, supply of microchips is likely to be price elastic due to shorter manufacturing time period and the existence of spare capacity. Hence, producers of microchips may be able to respond quickly to the higher market prices by increasing the quantity supplied of microchips of by increasing production. This is illustrated by the supply curve in Figure 1 below.
 - In Figure 1 below, the per unit cost increase is given by P_0P_1 , where consumers bear a greater incidence of price increase of P_0P_1 and the producers bears a smaller incidence of bP_0 .

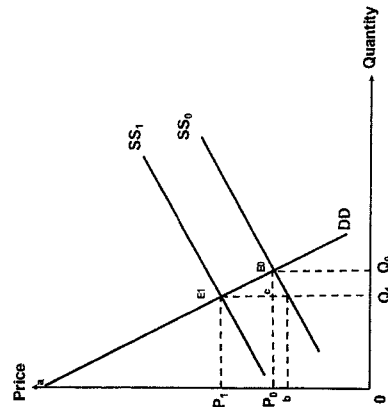


Figure 1: Impact of increase in microchips costs on the consumers and producers of microchips

In the consumer electronics (as smartphones and computers) market, consumers rather than the producers may bear a greater burden of the increase in costs of microchips.

- For smartphones and computers, there is a high degree of necessity to use these devices for education, communication and entertainment. Hence, demand for consumer electronics is relatively price-inelastic, as illustrated by the demand curve DD in Figure 1.
- In contrast, supply of consumer electronics is likely to be price elastic due to shorter manufacturing time period and the existence of spare capacity. Hence, producers of consumer electronics may be able to respond quickly to the higher market prices by increasing the quantity supplied of consumer electronics of by increasing production. This is illustrated by the supply curve in Figure 1 below.
- In Figure 1 below, the per unit cost increase is given by bP_1 , where consumers bear a greater incidence of price increase of P_1P_0 , and the producers bears a smaller incidence of bP_0 .

Evaluative conclusion

- The extent of burden of an increase in microchips costs on consumers and producers depends on the relative price-elasticity of demand (PED) and price-elasticity of supply of the goods itself.
- The extent of burden of an increase in microchips costs on consumers and producers depends on the extent of shift of supply given the differing relative importance of microchips in terms of the total cost of car or consumer electronics.

Mark scheme

<p>L3 8 - 10</p>	<p>For an answer that demonstrates knowledge, understanding, application and analysis:</p> <p>EXCELLENT breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of relevance and significance in answering the question.</p> <p>EXCELLENT depth in economic analysis that reflects the following in ALL explanations.</p> <ul style="list-style-type: none"> ✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminology, language and phrasing. <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> Well-labelled and well-referred to diagram(s) / tool(s) of analysis drawn with precision (where appropriate). Relevant examples and accurate use of facts. Logical structure.
<p>L2 5 - 7</p>	<p>For an answer that demonstrates knowledge and understanding but lacks application and analysis:</p> <p>At least GOOD breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of relevance and significance in answering the question.</p> <p>At least GOOD depth in economic analysis that reflects the following in MOST explanations.</p> <ul style="list-style-type: none"> ✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminology, language and phrasing. <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> Diagram(s) / Tool(s) of analysis that may not be well-labelled, may not be well-referred to and may not be drawn with precision (where appropriate). Example(s). Logical structure.
<p>High L1 3 - 4</p>	<p>For an answer that demonstrates knowledge but lacks understanding, application and analysis:</p> <p>INSUFFICIENT breadth that considers the following economic concept(s). Point(s) chosen may be of relevance but may not be of significance in answering the question.</p> <p>INSUFFICIENT depth in economic analysis that may reflect the following:</p> <ul style="list-style-type: none"> • Lack of accuracy in the use of economic concepts, lack of clarity in elaboration, and lack of precision in the use of economic terminology, language and phrasing.
<p>Low L1 1 - 2</p>	<p>For an answer that:</p> <p>Is irrelevant in analysis but may contain an introduction that addresses the question or contains no economic analysis but may contain a few statements that are relevant to the concepts required to answer the question.</p> <p>Contains fundamental conceptual errors in analysis.</p>

Levels	Descriptors
E3 4 - 5	<p>For an evaluation that contains</p> <p>A synthesis of earlier economic arguments to arrive at relevant judgements/decisions (i.e. answer the question).</p> <p>Well-explained criteria-based evaluative comments supported by accurate and clear analysis to provide fairness in views.</p> <p>A good summative conclusion.</p>
E2 2 - 3	<p>For an evaluation that contains</p> <p>Relevant judgement(s)/decision(s) (i.e. answer the question) that may not follow from earlier economic arguments.</p> <p>Criteria-based evaluative comment(s) supported by analysis to provide fairness in views but the comment(s) may not be well-explained, may be unclear and/or may be inaccurate at times.</p>
E1 1	<p>For an evaluation that contains</p> <p>Relevant but unexplained evaluative judgement(s)/statement(s) i.e. evaluative judgement(s)/statement(s) not supported by analysis or</p> <p>A relevant conclusion.</p>

2022 NJC H2 Economics Preliminary Examination Essay Question 2

- 2 (a) Explain why some consumer electronics megastores in Singapore like Courts and Harvey Norman would price match other consumer electronics megastores by charging the same prices for same products but smaller consumer electronics stores in the neighbourhood would not. [10]
- (b) Discuss whether demand or supply factors are more important in explaining the coexistence of big businesses and small independent businesses. [15]

Part (a) suggested answer

Introduction

- Consumer electronics stores in Singapore operate in a oligopoly market structure.
- The megastores (i.e. oligopolies) are mutually interdependent thus would price match other megastores.
- The smaller stores in the neighbourhood would not match the megastores.

Body 1: Explain that some consumer electronics megastores would price match other consumer electronics megastores by charging the same prices for the same products.

- In Singapore's consumer electronics market, there are a few dominant firms (e.g. Courts, Harvey Norman, Best Denki, Challenger,) and each of these megastores has significant market share.
- In addition, there are high barriers to entry in the market. For example, existing megastores enjoy tremendous brand loyalty via their respective loyalty reward program where members can accumulate points which can be used to enjoy additional discounts, attractive free gifts, etc.
- Furthermore, each of the megastore sells differentiated goods thus there are a few close substitutes e.g. same product from the same brand such as LG, Samsung, Panasonic but each has different inhouse warranty.
- The megastores are therefore mutually interdependent.

- If a megastore reduces its price, other megastores would have to follow suit i.e. price match. If not, they would face a decrease in demand and profit would decrease.

Body 2: Explain that smaller consumer electronics stores in the neighbourhood would not price match the megastores because they do not need to and/or are unable to.

- On the other hand, due to their small scale of production / sales, the smaller stores in the neighbourhood would not price match the megastores because the former does not enjoy the level internal economies of scale (IEOS, if any) enjoyed by the megastores. For example, the smaller stores are less able / unable to enjoy marketing economies of

scale e.g. with smaller scale of production / sales, advertising cost of the smaller stores is only shared across a smaller amount of output / sales. As a result, when faced with the lowering of prices by the megastores, the smaller stores are unable to price match the lower prices due to their higher average cost.

Conclusion

- In conclusion, consumer electronics megastores would price match other consumer electronics megastores by charging the same prices for the same products due to mutual interdependency but smaller consumer electronics stores in the neighbourhood would not due to their inability to enjoy IEOS.

