Question 1

1. Singapore recorded an increase in attrition rates among local and foreign nurses in the public sector in 2021, compared with 2020. The number of nurses now is 58,000 and Ministry of Health estimates that this will need to grow to 82,000 by 2030 as one in four Singaporeans will be aged 65 and above, up from one in six today. The base salaries of public healthcare nurses were also increased between 5 and 14 per cent.

Source: Adapted from 30 Nov 2022, CNA

(a) Explain why a shortage of nurses might still exist even with the rise in the salaries of nurses. [10]

(b) Other than increasing salaries of nurses, discuss possible measures Singapore government can adopt to overcome future shortages of nurses. [15]

Suggested answer:

(a) Explain why a shortage of nurses might still exist even with the rise in the salaries of nurses. [10]

Introduction:

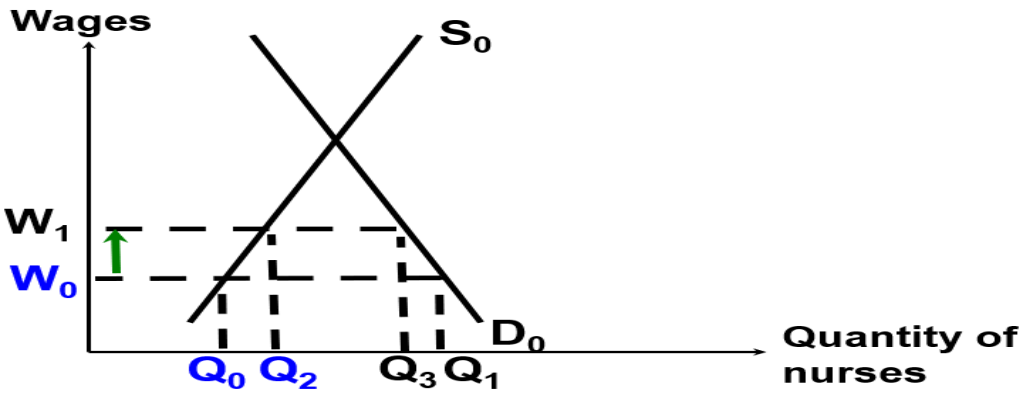
- Define **shortages**:
  Shortages arise when the quantity demanded for nurses exceed the quantity supplied of nurses.
- Approach to question: [can differ depending on the approach adopted by the students]
  The shortages might still exist due to inelastic demand and supply of nurses, and the increase in demand and/or fall in supply of nurses.

R1: Shortages might still exist due to inelastic demand and supply of nurses

- **Define P(W)ED:** Measures the responsiveness of quantity demanded for nurses with respect to a change in salary (wage) of nurses, ceteris paribus.
- **Inelastic P(W)ED:** PED for nurses is inelastic as the role of nurses is essential in assisting doctors in treatments and provide critical services such as monitoring of patients' medical conditions and treatments, and providing care and support patients recovery. Due to the role of nurses being a necessity in healthcare services, the increase in wage of nurses will lead to a less than proportionate fall in quantity demanded for nurses, making demand for nurses price inelastic.
- **Define P(W)ES:** Measures the responsiveness of quantity supplied of nurses with respect to a change in wage of nurses, ceteris paribus.
- **Inelastic P(W)ES:** PES of nurses is inelastic as nurses need to be trained and certified by the respective authorities before they can be employed by hospitals. The time needed for nurses training and certification could take from two to four years due to the specialised skills. At the same time, due to the harsh working conditions of nurses in terms of working environment and work schedule, the nursing profession has difficulty attracting people to join nursing. Hence, an increase in the wage of nurses will lead to a

less than proportionate increase in quantity supplied of nurses, making supply price inelastic.

- Given the inelastic demand and supply of nurses, the current market wage of nurses is not high enough to meet the shortages.

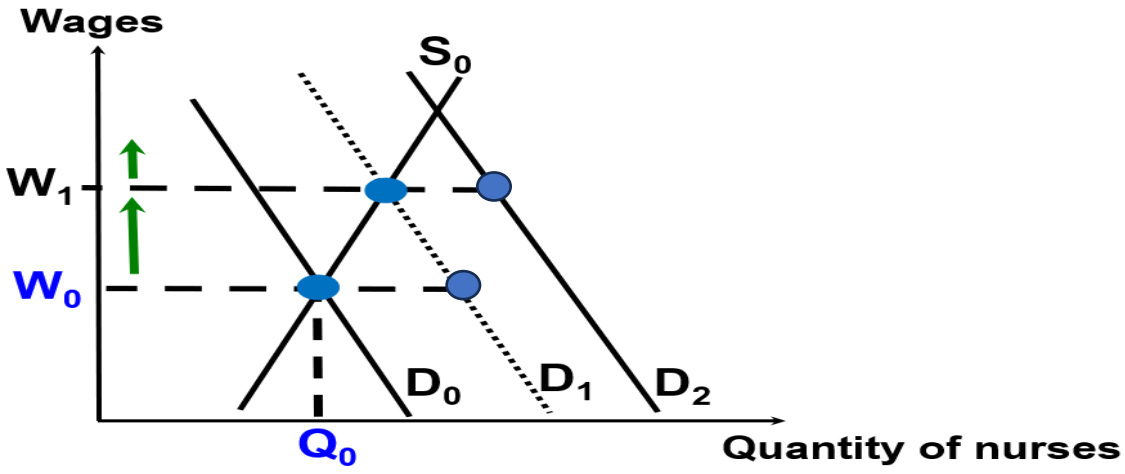


- With reference to the figure above, the current market wage of nurses is at W_0. However, at this wage, the quantity demanded for nurses is at Q_1 while the quantity supplied of nurses is at Q_0 resulting in a shortage of Q_0Q_1. Even with the increase in wage rate, the quantity demand of nurses will only fall less than proportionately. At the same time, the higher wage rate only increases the quantity supplied of nurses less than proportionately as well. Hence, the shortage of nurses continues to persist unless a much higher wage rate is achieved in order to eliminate this shortage.

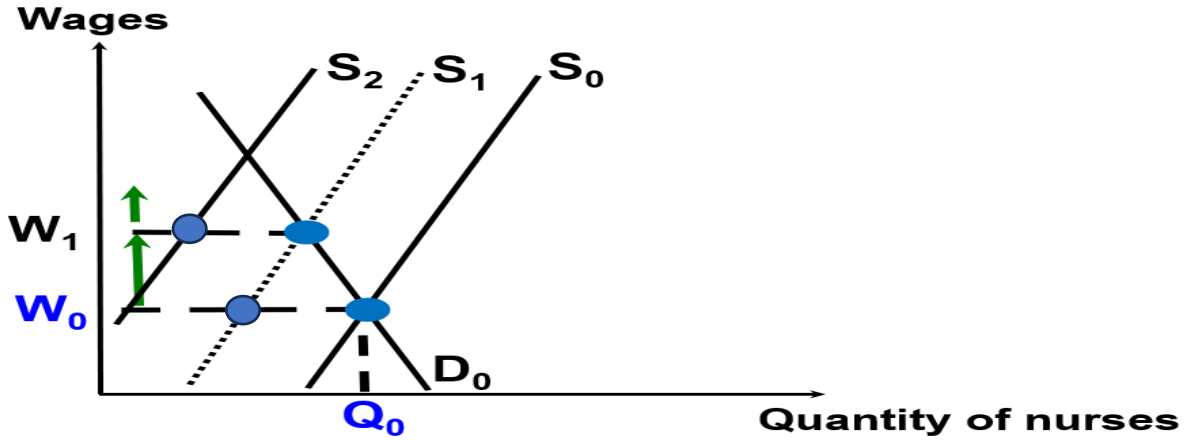
R2: Shortages might still exist due to increase in demand and/or fall in supply of nurses

- **Increase in demand for nurses**
  - There could be an increase in demand for nurses due to the aging population.
  - With the increase improvement in medical facilities and technologies, coupled with the increase in literacy rate, Singapore has experienced an increase in life expectancy. While the advancement in medical technology and new specialised medical facilities for treatments has provided better diagnostics and medical treatments to patients who are ill, higher level of literacy rate and greater awareness of illness prevention has increased the demand for health checks on a regular basis. With an aging population, there will be a greater demand for nurses to meet the increasing medical needs of the aged either due to more frequent occurrence of illnesses and/or diagnostics due to more frequent health checks.
  - This will lead to an increase in demand for nurses which is **derived** from the demand for medical services.
  - This increase in demand for nurses is represented by the rightward shift of the demand curve from D_0 to D_1. The shortage created at W_0 will cause an upward pressure on the wage leading to an increase in wage rate of nurses. However, while the wage rate is rising to eliminate the shortage, **further increase in**

demand of nurses to D_2 due to increasing number of the aged, will lead to further rightward shift of the demand curve causing the shortage to persist.