Mark scheme

<p>L3 8 - 10</p>	<p>For an answer that demonstrates knowledge, understanding, application and analysis:</p> <p>EXCELLENT breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of relevance and significance in answering the question.</p> <p>EXCELLENT depth in economic analysis that reflects the following in ALL explanations.</p> <ul style="list-style-type: none"> ✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing. <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> Well-labelled and well-referred to diagram(s) / tool(s) of analysis drawn with precision (where appropriate). Relevant examples and accurate use of facts. Logical structure.
<p>L2 5 - 7</p>	<p>For an answer that demonstrates knowledge and understanding but lacks application and analysis:</p> <p>At least GOOD breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of relevance and significance in answering the question.</p> <p>At least GOOD depth in economic analysis that reflects the following in MOST explanations.</p> <ul style="list-style-type: none"> ✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing. <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> Diagram(s) / Tool(s) of analysis that may not be well-labelled, may not be well-referred to and may not be drawn with precision (where appropriate). Example(s). Logical structure.
<p>High L1 3 - 4</p>	<p>For an answer that demonstrates knowledge but lacks understanding, application and analysis:</p> <p>INSUFFICIENT breadth that considers the following economic concept(s). Point(s) chosen may be of relevance but may not be of significance in answering the question.</p> <p>INSUFFICIENT depth in economic analysis that may reflect the following:</p> <ul style="list-style-type: none"> Lack of accuracy in the use of economic concepts, lack of clarity in elaboration, and lack of precision in the use of economic terminologies, language and phrasing.
<p>Low L1 1 - 2</p>	<p>For an answer that:</p> <p>Is irrelevant in analysis but may contain an introduction that addresses the question or contains no economic analysis but may contain a few statements that are relevant to the concepts required to answer the question.</p> <p>Contains fundamental conceptual errors in analysis.</p>

Part (b) suggested answer

Introduction

- Both demand and supply / cost factors can explain the coexistence of big and small businesses.

Body 1: Explain the demand factor(s) that explains the coexistence of big and small businesses.

- The size of a business can be determined by the size of its demand i.e. demand factor.
- Even if a business can enjoy huge average cost savings from having a large scale of production via enjoying internal economies of scale (IEOS) having a large output would decrease the business' profit if it faces a much smaller demand for its goods. The size of the business would thus be limited i.e. existence of small businesses.
- However, if a business faces a much larger demand the business can then grow big while enjoying internal economies of scale.
- A determinant of the size of demand is consumers' preference.
 - Small businesses exist (alongside with big businesses) to cater to consumers' taste for varieties and personalised services. For example, in shirt making businesses, small bespoke tailors exist to cater to a small niche group of consumers who want custom-fit shirt to look better.
 - On the other hand, the existence of a much larger size of consumers who value lower prices over personalisation explains the existence of big shirt making businesses.
 - The coexistence of big and small firms can thus be explained by the size of demand for the products / goods which is a demand factor.

Body 2: Explain the supply / cost factor(s) that explains the coexistence of big and small businesses.

- The size of a business can also be determined the ability of the business to enjoy IEOS i.e. supply / cost factor.
 - Bespoke shirts can only be hand-made a piece at a time while standardised shirts can be mass produced by big shirt making business via the use of machines. The latter would involve huge capital outlay thus afford huge enjoyment of internal economies of scale. For example, the big businesses can enjoy plant internal economies of scale via the use of indivisible but highly efficient shirt making machineries with their large scale of production.
 - On the other hand, small bespoke tailors exist alongside the big shirt making businesses because of the nature of their personalised products.

- o The coexistence of big and small firms can thus be explained by the nature of the products / goods which is a supply factor.
- Evaluative conclusion**
- In conclusion, both demand and supply / cost factors are important in explaining the coexistence of big and small businesses. Whether demand or supply factors are more important in explaining the coexistence of big and small businesses depends on:
 - o The type / nature of goods considered.
 - For example, if the goods considered are necessity which has huge demand, then whether a business grows big or small depends more on the supply factor such as the ability to enjoy EOS. However, if the goods considered are super luxury such handbags that are handmade with rare materials, even if there is a large demand, some businesses are unlikely to grow big.
 - o The importance of services surrounding the goods: For example, for goods where knowledge regarding the use of the goods is important, demand factors might be more important as personalised services to provide such knowledge are important. As such, demand factor might be more important in explaining the coexistence of small independent.

Mark scheme	
L3 8 - 10	<p>For an answer that demonstrates knowledge, understanding, application and analysis:</p> <p>EXCELLENT breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of relevance and significance in answering the question.</p> <p>EXCELLENT depth in economic analysis that reflects the following in ALL explanations.</p> <ul style="list-style-type: none"> ✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing. <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> Well-labelled and well-referred to diagram(s) / tool(s) of analysis drawn with precision (where appropriate). Relevant examples and accurate use of facts. Logical structure.
L2 5 - 7	<p>For an answer that demonstrates knowledge and understanding but lacks application and analysis:</p> <p>At least GOOD breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of relevance and significance in answering the question.</p> <p>At least GOOD depth in economic analysis that reflects the following in MOST explanations.</p> <ul style="list-style-type: none"> ✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing. <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> Diagram(s) / Tool(s) of analysis that may not be well-labelled, may not be well-referred to and may not be drawn with precision (where appropriate). Example(s). Logical structure.
High L1 3 - 4	<p>For an answer that demonstrates knowledge but lacks understanding, application and analysis:</p> <p>INSUFFICIENT breadth that considers the following economic concept(s). Point(s) chosen may be of relevance but may not be of significance in answering the question.</p> <p>INSUFFICIENT depth in economic analysis that may reflect the following:</p> <ul style="list-style-type: none"> • Lack of accuracy in the use of economic concepts, lack of clarity in elaboration, and lack of precision in the use of economic terminologies, language and phrasing.
Low L1 1 - 2	<p>For an answer that:</p> <p>Is irrelevant in analysis but may contain an introduction that addresses the question or contains no economic analysis but may contain a few statements that are relevant to the concepts required to answer the question.</p> <p>Contains fundamental conceptual errors in analysis.</p>

Levels	Descriptions
<p>E3 4 - 5</p>	<p>For an evaluation that contains</p> <p>A synthesis of earlier economic arguments to arrive at relevant judgements/decisions (i.e. answer the question).</p> <p>Well-explained criteria-based evaluative comments supported by accurate and clear analysis to provide fairness in views.</p> <p>A good summative conclusion.</p>
<p>E2 2 - 3</p>	<p>For an evaluation that contains</p> <p>Relevant judgement(s)/decision(s) (i.e. answer the question) that may not follow from earlier economic arguments.</p> <p>Criteria-based evaluative comment(s) supported by analysis to provide fairness in views but the comment(s) may not be well-explained, may be unclear and/or may be inaccurate at times.</p>
<p>E1 1</p>	<p>For an evaluation that contains</p> <p>Relevant but unexplained evaluative judgement(s)/statement(s) i.e. evaluative judgement(s)/statement(s) not supported by analysis or</p> <p>A relevant conclusion.</p>

- 3 Children who grow up in lower-income families have less access to quality education. Singapore government will start to level the playing field by providing more assistance to those in danger of being left behind during pre-school years. In addition, the government will also double spending on the pre-school sector to \$1.7 billion by 2022.

Discuss the factors that the Singapore government should consider in its decision to intervene in the pre-school education market. [25]

Suggested Answer Outline

Introduction

- In deciding whether to intervene in the pre-school education market, the government has to gather the necessary information from various economic perspectives, consider its constraints, weigh the benefits versus the costs of such intervention and consider its unintended consequences. This approach is known as the decision-making framework.

Body

Benefits of intervening in the pre-school education market

Benefit 1 Correct market failure due to positive externalities in consumption to achieve allocative efficiency

- The benefits of early education extend to society as a whole. The third party (society) benefits through better work force in the long term as pre-school education might enable to child to develop good cognitive skills which will translate to more year of schooling and better labour work force which will bring about more innovation and higher productivity.
- Hence, the presence of marginal external benefits (MEB) creates a divergence between the marginal private benefits (MPB) and marginal social benefits (MSB) where $MSB = MPB + MEB$.
- Assuming no negative externality, marginal private cost (MPC) equals to marginal social cost (MSC).

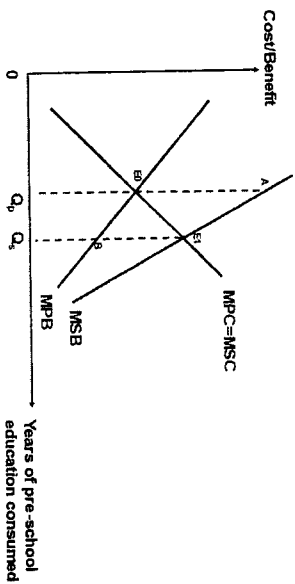


Figure 1: Market failure from the underconsumption of pre-school education

- In the pursuit of self-interest, consumers will only consider their own private costs and benefits and consume at Q_p , where $MPC=MPB$. However, the socially optimum output level is Q_s , where $MSB=MSC$.
- Thus, there is an underconsumption of Q_p units leading to a deadweight loss of area ABC and allocative inefficiency.
- Hence, government intervention can be beneficial via attaining allocative efficiency (the above explain the need for government intervention not the benefit of it).
- The subsidy will reduce the MPC, shifting the MPC curve from MPC to $MPC + \text{subsidy per unit}$, causing the consumers to consume pre-school education up to the level of Q_s , hence coinciding with the socially optimal output level.

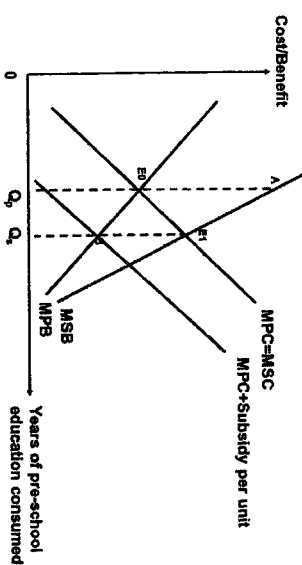


Figure 2: Subsidy for pre-school education

Evaluation of benefit 1

- Due to imperfect information, it is difficult to accurately measure the amount of MEB.

Benefit 2 Correct market failure due imperfect information to achieve allocative efficiency

- If left to the free market, it is likely that pre-school education will also be under-consumed because the family/household undervalue the family's private benefits from the consumption of pre-school.
- Most parents perceived the MPB of pre-school education to be acquisition of simple knowledge by their children.
- However, parents have underestimated the amount of true benefits to pre-school education.
- As most parents may be unaware of the extent of the full benefits from pre-school education. With reference to figure 3, due to imperfect information, there is a divergence between MPBperceived and MPBactual.
- Hence, with imperfect information, there will be an underconsumption of Q_p / Q_a units of pre-school education and the welfare loss is represented by area ABC.
- To attain allocative efficiency in the case of imperfect information, the government could provide campaign to inform parents of the true benefits to

- Hence, the benefit of government intervention would be to correct market failure due to imperfect information in the case of merit goods, a government can provide the necessary information through educational campaigns to help consumers make rational decisions.
- For example, there are advertisements on the actual benefits of pre-school education.
- Assuming that social optimal level of information is provided to parents to learn about the full benefit, the demand for pre-school education would increase as illustrated by the shift from $MPB_{perceived}$ to MPB_{actual} (Figure 3) thus achieving allocative efficiency where deadweight loss is eliminated.

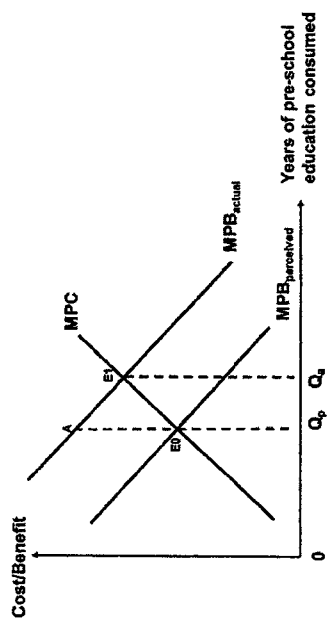


Figure 3: Imperfect information

Evaluation of benefit 2

- For some lower-income family, while parents are informed of the true benefits and the parents are willing to send their child to pre-school, but they might be unable to afford the school fees.

Benefit 3 Reduce inequity from allocating resources to pre-school education market

- Inequality in family financial resources contribute to achievement gaps that manifest very early in a child's life. Pre-school education is essential to adequately prepare the students for primary school and bringing about more equal opportunities in the child's future/long-term developments (tertiary education and career opportunities).

Costs of allocating resources to pre-school education

- The costs incurred by the government from intervening in the pre-school education market includes the costs of subsidy and the construction fees are incurred from building the pre-school centres.

Constraints faced by government in deciding whether to intervene and the unintended consequences of government's intervention

- Land constraints – Land scarcity has been a perennial issue in Singapore. Government has various plans to use the limited land for developments of pre-school centres, elderly care centres and for businesses.

Evaluative conclusion

- For Singapore, the most important factor that Singapore government should consider in their decision to intervene in the pre-school education market should be the extent of the benefit and costs.
- The government should allocate resources to pre-school education if the benefits outweigh the costs of doing so.
- Secondly, the decision to allocate resources to pre-school education could also depend on the priority of the government.

Marking Scheme

Levels	Descriptors
High L3 18 - 20	<p>For an answer that demonstrates knowledge, understanding, application and analysis:</p> <p>EXCELLENT breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of relevance and significance in answering the question.</p> <p>EXCELLENT depth in economic analysis that reflects the following in ALL explanations.</p> <ul style="list-style-type: none"> ✓ Accurate use of economic concepts, clear elaboration and precise use of economic terminologies, language and phrasing. <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> Well-labelled and well-referred to diagram(s) / tool(s) of analysis drawn with precision (where appropriate). Relevant examples and accurate use of facts. Logical structure
Low L3 15 - 17	<p>For an answer that demonstrates knowledge, understanding, application and analysis:</p> <p>At least VERY GOOD breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of relevance and significance in answering the question.</p> <p>At least VERY GOOD depth in economic analysis that reflects the following in MOST explanations.</p> <ul style="list-style-type: none"> ✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing. <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> Well-labelled and well-referred to diagram(s) / tool(s) of analysis drawn with precision (where appropriate). Relevant example(s) and accurate use of facts. Logical structure.