- **Fall in supply of nurses**
  - The fall in supply of nurses could be due to increasing attrition rate of nurses in view of the poor working conditions and higher pay for nurses in other countries.
  - Long working hours and poor treatment of the nurses in public hospitals has severely affected the morale and mental wellbeing of the nurses in Singapore. This has resulted in a significant number of nurses leaving the nursing profession and switching to other careers.
  - Due to the global shortage of nurses, trained nurses are in high demand. With other countries offering attractive pay packages and better work conditions such as more regular and shorter working hours, many nurses in Singapore leave the local public hospitals to work in countries such as Australia and UK.
  - The fall in supply of nurses will lead to a leftward shift of supply curve from S_0 to S_1. This creates a shortage at W_0 which exerts an upward pressure on the wage rate. While the wage rate is rising to eliminate the shortage, a **further fall in supply** due to continuous attrition of nurses in public hospitals will cause a persistent shortage in the market for nurses.



Conclusion:

- The reasons for the existence of shortage of nurses are due to the inelastic demand and supply of nurses, coupled with the increasing demand and falling supply of nurses.
- The acute shortage of nurses severely compromised the quality of medical services in Singapore. Hence, the Singapore government is concerned as it will adversely affect the standard of living of Singaporeans.

[Alternative structure:

R1: Increase in demand with inelastic PES of nurses to explain existence of shortage even with the increase in wage

R2: Fall in supply with inelastic PED of nurses to explain existence of shortage even with the increase in wage

Alternative approach:

R1: Unanticipated (unexpected) large increase in demand for nurses

R2: Unanticipated (unexpected) large fall in supply of nurses]

Mark Scheme:

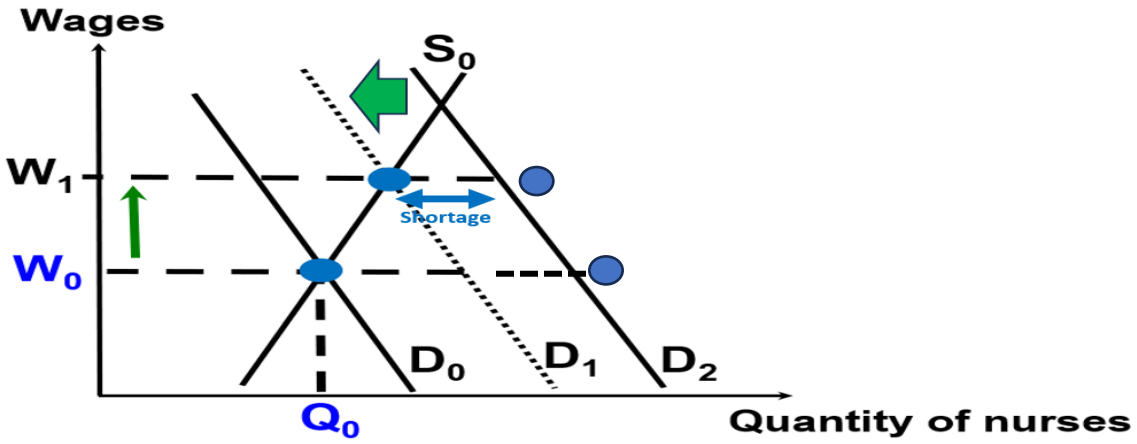
Knowledge, Application, Understanding and Analysis		
L3	Answer is **relevant to question requirements** and covers sufficient **breadth**: ○ Use of demand, supply, PED and PES concepts to explain the **existence of the shortage**. Answer has sufficient **depth**: ○ **rigorous and detailed** economic analysis that demonstrate strong understanding of the use of demand, supply, inelastic PED and PES, to explain the existence of the shortage. ○ **relevant** and **clearly**-labelled DD-SS diagram(s) to support economic analysis ○ **relevant to the context** of Singapore or any other country, and information in the preamble. For answers that provide a good breadth to explain the existence of the shortage without the use of information in the preamble or apply any context – max 8m	8 – 10
L2	• Answer is mostly relevant to question requirements (e.g. An undeveloped explanation of the existence of the shortage due to an increase in demand and fall in supply or nurses (with the use of information in the preamble) – up to 7m • Theoretical use of demand and supply analysis (without PED and PES) to explain the existence of the shortage (without the use of information in the preamble) – max 5m • Economic concepts are relevant but may contain minor inaccuracies. • Economic analysis is accurate but incomplete or lacks precision. • Relevant diagrams are used but might not be accurately explained or applied to support economic analysis.	5 – 7

L1	• Question requirements are interpreted inaccurately with no or minimal link to the market of nurses. • Mere listing of demand and supply factors with limited or inaccurate explanation. • Inappropriate or lack of diagrams.	1 – 4

(b) Other than increasing salaries of nurses, discuss possible measures Singapore government can adopt to overcome future shortages of nurses. [15]

R1: Measures to reduce demand for nurses to reduce future shortages

- Government to subsidise or provide grants to hospitals to encourage the use of **technology** to improve productivity of nurses.
- For example, the **digitalisation** reduces the time needed for nurses to input patients' data, and increase efficiency of retrieving data. Hence, work effort of nurses can be better focused on patients care.
- As nurses can now spend more time on patient care, less nurses will be required to attend to the same number of patients, reducing the demand for nurses.
- Also, **technology that improves monitoring and supervision** of patients, reduces the need for nurses to constantly monitor and collect data of the patients in their care. With less time needed for frequent monitoring and supervision of patients, demand for nurses might fall as less number of nurses will be required for the same number of patients.
- Government can seek to **improve preventive healthcare services** to reduce the demand for nurses in public hospitals.
- Campaigns and public education can be organised to **create greater awareness of preventing illnesses** such as healthier food choices and more active lifestyles. This will reduce the demand for medical services in public hospitals as the senior citizens fall ill less frequently due to better diet and lifestyle. Since demand for nurses in public hospitals is derived from the demand for medical services in hospitals, a fall in demand for the latter will lead to a fall in demand for nurses in public hospitals reducing the future shortage of nurses.
- Government can also provide more **training for nurses in polyclinics on outpatient care** such as after-hospitalisation health checks and monitoring, removing of surgical stiches. These will shorten hospitalisation stays for the patients and reduce hospital visits, hence reducing the need for medical services in hospitals, reducing the demand for nurses in public hospitals.



- These measures to reduce the demand of nurses can slow down the continuous increase in demand for nurses in public hospitals in Singapore by reducing the demand from D_0 to D_1, hence reducing the future shortage of nurses in Singapore.