High L2 12 - 14	<p>For an answer that demonstrates knowledge and understanding but lacks application and analysis:</p> <p>At least GOOD breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of relevance and significance in answering the question.</p> <p>At least GOOD depth in economic analysis that reflects the following in MOST explanations.</p> <ul style="list-style-type: none"> ✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing. <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> Diagram(s) / Tool(s) of analysis that may not be well-labelled, may not be well-referred to and may not be drawn with precision (where appropriate). Example(s) Logical structure
Low L2 9 - 11	<p>For an answer that demonstrates knowledge and understanding but lacks application and analysis:</p> <p>At least SUFFICIENT breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors.</p> <p>SOME points chosen should be of relevance and significance in answering the question.</p> <p>At least SUFFICIENT depth in economic analysis that reflects the following in SOME explanations.</p> <ul style="list-style-type: none"> ✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing. <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> ✓ Diagram(s) / Tool(s) of analysis that may not be well-labelled, may not be well-referred to and may not be drawn with precision (where appropriate). ✓ Example(s). ✓ Logical structure.

<p>High L1 5 - 8</p>	<p>For an answer that demonstrates knowledge but lacks understanding, application and analysis:</p> <p>INSUFFICIENT breadth that considers the following economic concept(s). Point(s) chosen may be of relevance but may not be of significance in answering the question.</p> <p>INSUFFICIENT depth in economic analysis that may reflect the following:</p> <ul style="list-style-type: none"> ✓ Lack of accuracy in the use of economic concepts, lack of clarity in elaboration, and lack of precision in the use of economic terminologies, language and phrasing.
<p>Low L1 1 - 4</p>	<p>Demonstrates POOR breadth and POOR economic analysis. Is irrelevant in analysis but may contain an introduction that addresses the question or contains no economic analysis but may contain a few statements that are relevant to the concepts required to answer the question.</p> <p>Contains fundamental conceptual errors in analysis.</p>

Levels	Descriptors
<p>E3 4 - 5</p>	<p>For an evaluation that contains</p> <p>A synthesis of earlier economic arguments to arrive at relevant judgements/decisions (i.e. answer the question).</p> <p>Well-explained criteria-based evaluative comments supported by accurate and clear analysis to provide fairness in views.</p> <p>A good summative conclusion.</p>
<p>E2 2 - 3</p>	<p>For an evaluation that contains</p> <p>Relevant judgement(s)/decision(s) (i.e. answer the question) that may not follow from earlier economic arguments.</p> <p>Criteria-based evaluative comment(s) supported by analysis to provide fairness in views but the comment(s) may not be well-explained, may be unclear and/or may be inaccurate at times.</p>
<p>E1 1</p>	<p>For an evaluation that contains</p> <p>Relevant but unexplained evaluative judgement(s)/statement(s) i.e. evaluative judgement(s)/statement(s) not supported by analysis or</p> <p>A relevant conclusion.</p>

4	<p>The Bank of Korea slashed its benchmark interest rate to a record low of 0.75 per cent in an emergency move following similar actions by the Federal Reserve and other central banks to combat economic damage from the coronavirus outbreak.</p>
(a)	<p>Explain the factors that affect Singapore's choice of exchange rate policy as its main policy to achieve internal stability in the economy.</p>
(b)	<p>Discuss whether a fall in world interest rates would have a positive impact on the Singapore's economy.</p>

Sources: The Straits Times, 16 March 2020

Part (a)

Introduction

- State that internal stability in an economy refers to the achievement of macroeconomic goals including price stability, low unemployment and economic growth.
- The factors that affect Singapore's choice of exchange rate policy is dependent on the export-oriented and import reliant nature of Singapore's economy as well as the limitations of other macroeconomic policies leading to the choice of exchange rate policy instead as the main policy.

Body

- For a small and open economy such as Singapore, it is an economy that is export-led and import reliant and thus the root cause of its macroeconomic problems are related to trade.

1. Import-reliant Nature of Singapore Economy

- Given that Singapore has limited resources and thus is import-reliant, a root cause of inflationary concerns in the economy is high imported cost of production.
- Given that imported cost of production is a root cause of achieving price stability in Singapore, the use of appreciating exchange rate will be able to effectively achieve a successful economy in terms of price stability.
- With an appreciation of exchange rate, price of imported input will be cheaper in domestic currency. This helps to reduced imported cost of production in Singapore, thus causing an increase in her short run aggregate supply (SRAS).

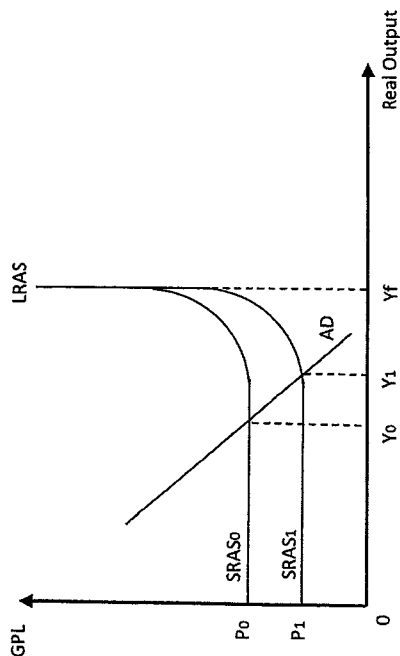


Figure 1: Impact of Appreciation of Exchange rate on Import Price-Push Inflation

2. Export-Oriented Nature of Singapore Economy

- Given that Singapore is a small and open economy and thus export-led, a root cause of economic recession and thus low economic growth is due to depressed net export revenue. Thus, depreciating exchange rate policy can help to address this.
- With a depreciation of exchange rate, price of exports are cheaper in foreign currencies and price of imports are more expensive in domestic currency. Given that Marshall Lerner condition, which is $|PEDX + PEDM| > 1$, will hold in Singapore context, a depreciation of exchange rate will cause an increase in net export revenue in Singapore.
- The increase in net export revenue thus leads to an increase in aggregate demand (AD) and thus more than proportionate increase in national income via the multiplier process. Thus, actual economic growth is effectively achieved.

3. Limitation of Monetary Policy in Singapore

- Due to policy trilemma, Singapore has to choose two between the three options, namely open capital flow, control of exchange rate or control of interest rate.
- Given the limitation of monetary policy in Singapore, exchange rate policy rather than monetary policy is chosen instead as the macroeconomic policy to achieve its macroeconomic goals.

Singapore as an i/r taker

- Monetary policy is limited in its effectiveness in Singapore's economy. Given the small and open nature of Singapore's economy, Singapore is unable to effectively manipulate its interest rate.
- If Singapore were to increase its interest rate relative to global interest rates, for example from r_1 to r_0 in figure 2, then short term capital will flow into the economy to gain from the interest rate differential. This short term capital inflow will thus increase Singapore's internal liquidity, and thus increase its money supply. This will lead to a fall in interest rate again. Thus, Singapore is effectively an interest rate taker.

Conclusion

- The factors that led Singapore to choose exchange rate policy as its main policy is due to its export-led, import-reliant nature of its economy.
- In addition, Singapore being an interest-rate taker also limits significantly the use of monetary policy.

Part (b)

Introduction

- State that a fall in world interest rates can have positive and negative effects on Singapore's internal and external stability.
- The fall in world interest rates would affect the economies of Singapore's trading partners and this would in turn affect Singapore internal stability given the small and open nature of Singapore's economy via impact on its net export revenue.
- In addition, given Singapore is an interest rate taker due to the small and open nature of its economy, the fall in domestic interest rates would also affect Singapore's internal stability.