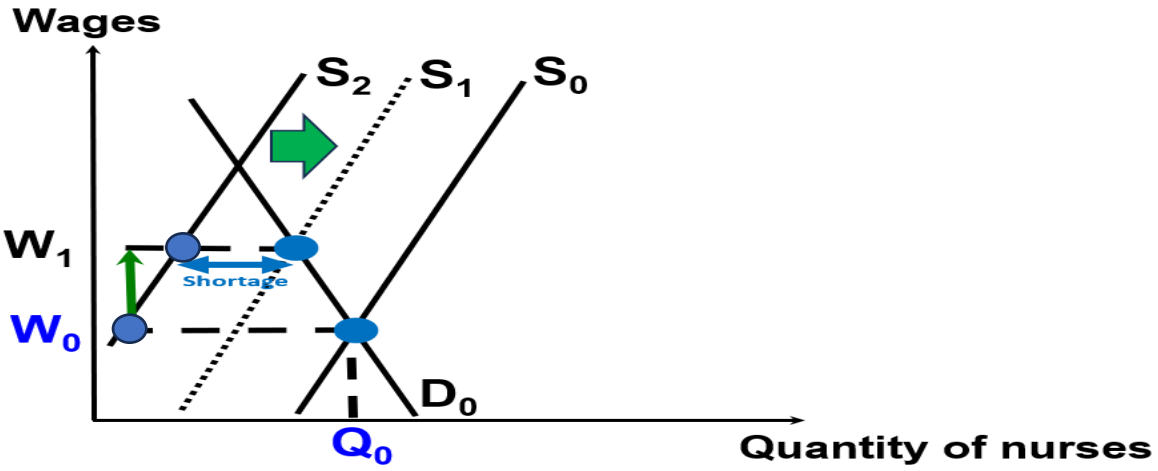
E1: Limitations and trade-off of the measures to reduce demand for nurses

- The **high costs of these technologies** might impede the efforts of the hospitals in adopting them, hence the fall in demand for nurses might be slower than the increase in demand for nurses due to aging population.
- **Patient care is highly customised** and human interaction with patients is highly valued in the medical industry. Hence, technology might not be effective in significantly reducing the demand for nurses in public hospitals.

R2: Measures to increase supply of nurses to reduce future shortages

- Government can **regulate the working conditions of the nurses** in public hospitals.
- For example, **regulating the number of working hours per day or week** and **forbidding urgent recall** of nurses beyond work hours are some ways to mitigate fatigue experienced by nurses.
- **Educating patients and care givers** in their treatment of the nurses via posters in hospitals and media, will help to alleviate the stress of nurses in conducting their roles professionally and better manage their mental wellness.
- All these measures aim to improve working conditions of the nurses to reduce nurses attrition rate and at the same time, attract more people to join nursing.
- Government can also **relax the immigration controls for foreign nurses** to attract them to join local hospitals. This can be done by increasing quota for foreign nurses and reducing entry requirements for these nurses. This will also require better publicity and outreach by local hospitals such as overseas recruitment talks and conducting interviews to accelerate the hiring process.
- Government can also consider **expanding the accreditation of nursing qualifications** to more countries so as to tap on a greater pool of foreign nurses.

- All the above seek to slow down the fall in supply of nurses and if well implemented with positive outcomes, might even increase the supply of nurses, hence reducing the shortage.



- The successful implementation of the above measures can slow down the fall in supply from S_1 to S_2, or increase the supply from S_2 to S_1, hence reducing the future shortage of nurses in Singapore.

E2: Limitations and trade-off of increasing the supply of nurses

- **Limitations:**
  - Regulation of working conditions of nurses must be accompanied by close monitoring by the regulators to ensure hospitals abide by the guidelines and punishment must be carried out for abusive behaviour of patients and care givers.
- **Trade-off:**
  - The recruitment of foreign nurses might compromise the quality of patient care due to different culture and language barriers especially for senior citizens who can only converse in local dialects.
  - Overseas recruitment take time and is a long term solution. The implementation of guidelines to protect the work hours of the nurses might lead to increase in demand for nurses as hospitals would need more nurses in the short-run in order not to flout these guidelines.

Conclusion:

- In order to reduce the future shortage of nurse, both demand and supply of nurses must be concurrently tackled.
- To reduce demand, **providing more outpatient care in polyclinics** might be a better solution as this can be done in the short run as nurses in polyclinics are certified and trained in proving such services. It can also effectively divert demand for less critical medical services away from hospitals, hence less demand for nurses reducing future

shortages. The large number of polyclinics around Singapore in the neighbourhood compared to the few public hospitals would be able to cater to the increasing demand for these outpatient medical services.

- Measure to retain current nurses by **improving the working conditions** of nurses in public hospitals is a better solution compared to recruiting more foreign nurses in the long run. With poor working conditions, foreign and local nurses will be less inclined to stay in local hospitals for long period and the issue of high attrition will continue to persist. Recruiting foreign nurses might be a shot- term solution while the regulators implement and enforce appropriate guidelines to improve the working conditions of the nurses.

Mark Scheme:

Knowledge, Understanding, Application and Analysis		
L3	Answer is **relevant to question requirements** and covers sufficient **breadth**: ○ Well-developed and balanced explanation of how both reducing demand (R1) and the increasing supply of nurses (R2) can be implemented to reduce the future shortage of nurses. Answer has sufficient **depth**: ○ **rigorous and detailed** economic analysis that demonstrate strong understanding of the use of demand and supply analysis to explain how the future shortages of nurses can be addressed ○ **relevant** and **precise** use of economic concepts (demand and supply diagrams); ○ **accurate** and **clearly-labelled** diagrams to support economic analysis ○ Answer is **relevant to** the question and applies to the context of **Singapore** to support the analysis.	8 – 10
L2	• Answer is mostly relevant to question requirements. • Economic concepts are relevant but may contain minor inaccuracies.	5 – 7

	• Economic analysis is accurate but incomplete or lacks precision (an undeveloped 2-sided answer which explains the demand and supply measures, with some use of examples). • For a good discussion of R1 or R2, max 5m. • Attempts to address the context of the question but is incomplete. • Relevant diagrams are used but might not be accurately explained or applied to support economic analysis.	
L1	• Answer is mostly irrelevant to question requirements. • Economic concepts are largely irrelevant and/or inaccurate. • Unclear and/or inaccurate economic analysis (an answer which merely lists and describes the measures). • Lacking in use of diagrams or wrong diagrams are used.	1 – 4
Evaluation		
E3	A summative conclusion that synthesizes the use of both demand and supply solutions to address future shortages of nurses.	5
E2	Evaluative judgements about **BOTH** requirements in the body paragraphs that are built on appropriate economic analysis which are **directly relevant** to the question requirement and have **sufficient depth**.	3-4
E1	Evaluative judgement about **one requirement** which are **directly relevant** to the question requirement and contains **sufficient depth**. For example, explaining the **limitations and/or trade off** of the use of demand/supply measures.	1-2

Question 2

The emergence of online bookstores like OpenTrolley disrupts both consumer habits and existing physical bookstores in the industry. Some physical bookstores in Singapore like Kinokuniya are venturing online to expand their consumer base as well as compete with OpenTrolley's expansive catalogue and low delivery fee.	
(a) Explain two reasons why technological disruption in the book industry could increase the profits of an online bookstore.	[10]
(b) Discuss whether price competition or product differentiation is the more appropriate strategy for physical bookstores in Singapore that are disrupted by the emergence of online bookstores.	[15]

Suggested answer for part (a):

Question Analysis	
Content	Technological disruption, profits
Context	technological disruption in the **book** industry, an online bookstore, two reasons
Command	Explain why
Synopsis: *Students are expected to demonstrate their **knowledge** of **profits** when explaining a possible **revenue** and a possible **cost** reason. Students are also expected to use **both firm's diagram** and the preamble information of* technological disruption in the book industry *to explain how and why* the **profits** of an online bookstore could increase*.*	

Suggested Introduction

Clarify what comprises of **technological disruption** in the book industry

❒ E.g. disrupts both **consumer habits** and **existing physical bookstores** in the industry

Suggested Body

Requirement 1: Revenue reason

Suggested Body 1: Using **firm's diagram**, explain *how* and *why* technological disruption in the book industry could increase the **total revenue** and thus profits of an online bookstore.

E.g. Technological *disruption* in the book industry could increase both **total revenue** and profits of an online bookstore. As highlighted in the preamble, the emergence of online bookstores like OpenTrolley would *disrupt consumer habits* of buying books from a physical bookstore. Consumers are attracted by the convenience of buying books at any time of the day and having them delivered to their homes, without having to travel to physical bookstores. Such *disruption* of consumer habits provides incentives for consumers to *shift* their tastes and preferences towards buying books online. This would have the effect of increasing demand for books from OpenTrolley and shifting the demand curve for OpenTrolley rightwards from AR_0 to AR_1. Using marginalist principle, the new profit-maximising condition is at $MC=MR_1$ where MC is rising. As shown in

Figure 1, OpenTrolley would then be able to charge a higher equilibrium price of P_1 and a higher level of equilibrium output Q_1. OpenTrolley's total revenue would increase from area $0P_0AQ_0$ to area $0P_1BQ_1$ as shown in Figure 1. Assuming that total cost of selling books remains unchanged, OpenTrolley's profits would also increase from area P_0FEA to area DP_1BC.

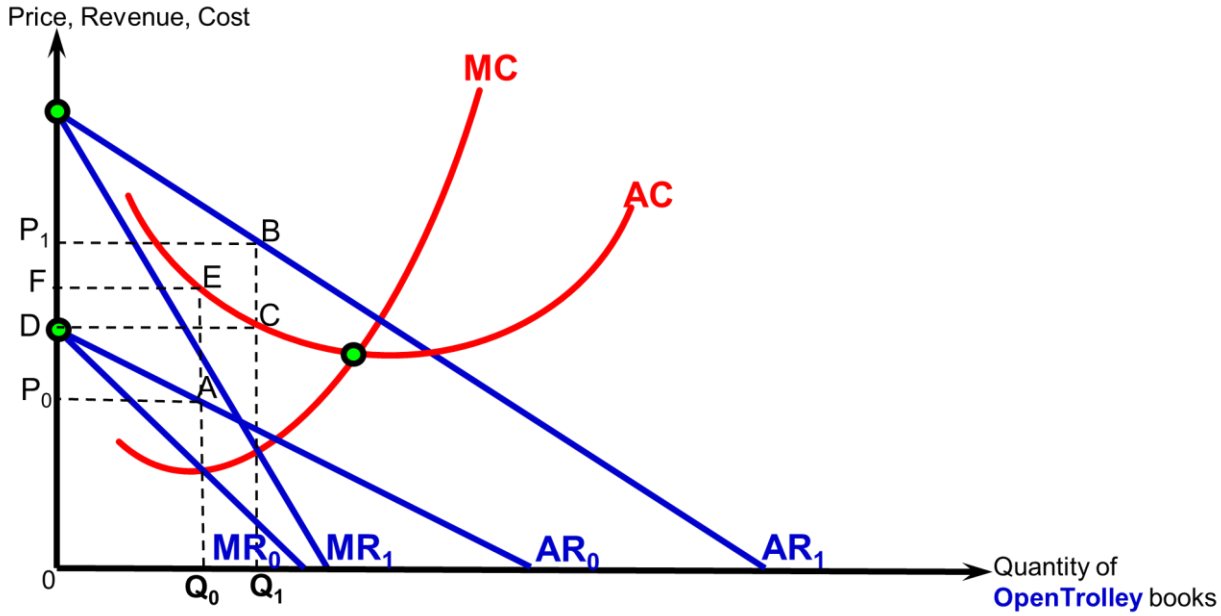


Figure 1

Requirement 2: Cost reason

Suggested Body 2: Using **firm's diagram**, explain *how* and *why* technological disruption in the book industry could reduce the **total cost** and thus increase profits of an online bookstore.

E.g. Technological *disruption* in the book industry could reduce **total cost** and increase profits of an online bookstore. As suggested by the preamble, the emergence of online bookstores *disrupts* the business model of physical bookstores. For those physical bookstores that view such *disruption* as an opportunity to grow its scale of operation, they could leverage on *technology* to set up an online bookstore. One such example would be Kinokuniya, who venture online to increase its output. This also means that Kinokuniya online bookstore would be able to enjoy greater buying power when procuring larger number of books from book publishers. In other words, Kinokuniya online bookstore would be able to reap **internal economies of scale** (IEOS) and enjoy cost savings for each unit of book. Thus, Kinokuniya online bookstore is now able to spread the variable cost over a larger output. This would have the effect of reducing both Kinokuniya online bookstore's variable cost and marginal cost of selling each unit of book. As shown in Figure 2, Kinokuniya online bookstore's variable cost would fall from AC_0 to AC_1 and its marginal cost would fall from MC_0 to MC_1. By marginalist principle, where profits are maximised at MC_1=MR and the rising portion of MC curve, equilibrium price of her books falls from P_0 to P_1 and equilibrium quantity of her books rises from Q_0 to Q_1 as shown in Figure 2. Assuming that the fixed cost of setting up an online bookstore is negligible, Kinokuniya online bookstore's total cost would reduce from area $0CBQ_0$ to area $0FEQ_1$. Thus, Kinokuniya online bookstore's profits would also increase from area P_0ABC to area P_1DEF, ceteris paribus.

*[Students could alternatively provide relevant contextual example to explain how and why (pure) online bookstore like **OpenTrolley** could **reduce total cost** and thus increase profits.]*

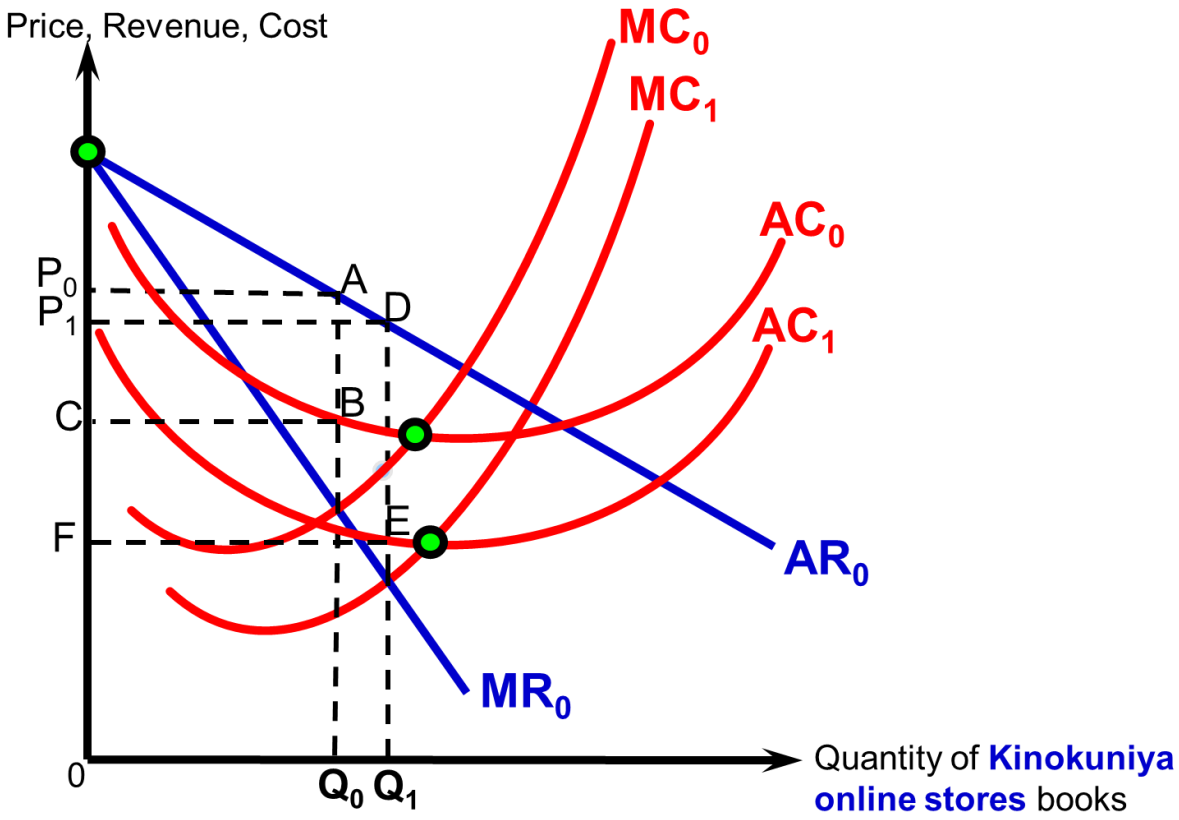


Figure 2

Suggested Conclusion

Technological disruption in the book industry could increase total revenue and reduce total cost of an online bookstore. Thus, physical bookstores could compete with online bookstores through the adoption of product differentiation strategy like venturing online. ***[Explicit link to part (b)]***