Body

1. Thesis: Positive Impact on Singapore's economy due to fall in world interest rates

- Explain how a fall in world interest rates might affect the economies of Singapore's major trading partners and in turn affect Singapore's export revenue and its external stability (Balance of Payment).
 - A fall in interest rates in economies of Singapore's major trading partners would lower the cost of borrowing for households and firms in the economies. Households would increase consumption expenditure (C) and firms would increase investment expenditure (I). Given $AD=C+I+G+(X-M)$, the fall in interest rates would increase AD which in turn would lead to actual growth and higher national income.
 - Given the higher national income of Singapore's major trading partners, there would be an increase in Singapore's export revenue (X).
 - The increase in net export revenue would lead to an increase in credit items in current account and thus lead to an overall improvement in Singapore's Balance of Payment position.
- Given that Singapore is an interest rate taker, explain how a fall in domestic interest rates would affect Singapore's aggregate demand (AD) and might positively affect Singapore's internal stability (Economic Growth and Low Cyclical Unemployment).
 - Given that Singapore is an interest rate taker (as explained in part a), domestic interest rates in Singapore would fall as well.
 - Therefore, C and I in Singapore would also increase (as explained earlier) as cost of borrowing falls with lowered domestic interest rates. Coupled with the increase in X explained earlier (which has a significant effect on Singapore's AD because X takes up a large proportion of Singapore's AD), Singapore's AD might increase significantly.
 - The increase in AD would lead to an improvement in economic growth and fall in cyclical unemployment.

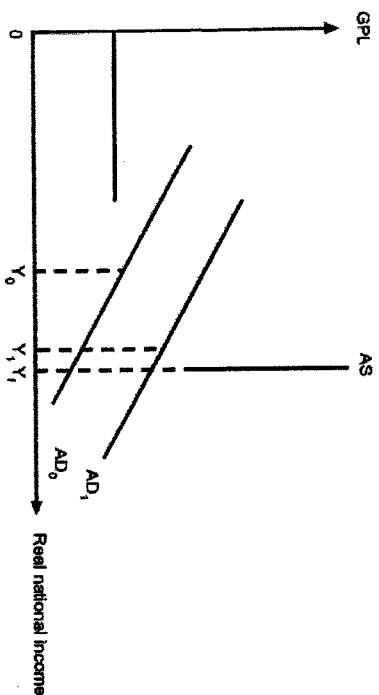


Figure 1: AD-AS (Actual growth in Singapore)

- Positive Impact on Singapore's internal stability (Potential Economic Growth) due to increase in LRAS
 - The increase in investment expenditure would also suggest, for example, an increase in the acquiring of capital assets that would increase Singapore's ability to produce more goods and services in the future. Therefore, Singapore's productive capacity would increase thus increasing Singapore's full employment level of output leading to an increase in Singapore's long run aggregate supply (LRAS). Hence, the fall in interest rates would increase Singapore's potential growth. Coupled with the increase in actual growth, Singapore can enjoy sustained economic growth which is non-inflationary.
 - Overall, the fall in interest rates can positively affect Singapore's internal and external stability.
- 2. Anti-thesis: Negative Impact on Singapore's economy due to fall in world interest rates**
 - Explain how the increase in aggregate demand (AD) might negatively affect Singapore's internal stability (Price Stability).
 - However, the increase in AD due to lower interest rates may compromise on price stability. If Singapore is operating near full employment level of output at the upward sloping portion of AS curve where there is a lack of limited spare capacity, the fall in interest rate might lead to demand pull inflation in Singapore.
 - Explain how the increase in prices of imported inputs in other countries might negatively affect Singapore's internal stability (Import Price-Push Inflation).
 - Trading partners in Singapore may also similarly suffer from demand-pull inflation due to increase in AD brought about the fall in world interest rates.
 - Given that Singapore has limited resources and is import-reliant, higher global prices mean higher price of imported inputs and thus an increase in imported cost of production.
 - Overall, the fall in interest rates can have negative effects on Singapore's internal stability in the long run where most economies may be operating nearer to the full employment output level instead.
 - Explain how the increase inflow of hot money might negatively affect Singapore's External stability (Balance of Payment).

- As world interest rate falls, there will be an inflow of hot money due to the relatively higher interest rates in Singapore in the short term. The inflow of hot money would thus lead to an increase in demand for Singapore dollar (SGD) as residents in foreign countries would need to buy SGD to put money into banks in Singapore. Assuming the supply of SGD remains constant, it would lead to an appreciation of SGD i.e. more foreign currencies in need to buy one unit of SGD.
- Given that Marshall-Lerner Condition where $|PED_x + PED_m| > 1$ holds for Singapore, the appreciation of SGD would lead to a decrease in Singapore's net export (X-M). This would in turn decrease Singapore's AD significantly due to the significance of X to Singapore's AD and thus significantly decrease Singapore's national income and increase cyclical unemployment in the long run.

Evaluation conclusion:

- In conclusion, a fall in world interest rates can have positive and negative effects on Singapore's internal stability.
- Whether or not a fall in world interest rate is likely to have a positive impact on Singapore's economy depends on the macroeconomic condition and the confidence level of consumers and firms.
- It also depends on the existing policies in place that can help Singapore reap the positive effects of the fall in interest rates and/or mitigate the negative effects. If so, it is more likely that the benefits of the fall in world interest rates would outweigh the costs when considering the effects on Singapore's internal stability.

5 Amid the COVID-19 pandemic, investment will remain weak for an extended period. Prolonged recession will shrink the labour force and lending capacity of financial systems. These have damaged the supply side of many economies, with many economies facing recession and cost push inflation.

(a) Explain how a sustained period of low aggregate demand might damage the supply side of an economy. [10]

(b) Discuss whether demand management or supply side policies are more effective in helping an economy recovers from the effects of the pandemic. [15]

Part (a) suggested answer:

Introduction

- A sustained period of low aggregate demand will lead to a decrease in short run aggregate supply (SRAS) and long run aggregate supply (LRAS).

Body 1: Explain how a sustained period of low aggregate demand will lead to a decrease in short run aggregate supply (SRAS).

- A sustained period of low aggregate demand (AD) suggests poor economic outlook.
- Due to the higher risk, supply of loanable funds will decrease, leading to higher interest rates i.e. "Prolonged recession will shrink ... lending capacity of financial systems". As a result, cost of borrowing for firms would increase. Investment expenditure (I) in the country will decrease i.e. "Investment will remain weak for an extended period".
- Moreover, a sustained period of low AD, some workers might be demotivated to work and thus leave the labour force i.e. "Prolonged recession will shrink the labour force". Hence, supply of labour resource decreases.
- Overall, the decrease in the supply of resources in the country would lead to higher prices of these inputs. Thus, the cost of production for firms would increase. As a result, SRAS would decrease, damaging the supply side of the economy.

Body 2: Explain how a sustained period of low aggregate demand will lead to a decrease in long run aggregate supply (LRAS).

- As explained earlier, the sustained period of low AD would result in a decrease in the quantity of resources. The ability of the economy to produce would decrease, productive capacity and LRAS of the economy would decrease, damaging the supply side of the economy.

Body 3: Explain how the decrease in SRAS and LRAS would lead to higher cost push inflation and recession.

- There would likely be higher cost push inflation, damaging the supply side of the economy. Also, the decrease in production would result in a decrease in real national income, damaging the supply side of the economy.