Mark Scheme:

Knowledge, Application, Understanding and Analysis		
L3	• A **clear** and coherent answer that is **relevant** to the question requirements and applied to its context (i.e. **technological disruption** in the **book industry** on the **online** bookstore). • Answer covers sufficient **scope** (i.e. areas of analysis) for the *two* distinct requirements: o Requirement 1: **Revenue** reason o Requirement 2: **Cost** reason • Answer is **accurate** and has sufficient **depth**: o Detailed and **accurate** explanation of economic concepts with **analytical** application to the question. o Economic analysis is supported by **accurately** labelled and explained diagrams (i.e. **firm's diagram**) and relevant real-world examples (that relates to the **technological disruption** in the **book industry**)	8–10
L2	• Answer is **mostly relevant** to the question requirements. • Answer **lacks scope** (e.g. considers **only revenue or cost** reason). • Answer may contain **minor inaccuracies** (e.g. Students simply associate **technological disruption** with **technological advancement**) and has **insufficient depth** with **cursory** application to the question (e.g. incomplete or inaccurate explanation of economic concepts, incomplete or no explanation of diagrams and little or no use of real-world examples). Max 7 marks if students **only** consider **total revenue or total cost**, **without** linking its economic analysis to profits.	5–7
L1	• Answer is **mostly irrelevant** to question requirements (i.e. considers **technological disruption** on the **physical** bookstore) • Economic concepts are not explained and/or are **inaccurate**. • Economic analysis **lacks coherence** and **accuracy**. • Lacking in use of diagrams or wrong diagrams (i.e. **demand and supply** diagrams) are used.	1–4

Suggested answer for part (b):

Question Analysis	
Content	Price competition Product differentiation
Context	**more appropriate** strategy for **physical** bookstores in **Singapore**, disrupted by the emergence of online bookstores
Command	Discuss whether
Synopsis: *Students are expected to demonstrate their* ***knowledge*** *of* **price competition** *and* **product differentiation** *when explaining the effects of these two strategies on* **Singapore's physical** bookstores*. Students are also expected to use the preamble information of* the technological disruption of online bookstores *to explain how and why the profits of* ***Singapore's*** **physical** bookstores would fall. Following this, students are expected to use ***firm's diagram*** *to explain how and why each of these two strategies could achieve the objective(s) of* ***Singapore's*** **physical** bookstores. *Finally, students are also expected to* ***evaluate*** *whether* **price competition** *or* **product differentiation** *is the* ***more appropriate*** *strategy for* Singapore's physical bookstores that are disrupted by the emergence of online bookstores.	

Suggested Introduction

Clarify what comprises of **product differentiation strategies**

- ❒ E.g. Marketing, product innovation, market diversification

Clarify what comprises of **technological disruption** in the book industry

1. Online bookstores disrupt the **consumer habits** in the book industry as well as
2. Online bookstores (i.e. Open Trolley) disrupting existing physical bookstores in terms of its **expansive catalogue** and **low delivery fee**

Clarify what is meant by 'more **appropriate**'

- ❒ E.g. Tackle the **contextual constraint** (i.e. unfavourable consumer tastes and preferences towards physical bookstore, OpenTrolley's offering expansive catalogue and low delivery fee) of the technological disruption of online bookstores so that it would bring about **greatest increase** in Singapore's physical bookstore's **profits** in the long term.

Suggested Body

Requirement 1: Price Competition

Suggested Body 1: Using ***firm's diagram,*** explain *how and why* **price competition** strategy could help **Singapore's physical bookstore** to respond to the technological disruption of online bookstores.

Example: discounts during clearance sales

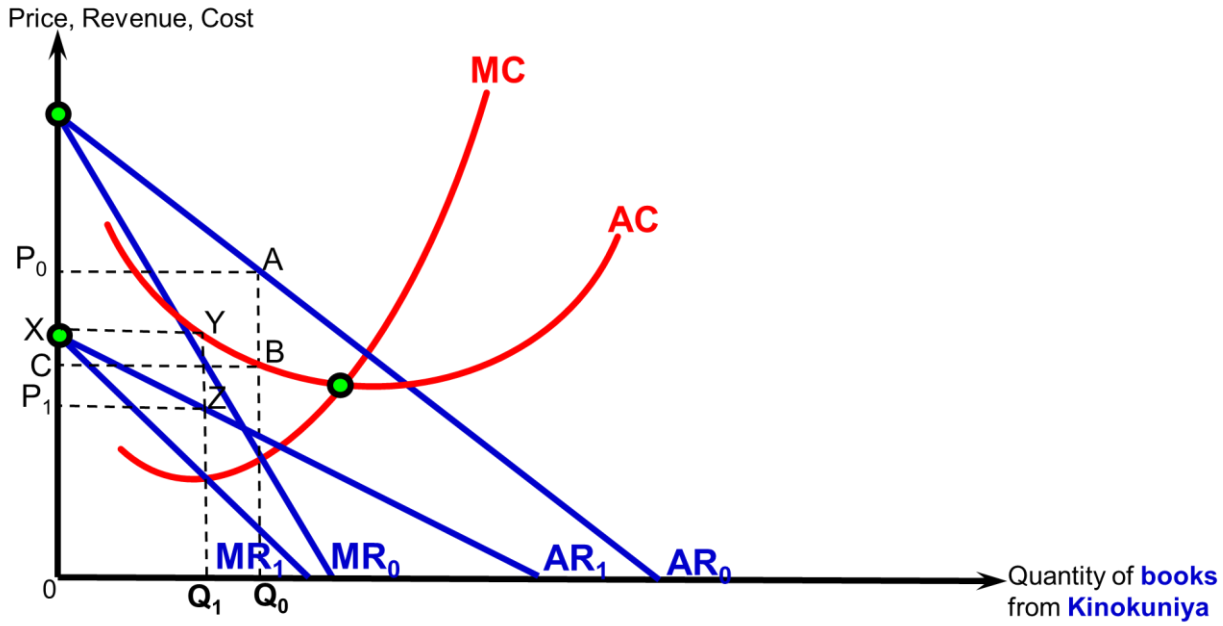


Figure 3

E.g. **Price competition** could be a strategy for physical bookstores in Singapore that are disrupted by the emergence of online bookstores. For instance, Kinokuniya physical bookstore could provide discounts during clearance sales when competing with OpenTrolley's low delivery fees. This is an example of **price competition** by Kinokuniya physical bookstore, since OpenTrolley's delivery fees would increase the price of a similar priced book that are sold at a physical bookstore. Such price competition could help Kinokuniya physical bookstore to **offset** its **falling profits** that arises from the emergence of online bookstores like OpenTrolley. As highlighted in part (a), the emergence of online bookstores *disrupts* consumers' tastes and preferences away from physical bookstores ***[Explicit link to demand factor]***. At the same time, both Kinokuniya bookstore and OpenTrolley provide similar services when selling books, the technological disruption of online bookstores increases the number of substitutes in the same price range for books ***[Explicit link to PED factor]***. This suggests that **demand** for books from Kinokuniya physical bookstore would be more **price elastic**. Taken together, this has the effect of decreasing demand for books from Kinokuniya physical bookstore from AR_0 to AR_1. Using marginalist principle where the profit maximising condition is at MC = MR_1 and MC is rising, this would decrease the equilibrium price from P_0 to P_1 and increase the equilibrium quantity of books from Kinokuniya physical bookstore from Q_0 to Q_1 as shown in Figure 3. Without any strategy from Kinokuniya physical bookstore, this would reduce Kinokuniya physical bookstore's profits from area P_0ABC to area P_1XYZ, ceteris paribus.

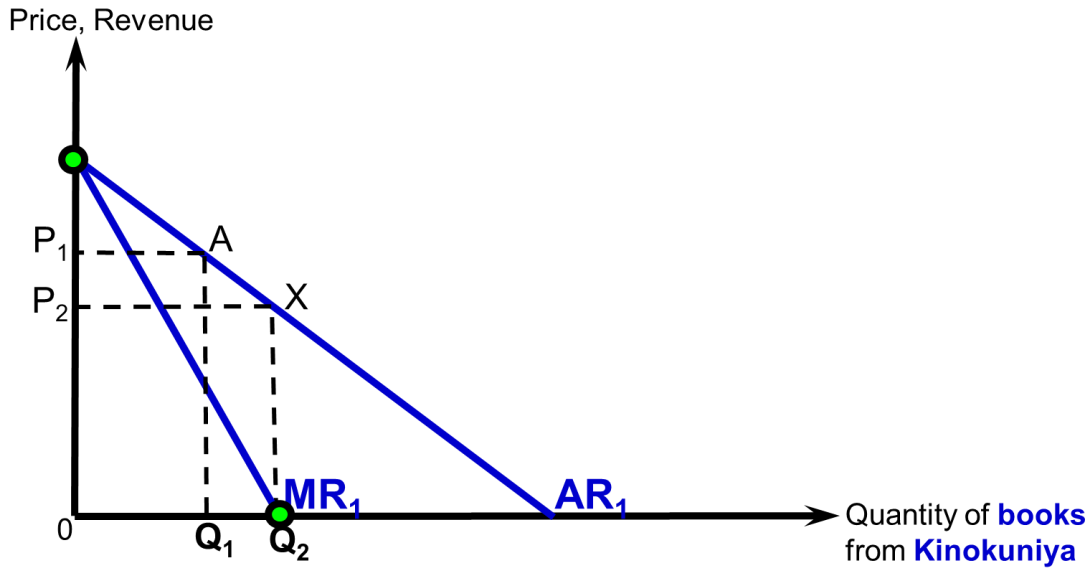


Figure 4

Yet, Kinokuniya physical bookstore could instead pass the falling prices to the consumers in terms of offering discounts during the clearance sales at the physical bookstores. Assuming that the objective of price competition is to maximise total revenue during the clearance sale, Kinokuniya physical bookstore could sell its books at the quantity of Q_2, where MR = 0. Since demand for books from Kinokuniya physical bookstore is price elastic, Kinokuniya physical bookstore's total revenue would increase from area $0P_1AQ_1$ to area $0P_2XQ_2$ as shown in Figure 3. Hence, **price competition** could be a strategy for physical bookstores that are disrupted by online bookstores and compete with OpenTrolley's low delivery fee.

*[Students could alternatively provide relevant contextual example of **cost strategy, predatory or limit** pricing to explain how and why physical bookstores could adopt **price competition** to respond to the technological disruption of online bookstores.]*

[Evaluation]

- ❑ Would demand for books from physical bookstore be always price elastic? → Impact on physical bookstore's total revenue? → **Appropriateness** of price competition to compete with Open Trolley's low delivery fee?
- ❑ Possibility of price war between physical and online bookstores → Impact on physical bookstore's profits? → Cost & Sustainability of price competition? → **Appropriateness** of price competition to compete with Open Trolley's low delivery fee?
- ❑ Degree of substitutability (or complementarily) between physical bookstore and online bookstore? → Impact on physical bookstore's revenue? → **Appropriateness** of price competition to compete with Open Trolley's low delivery fee?

Requirement 2: Product differentiation

Suggested Body 2: Using ***firm's diagram,*** explain *how and why* **product differentiation** strategy could help **Singapore's physical bookstore** to respond to the technological disruption of online bookstores.

Example: **Product** Innovation

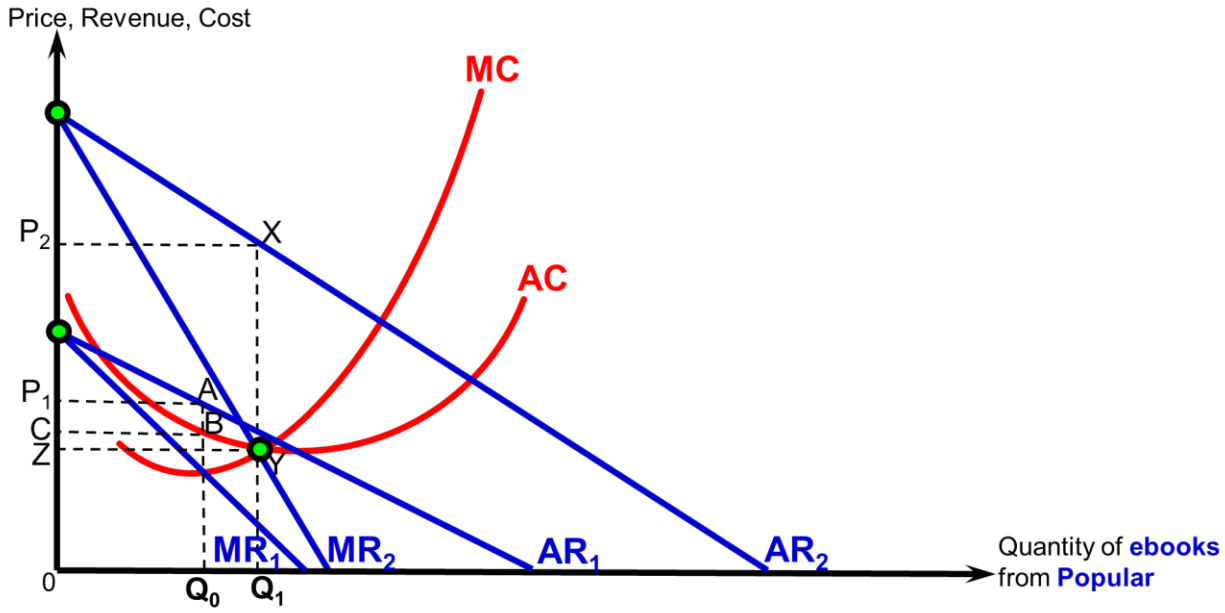


Figure 5

E.g. **Product differentiation** could be a strategy for physical bookstores in Singapore that are disrupted by the emergence of online bookstores. For instance, Popular physical bookstore in Singapore could compete with OpenTrolley's expansive catalogue by selling e-books. This could be considered as **product** innovation, since it involves the development of a newer product that allows consumers to access books everywhere as long as they have the software. Such product innovation could also be considered as **product differentiation** strategy as it distinguishes Popular physical bookstore's e-books from those online bookstores like OpenTrolley, who only sells physical books. Even though OpenTrolley offers expansive catalogue as highlighted in the preamble, such strategy could result in fewer substitutes in the same price range for Popular physical bookstore. This would result in the demand for e-books from Popular physical bookstore is likely to be more price inelastic. Such product innovation is also likely to attract more consumers, who are attracted to the convenience provided by e-books and thus shifts their tastes and preference towards e-books. This would have the effect of increasing demand for Popular physical bookstore's e-books from AR_0 to AR_1. As shown in Figure 5, this would increase Popular physical bookstore's profits from area P_0ABC to area P_1XYZ. Assuming that such increase in demand for Popular physical bookstore's e-books is sustained, this increase in profits from its ebooks would be able to **offset** its falling profits that arises from the disruption of online bookstores as analysed in the previous body paragraph, ceteris paribus. Hence, **product differentiation** could be a strategy for physical bookstores in Singapore that are disrupted by the emergence of online bookstores and compete with OpenTrolley's expansive catalogue.