Conclusion

- In conclusion, a sustained period of low aggregate demand might damage the supply side of the economy.

Part (b) suggested answer.

Introduction

- Both demand management and supply side policies can be effective in helping the economy to recover from the effects of the pandemic.

Body 1: Explain the working and limitation(s) of demand management policy(ies) in increasing AD.

- Given the underpinning issue of high interest rates and low profitability as suggested in part (a), demand management via interest rate centred monetary policy can help the economy recovers from the recession.
 - A decrease in interest rates would reduce cost of borrowing and thus increase firms' profitability to increase investment expenditure (I). Also, a lowering of interest rates would decrease the opportunity cost of consumption and hence incentivise consumers to borrow to spend i.e. an increase in consumption expenditure (C). Given $AD=C+I+G+(X-M)$, AD would increase.
 - Limitation(s) of lowering interest rates to increase AD.**
 - Nevertheless, precisely because there is high risk and uncertainty during the pandemic, some economic agents might still not be willing borrowing.
 - Another demand management to help the economy recovers is via weakening of the exchange rate. The depreciation of the domestic currency would make the country's exports relatively cheaper to foreign residents while making its imports relatively more expensive to domestic residents. Assuming Marshall-Lerner condition holds, $(X-M)$ would increase hence AD would increase.
 - Limitation(s) of depreciation of exchange rate to help the economy recovers.**
 - However, for an import reliance economy like Singapore which has no natural resources thus dependent on importing of even the most basic needs, the weakening of the currency would likely result in cost push inflation.
 - Furthermore, increasing government expenditure (G) can help the economy recovers from the recession. For example, the government can accelerate and expand on infrastructure building (e.g. building educational institutions and network in preparation for transformation to a digital economy and for related skills training, expansion of transport connectivity) to increase AD.
 - Limitation(s) of increasing G to increase AD.**
 - Nevertheless, G has to be sufficiently large to be effective. If a government does not have the required fiscal budget and/or reserves to fund G and thus has to resort to borrowing from the public, this would in turn crowd out private investment and consumption due to higher cost of borrowing.

Overall, the increase in AD as illustrated in Diagram 1 from AD_0 to AD_1 will increase real national income as illustrated from Y_0 to Y_1 .

Mark scheme	Descriptors
L3 8 - 10	<p>For an answer that demonstrates knowledge, understanding, application and analysis:</p> <p>EXCELLENT breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of relevance and significance in answering the question.</p> <p>EXCELLENT depth in economic analysis that reflects the following in ALL explanations.</p> <ul style="list-style-type: none"> Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing. <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> Well-labelled and well-referred to diagram(s) / tool(s) of analysis drawn with precision (where appropriate). Relevant examples and accurate use of facts. Logical structure.
L2 5 - 7	<p>For an answer that demonstrates knowledge and understanding but lacks application and analysis:</p> <p>At least GOOD breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of relevance and significance in answering the question.</p> <p>At least GOOD depth in economic analysis that reflects the following in MOST explanations.</p> <ul style="list-style-type: none"> Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing. <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> Diagram(s) / Tool(s) of analysis that may not be well-labelled, may not be well-referred to and may not be drawn with precision (where appropriate). Example(s). Logical structure.
High L1 3 - 4	<p>For an answer that demonstrates knowledge but lacks understanding, application and analysis:</p> <p>INSUFFICIENT breadth that considers the following economic concept(s). Point(s) chosen may be of relevance but may not be of significance in answering the question.</p> <p>INSUFFICIENT depth in economic analysis that may reflect the following:</p> <ul style="list-style-type: none"> Lack of accuracy in the use of economic concepts, lack of clarity in elaboration, and lack of precision in the use of economic terminologies, language and phrasing.
Low L1 1 - 2	<p>For an answer that:</p> <p>is irrelevant in analysis but may contain an introduction that addresses the question or contains no economic analysis but may contain a few statements that are relevant to the concepts required to answer the question.</p> <p>Contains fundamental conceptual errors in analysis.</p>

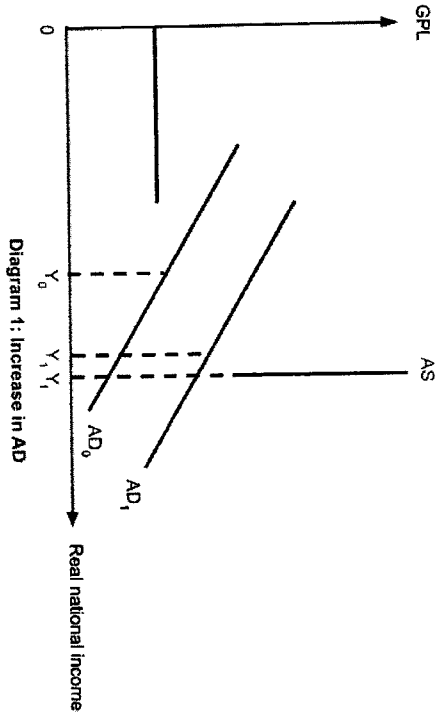


Diagram 1: Increase in AD

The increase in AD would increase national income via the multiplier effect where the increase in expenditure would generate an increase in income, vice versa, to eventually result in a more than proportionate increase national income, thus helping the economy to recover.

o Limitation(s) of increasing AD to increase national income.

- Nevertheless, for demand management policies to help the economy recover effectively, the size of the multiplier has to be large. If the multiplier is small, the eventual increase in national income might not be significant, thus the use of demand management policies might be of limited in helping the economy recovers.

Body 2: Explain the working and limitation(s) of supply side policy(ies) increasing SRAS and LRAS.

- Beside demand management policies, supply side policies can also be effective in helping the economy to recover from the effects of the pandemic.
- The preamble and the analysis in part (a) suggests that the pandemic has resulted in cost push inflation and a decrease in national income.
- One supply side policy that can help the economy recovers is the reskilling / upskilling of workers e.g. SkillsFuture in Singapore where subsidies are given for courses and participants received wage compensation.
- Such supply skill policy would incentivise workers to go for reskilling / upskilling. The reskilling / upskilling of workers would help match workers who learned new skills to jobs that require those skills. As such, it would reduce the number of workers who drop out of labour force. If so, the supply of workers would increase. Furthermore, the newly acquired skills will increase the productivity of workers would increase. These suggest decreasing firms cost of production and hence an

Increase in SRAS as illustrated from SRAS₀ to SRAS₁ in Diagram 2, helping the economy to recover.

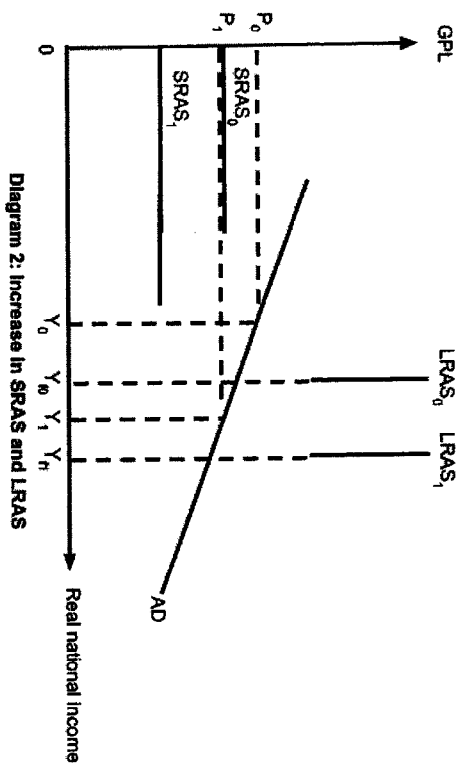


Diagram 2: Increase in SRAS and LRAS

- b. In addition, the higher productivity also suggest that the productive capacity of the economy is going to expand thus LRAS would increase as illustrated from LRAS₀ to LRAS₁ in Diagram 2 respectively, helping the economy to recover.

o Limitation(s) of reskill / upskilling to increase SRAS and LRAS.