*[Students could alternatively provide relevant contextual example of **marketing, market diversification** to explain how and why physical bookstores could adopt **product differentiation** to respond to the technological disruption of online bookstores.]*

[Evaluation]

- ❑ Capability of product differentiation strategy in **changing consumer habits** (as highlighted in the preamble) to purchase books from physical bookstore → **Appropriateness** of product differentiation strategy to compete with OpenTrolley's expansive catalogue?
- ❑ Possibility of **competitors** engaging in product differentiation strategies in the future → **Appropriateness** of product differentiation strategy to compete with OpenTrolley's expansive catalogue?

Suggested Evaluative Conclusion

E.g. In conclusion, product differentiation is the more appropriate strategy for physical bookstores in Singapore in the longer term.

Possible Evaluative Considerations:

- ❑ The extent of **benefits** and **costs** of price competition vs product differentiation
- ❑ Possible **responses** of existing competitors to price competition vs product differentiation
- ❑ **Type** of firms (i.e. **multinational** firm like Kinokuniya vs **local** physical bookstore)
- ❑ The **financial** resources of the physical bookstore (i.e. **small** vs **large** physical bookstore)

Mark Scheme:

Knowledge, Application, Understanding and Analysis		
L3	• A **clear** and coherent answer that is **relevant** to the question requirements and applied to its context (i.e. **Physical** bookstores in **Singapore** that are disrupted by the emergence of online bookstores). • Answer covers sufficient **scope** (i.e. areas of analysis) for the ***two*** distinct requirements: o Requirement 1: Explain *how and why* **price competition** strategy could help **Singapore's physical bookstore** to respond to the technological disruption of online bookstores. Requirement 2: Explain *how and why* **product differentiation** strategy could help **Singapore's physical bookstore** to respond to the technological disruption of online bookstores. • Answer is **accurate** and has sufficient **depth**: o Detailed and **accurate** explanation of economic concepts with **analytical** application to the question. o Economic analysis is supported by **accurately** labelled and explained diagrams (i.e. firm's diagram) and relevant real-world examples **Max 8 marks** if students did **not** explain how and why technological disruption of online bookstores would impact the **profits** of **physical** bookstores.	8–10
L2	• Answer is **mostly relevant** to the question requirements. • Answer **lacks scope** (e.g. considers **only price competition** or **product differentiation strategies**). • Answer may contain **minor inaccuracies** and has **insufficient depth** with **cursory** application to the question (e.g. incomplete or inaccurate explanation of economic concepts, incomplete or no explanation of diagrams and little or no use of real-world examples).	5–7
L1	• Answer is **mostly irrelevant** to question requirements. • Economic concepts are not explained and/or **inaccurate**. • Economic analysis **lacks coherence** and **accuracy**. • Lacking in use of diagrams or wrong diagrams are used.	1–4
Evaluation		
E3	• **Two well-explained** evaluative judgements that are supported by arguments presented in the answer and linked to the context of the question **PLUS a summative conclusion**.	5
E2	• **Two** evaluative judgements, one of which is explained.	3–4
E1	• Evaluative statements that are **unexplained** or not supported by the arguments presented in the answer OR a judgement that is not linked to the context of the question; OR	1–2

	• One explained evaluative judgement.	

Question 3

In April 2023, Malaysia announced an excise tax on e-vaporisers, and promised to intensify campaigns to address youth's misconception that e-vaporisers are safer than conventional cigarettes. On the other hand, vaping is illegal in Singapore, where the use and purchase of e-vaporiser was banned since February 2018.		
(a)	Explain why Government intervention is necessary in the market for e-vaporiser**.**	**10**
(b)	Assess the economic case for tax in Malaysia and a ban in Singapore in the market for e- vaporiser	**15**

(a) Explain why Government intervention is necessary in the market for e-vaporiser**. (10)**	
Content	Causes of Market Failure
Context	e-vaporisers, need for government intervention , market failure
Command	Explain *why*

Synopsis:

Requirement 1:

Students are expected to provide detailed explanation on why presence of negative externality in consumption provide reasons for a government to intervene in the free market for e-vaporisers.

Requirement 2:

Students are expected to provide detailed explanation on why **information failure** provide reasons for a government to intervene in the free market for e-vaporisers.

Students are also expected to provide both relevant tools of analysis (i.e. cost-benefit graphs) and example(s) from the preamble to deepen and contextualise their economic analysis.

Suggested Introduction

A government intervenes in the market. when there is **inefficient** allocation and/or inequitable distribution of resources.
E-vaporisers are private goods considered by the government to be socially undesirable and will be overconsumed if left to the free market. The two sources of market failure in e-vaporisers are negative externalities and imperfect information. The government deems it necessary to intervene in the market due to the large extent of negative externalities and/or imperfect information.

Suggested Body

R1: Using Cost-Benefit Graph, explain **WHY** the presence of **negative externality in consumption** could provide a reason for a government to intervene in the e-vaporisers market.

A rational vaper who maximises net private benefits would consider both the private costs and private benefits of consuming e-vaporisers. The private cost of consuming e-vaporisers includes the price of e-vaporisers as well as healthcare costs associated with the activity. The private benefit of consuming e-vaporisers includes the satisfaction gained from vaping. Using marginalist principle, the private optimal level of e-vaporisers consumed is determined by rational smoker at Qp where MPB = MPC as shown in figure 1.

However, the consumption of e-vaporisers generates negative externalities in consumption as it imposes a cost on third parties because of second-hand vaping. Vape aerosol contains several harmful substances, including nicotine, ultrafine particles and various other toxins that contain several cancer-causing agents. Individuals who do not vape are exposed to secondhand vape aerosol which may increase the risk of lung and cardiovascular disease. Second hand vape aerosol also contains several known carcinogens that may increase the risk of certain cancers. The vape aerosols pose an especially high risk for infants and children. Thus, such third parties would incur healthcare costs which results in marginal external costs on third parties. Such negative externality is not considered by the vapers who directly participates in the economic activity.
This negative externality to third parties leads to a divergence between MPC and MSC due to the existence of MEC. Hence, MSC is greater than MPC as it is equal to the sum of MPC & MEC as shown in fig 1.

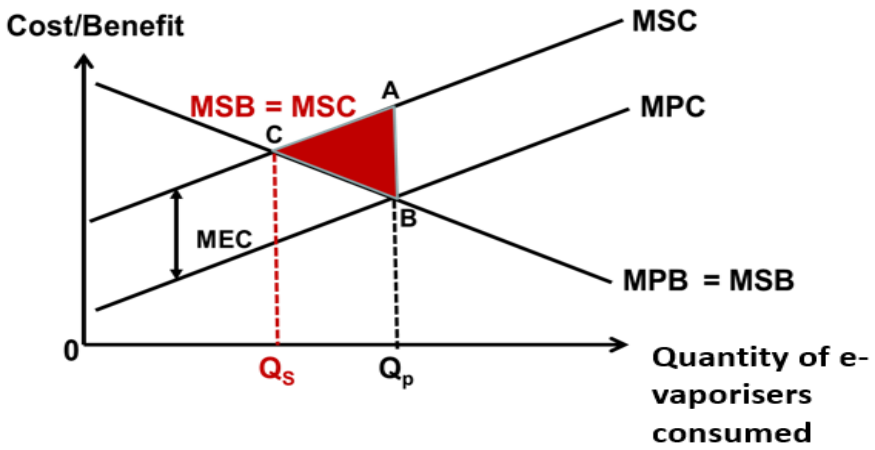


Figure 1

Assuming that there are no positive externalities (i.e. MEB =0 and thus MPB = MSB), using marginalist principle, the socially optimal level of e-vaporisers consumed is at Qs where MSB = MSC.
From the *government's* perspective, there is overconsumption of e-vaporisers by the amount QpQs. Between the amount of QpQs, the opportunity cost of using society's resources to consume e-vaporisers is higher than additional social benefit of using society's resources to consume e-vaporisers. Thus, the government may deem the deadweight loss of area ABC to be large which reflects a large reduction in net social benefits.