- Nevertheless, for this policy to effectively help the economy recovers, workers must be receptive to reskilling / upskilling. A rational workers would not participate of the costs of doing so is larger than the benefits.

Nonetheless, the increase SRAS would incentivise firms to increase production. Cost push inflation would dampen as illustrated from P₀ to P₁ and real national income would increase as illustrated from Y₀ to Y₁ in Diagram 2, helping the economy to recover.

Evaluative conclusion:

- In conclusion, the use of demand management policies and supply side policies can help an economy recovers from the effects of the pandemic. Whether demand management or supply side policies are more effective depends on the nature of the economy, the root issues to be addressed and time period under consideration.
- For an economy like Singapore which has high MPM and MPS, its multiplier (k) is likely to be small. An increase in AD would not likely be effective helping the economy get back to pre-pandemic level, thus demand management policies might not be as effective.

- On the other hand, the use of supply side policies such as reskill / upskilling might be more effective because the lowering of cost would not just reduce cost push inflation but would also result in an increase in real national income.
- Nonetheless, the time lag for the effect of reskilling / upskilling to be felt can be long, thus supply side policies might not be as effective in helping the economy recovers in time.

Mark scheme

Level	Description
L3 8 - 10	<p>For an answer that demonstrates knowledge, understanding, application and analysis:</p> <p>EXCELLENT breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of relevance and significance in answering the question.</p> <p>EXCELLENT depth in economic analysis that reflects the following in ALL explanations.</p> <ul style="list-style-type: none"> ✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing. <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> Well-labelled and well-referred to diagram(s) / tool(s) of analysis drawn with precision (where appropriate). Relevant examples and accurate use of facts. Logical structure.
L2 5 - 7	<p>For an answer that demonstrates knowledge and understanding but lacks application and analysis:</p> <p>At least GOOD breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of relevance and significance in answering the question.</p> <p>At least GOOD depth in economic analysis that reflects the following in MOST explanations.</p> <ul style="list-style-type: none"> ✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing. <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> Diagram(s) / Tool(s) of analysis that may not be well-labelled, may not be well-referred to and may not be drawn with precision (where appropriate). Example(s). Logical structure.
High L1 3 - 4	<p>For an answer that demonstrates knowledge but lacks understanding, application and analysis:</p> <p>INSUFFICIENT breadth that considers the following economic concept(s). Point(s) chosen may be of relevance but may not be of significance in answering the question.</p> <p>INSUFFICIENT depth in economic analysis that may reflect the following:</p> <ul style="list-style-type: none"> • Lack of accuracy in the use of economic concepts, lack of clarity in elaboration, and lack of precision in the use of economic terminologies, language and phrasing.
Low L1 1 - 2	<p>For an answer that:</p> <ul style="list-style-type: none"> Is irrelevant in analysis but may contain an introduction that addresses the question or contains no economic analysis but may contain a few statements that are relevant to the concepts required to answer the question. Contains fundamental conceptual errors in analysis.

Levels	Descriptors
E3 4 - 5	<p>For an evaluation that contains</p> <p>A synthesis of earlier economic arguments to arrive at relevant judgements/decisions (i.e. answer the question).</p> <p>Well-explained criteria-based evaluative comments supported by accurate and clear analysis to provide fairness in views.</p> <p>A good summative conclusion.</p>
E2 2 - 3	<p>For an evaluation that contains</p> <p>Relevant judgement(s)/decision(s) (i.e. answer the question) that may not follow from earlier economic arguments.</p> <p>Criteria-based evaluative comment(s) supported by analysis to provide fairness in views but the comment(s) may not be well-explained, may be unclear and/or may be inaccurate at times.</p>
E1 1	<p>For an evaluation that contains</p> <p>Relevant but unexplained evaluative judgement(s)/statement(s) i.e. evaluative judgement(s)/statement(s) not supported by analysis or</p> <p>A relevant conclusion.</p>

6	<p>The US officially named China a "currency manipulator", intensifying tensions between the world's two largest economies. The announcement by US Treasury follows a sharp fall in the value of the Chinese yuan against the US dollar. China is the world's biggest user of energy, components and grain. The yuan's fall will impact economies it has strong trading links with.</p> <p style="text-align: right;">Source: BBC News, 6 Aug 2019</p> <p>(a) Explain the possible causes of a fall in the value of a country's currency. [10]</p> <p>(b) Discuss the extent to which the value of the Chinese yuan might impact Singapore's economy. [15]</p>
---	--

Suggested answer

Part (a)

Introduction:

- There are several causes that can influence a change in the demand and supply of a country's currency, which in turn can cause a fall in the value of its currency.

Body:

Relative income change

- If the growth of the United States (US) national income is higher than that of the United Kingdom (UK), American consumers would demand more positive income elastic goods including foreign imports such as chocolates from the UK
- American consumers will increase their supply of US\$ in FOREX market in exchange to obtain £ to pay for their UK purchases.
- At the same time, demand for US dollar (US\$) from UK consumers for American goods will fall as UK consumers reduce their demand for American goods.
- The increase in supply of US\$ and the fall in demand for US\$ results in a surplus, putting a downward pressure on the US\$ relative to the £.
- The value of the US\$ has fallen relative to the £.

Relative change in price level

- Relative higher inflation in the US than other countries such as the UK means that American goods exported will become less price competitive.
- At the same time, imports will become relatively cheaper for American consumers leading to an rise in imported goods and supply of US\$
- This causes a fall in US\$ relative to all other foreign currencies including the £.
- At the same time, demand for US\$ falls, represented by a leftward shift of the demand curve from $D_{US\$}$ to $D'_{US\$}$ due to fall in demand for American software engineering services as these services are now more expensive.
- This causes a fall in US\$ relative to all other foreign currencies.

Relative interest rate

- Relative interest rates have a large influence on short term financial flows, otherwise known as hot money, between countries.
- With the US short-term interest rates lower than other countries, there would be a rise in short term capital outflow as speculative investors shift their funds out of US\$ into other foreign currencies.
- This causes a fall in US\$ relative to all other foreign currencies including the £.

Synthesis:

- All the above factors are potential causes of a fall in the value of a country's currency.

Mark scheme	Level	Descriptors
L3 8 -10		<p>For an answer that demonstrates knowledge, understanding, application and analysis:</p> <p>EXCELLENT breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of relevance and significance in answering the question.</p> <p>EXCELLENT depth in economic analysis that reflects the following in ALL explanations.</p> <ul style="list-style-type: none"> ✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminology, language and phrasing. <p>The answer should also be supported by: Well-labelled and well-referred to diagram(s) / tool(s) of analysis drawn with precision (where appropriate). Relevant examples and accurate use of facts. Logical structure.</p>
L2 5-7		<p>For an answer that demonstrates knowledge and understanding but lacks application and analysis:</p> <p>At least GOOD breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of relevance and significance in answering the question.</p> <p>At least GOOD depth in economic analysis that reflects the following in MOST explanations.</p> <ul style="list-style-type: none"> ✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminology, language and phrasing. <p>The answer should also be supported by: Diagram(s) / Tool(s) of analysis that may not be well-labelled, may not be well-referred to and may not be drawn with precision (where appropriate). Example(s). Logical structure.</p>
High L1 3 -4		<p>For an answer that demonstrates knowledge but lacks understanding, application and analysis:</p> <p>INSUFFICIENT breadth that considers the following economic concept(s). Point(s) chosen may be of relevance but may not be of significance in answering the question.</p> <p>INSUFFICIENT depth in economic analysis that may reflect the following:</p> <ul style="list-style-type: none"> • Lack of accuracy in the use of economic concepts, lack of clarity in elaboration, and lack of precision in the use of economic terminology, language and phrasing.
Low L1 1 -2		<p>For an answer that:</p> <p>Is irrelevant in analysis but may contain an introduction that addresses the question or contains no economic analysis but may contain a few statements that are relevant to the concepts required to answer the question. Contains fundamental conceptual errors in analysis.</p>

Part (b)

Introduction:

- The recent fall in the value of the Chinese Yuan, which led to the US officially naming China a 'currency manipulator', would have an impact on Singapore's economy since China is one of Singapore's top major trading partners.
- The resulting undervalued or a lowered value of the Chinese Yuan relative to other countries currency including the Singapore dollar (SGD) will make Chinese exports more price competitive in the global market while the price of imported goods into China will be high and more expensive for residents in China.

Body:

Negative Impact on Singapore's actual growth and unemployment

- The undervalued or lowered value of the Chinese Yuan relative to the currencies of other countries including SGD would mean relatively higher priced imports into China. This leads to a low demand for imported goods into China as firms located in China switch to domestic substitutes, substituting imported goods with goods produced domestically in China.
 - The low demand for imports into China translates into low demand for Singapore exports.
 - The low demand for Singapore exports means low price and low quantity of Singapore exports leading to a low value of Singapore's export revenue (X).
 - Singapore's import expenditure (M) increases as the undervalued Chinese Yuan means it is now relatively cheaper for residents in Singapore to import goods and services produced domestically in China as compared to before the undervaluation of the Chinese Yuan.
 - Aggregate demand (AD) is therefore low at AD₁ in Figure 1 since Singapore's net exports (X-M) is low, given that net exports is a component of AD where AD = C+I+G+(X-M) resulting in a low national income level Y₁.
- The depressed real national income could mean a slowdown in actual growth and high unemployment.

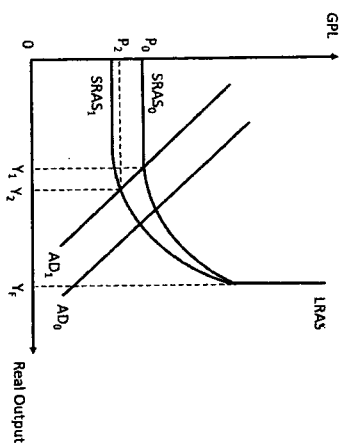


Figure 1 – Impact on Singapore's economy

Point Evaluation:

- The lowered value of the Chinese Yuan against SGD may not necessarily cause a low demand for Singapore exports since Singapore exports high-tech and capital-intensive manufactured goods and services like telecommunications, computer and information services. This may mitigate the low demand for Spore exports.

Mark scheme	Description
<p>L3 8 - 10</p>	<p>For an answer that demonstrates knowledge, understanding, application and analysis:</p> <p>EXCELLENT breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of relevance and significance in answering the question.</p> <p>EXCELLENT depth in economic analysis that reflects the following in ALL explanations.</p> <ul style="list-style-type: none"> ✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing. <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> Well-labelled and well-referred to diagram(s) / tool(s) of analysis drawn with precision (where appropriate). Relevant examples and accurate use of facts. Logical structure.
<p>L2 5 - 7</p>	<p>For an answer that demonstrates knowledge and understanding but lacks application and analysis:</p> <p>At least GOOD breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of relevance and significance in answering the question.</p> <p>At least GOOD depth in economic analysis that reflects the following in MOST explanations.</p> <ul style="list-style-type: none"> ✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing. <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> Diagram(s) / Tool(s) of analysis that may not be well-labelled, may not be well-referred to and may not be drawn with precision (where appropriate). Example(s). Logical structure.
<p>High L1 3 - 4</p>	<p>For an answer that demonstrates knowledge but lacks understanding, application and analysis:</p> <p>INSUFFICIENT breadth that considers the following economic concept(s). Point(s) chosen may be of relevance but may not be of significance in answering the question.</p> <p>INSUFFICIENT depth in economic analysis that may reflect the following:</p> <ul style="list-style-type: none"> • Lack of accuracy in the use of economic concepts, lack of clarity in elaboration, and lack of precision in the use of economic terminologies, language and phrasing.
<p>Low L1 1 - 2</p>	<p>For an answer that:</p> <p>Is irrelevant in analysis but may contain an introduction that addresses the question or contains no economic analysis but may contain a few statements that are relevant to the concepts required to answer the question.</p> <p>Contains fundamental conceptual errors in analysis.</p>

Negative Impact on Singapore's BOP

- The lowered value of the Chinese yuan against the SGD means it is now relatively more expensive for Chinese firms to expand their operations in Singapore.
- Less long term capital inflows into Singapore, worsening Singapore's overall BOP.

Negative Impact on Singapore's Potential Growth

- JFDI means a lower level of quantity and/or quality of capital goods spending by Chinese firms, which negatively impacts Singapore's productive capacity and potential growth.

Positive Impact on Singapore's rate of Inflation

- Singapore could experience a lower rate of inflation.
- The undervalued Chinese yuan against SGD means low price of imports leading to a fall in the unit cost of production for firms, illustrated by a downward shift of the SRAS curve from SRAS₀ to SRAS₁ in figure 1.
- GPL falls from P₀ to P₂.

Evaluative Conclusion

- The extent to which a lowered value of the Chinese yuan against the SGD might impact Singapore's economy is likely to be large and negative in the short run given the significance of external demand to Singapore's GDP.
- Given that China is one of Singapore's major trading partner, changes in China's policies would have a large and significant impact on Singapore's economy.
- If the Chinese yuan continue to be undervalued, this will have a negative impact on Singapore's economy. Singapore needs to constantly evaluate current policies to addresses other external challenges Singapore will likely face.

Levels	Descriptors
E3 4 - 5	<p>For an evaluation that contains</p> <p>A synthesis of earlier economic arguments to arrive at relevant judgements/decisions (i.e. answer the question).</p> <p>Well-explained criteria-based evaluative comments supported by accurate and clear analysis to provide fairness in views.</p> <p>A good summative conclusion.</p>
E2 2 - 3	<p>For an evaluation that contains</p> <p>Relevant judgement(s)/decision(s) (i.e. answer the question) that may not follow from earlier economic arguments.</p> <p>Criteria-based evaluative comment(s) supported by analysis to provide fairness in views but the comment(s) may not be well-explained, may be unclear and/or may be inaccurate at times.</p>
E1 1	<p>For an evaluation that contains</p> <p>Relevant but unexplained evaluative judgement(s)/statement(s) i.e. evaluative judgement(s)/statement(s) not supported by analysis or</p> <p>A relevant conclusion.</p>