Thus, a government needs to intervene in the e-vaporisers market to correct the overconsumption caused by negative externality in consumption.

R2: Using Cost-Benefit Graph, explain **WHY** information failure could provide a reason for a government to intervene in the e-vaporisers market.

A government may also intervene in the e-vaporisers market to correct the overconsumption caused by information failure. As highlighted in the preamble, some vapers especially the youths

might be unaware of the health implications of consuming e-vaporisers as they might have misconception that e-vaporisers are safer than conventional cigarettes.
In consuming goods, consumers make decisions based on information that they perceive to be accurate.
In consuming e-vaporisers, the perceived costs incurred by the consumer would include the purchase price of the e-vaporisers , some healthcare costs as well as other opportunity costs. In return, the benefits experienced by the consumer would include the satisfaction that vaping brings like relieving stress, feeling energised as well as appearing “trendy”.
Weighing costs and benefits from consumption, using marginalist principle, a rational vaper who maximises net private benefit would consume at Qperceived where MPB = MPCperceived.
However, information failure, creates a divergence between the MPC_A & MPC_P. To the consumer, the perceived costs are lesser than the actual costs i.e $MPC_P < MPC_A$.
They may not have understood the full extent of the ill effects on their own health that can result from the consumption of e-vaporisers that contain harmful substances like nicotine. Such information about the ill effects of harmful substances like nicotine and other toxic substances on their health may have been too complex for these vapers to understand or they might have the mis-conception that conventional cigarettes can lead to healthcare costs , but e-vaporisers are safe.
Assuming no externalities, society’s welfare would be maximised i.e Net Social Benefit is maximum if the consumption of e-vaporisers takes place at output Qs, where Marginal Social Benefit = Marginal Social Cost (i.e MSB = MSC). This would also coincide with Qactual.

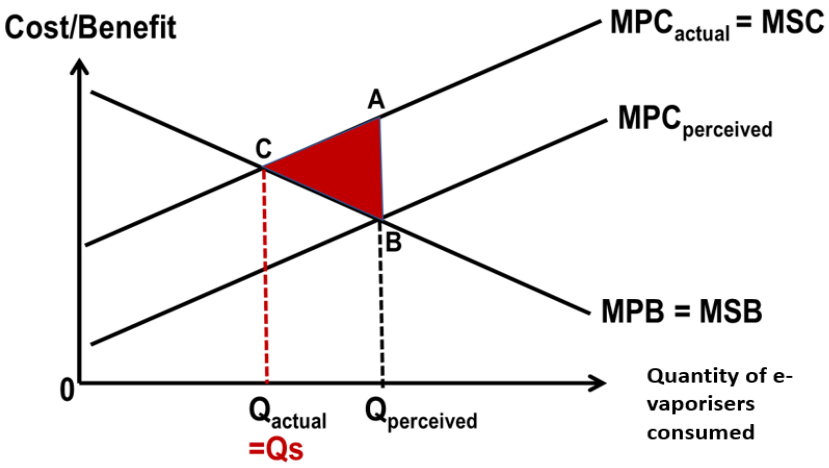


Figure 2

Since Qperceived is more than Q_S, there is an over-consumption by the amount QperceivedQs from a societal perspective. The market is said to have failed because the consumption level is higher than the socially efficient level.
Due to the over-consumption by consumers, society’s welfare is not maximised. At output Q_P, MSC>MSB hence Net Social Benefit is not maximised. The output between Qperceived and Q_S, adds more to social cost than to social benefit (i.e MSC>MSB). Hence society’s welfare could be improved by area ABC if consumption takes place at output Q_S instead of output Q_P.
Thus, a government may deem the deadweight loss of area ABC to be large which reflects a large reduction in net social benefits leading to inefficient allocation of resources which provides a reason why a government intervenes in the e-vaporisers market.

Suggested Conclusion:
In conclusion, the various reasons of government intervention in the e-vaporisers market are essential for governments to decide which microeconomic policies are appropriate in addressing the inefficient allocation of resources in the e-vaporisers market.

Mark Scheme:

Knowledge, Application, Understanding and Analysis		

L3	• Answer is **relevant to question requirements** and covers sufficient **breadth**:
	  ○ explains how **BOTH negative externality in consumption** and **information failure** provide reason on why a government intervenes in an inefficient free market;
	  ○ covers at least two distinct points of analysis.
	• Answer has sufficient **depth**:
	  ○ rigorous and detailed economic analysis that demonstrate strong understanding of the **reasons** for government intervention in the e-vaporisers market
	  ○ **relevant** and **precise** use of economic concepts (i.e. deadweight loss & allocative inefficiency, negative externality in consumption, information failure)
	  ○ **relevant** and **clearly**-labelled diagrams (i.e. **cost-benefit graphs**) to support economic analysis
	• Answer is **relevant to the context** of the question (i.e. e-vaporisers market, information highlighted in the preamble) and applies real-world examples to support the analysis.
		8 – 10

L2	• Answer is mostly relevant to question requirements but lack breadth (i.e. 1 relevant cause of market failure). • Economic concepts are relevant but may contain minor inaccuracies. • Economic analysis is accurate but incomplete or lacks precision. • Attempts to address the context of the question but is incomplete. • Relevant diagrams are used but might not be accurately explained or applied to support economic analysis. A **detailed and well-explained analytical** answer of 1 cause of market failure – Max 6 marks	5 – 7
L1	• Answer is mostly irrelevant to question requirements (i.e. talk about the workings and limitations of microeconomic policies AND/OR talk about negative externality in production). • Economic concepts are largely irrelevant and/or inaccurate. • Unclear and/or inaccurate economic analysis. • Lacking in use of diagrams or wrong diagrams are used.	1 – 4

(b)

Assess the economic case for tax in Malaysia and a ban in Singapore in the market for e- vaporiser. (15)	
Content	Economic case for tax & ban
Context	e-vaporisers market, government intervention, Malaysia & Singapore
Command	Assess

Synopsis:

Requirement 1:

The focus of requirement 2 is to provide detailed explanation on the economic case for tax in Malaysia in the market for e- vaporiser. Students are expected to provide both relevant tools of analysis (i.e. cost-benefit graphs) and example(s) from the preamble to deepen and contextualise their economic analysis.

Evaluation for requirement 1:

Students are expected to provide the strength and limitations of tax in the context of Malaysia.

Requirement 2:

The focus of requirement 1 is to provide detailed explanation on the economic case for ban in Singapore in the market for e- vaporiser. Students are expected to provide both relevant tools of analysis (i.e. cost-benefit graphs) and example(s) from the preamble to deepen and contextualise their economic analysis.

Evaluation for requirement 2:

Students are expected to provide the strength and limitations of ban in the context of Singapore.

Introduction: To improve the over-allocation of resources in the market for e- vaporisers, the government may intervene with a ban, indirect tax or moral suasion. The choice of the policy depends on how the governments perceive the extent of over-consumption of e-vaporisers .

R1 : Excise tax on e-vaporisers, in addressing the market failure arising from consumption of e-vaporisers in Malaysia .

Malaysia has legalised the consumption of e-vaporisers and uses taxation and education to address the overconsumption of e-vaporisers. Malaysia considers e-vaporisers to be not very harmful as they may consider it somewhat useful in the fight against traditional smoking and hence the MEC is not perceived to be very high.

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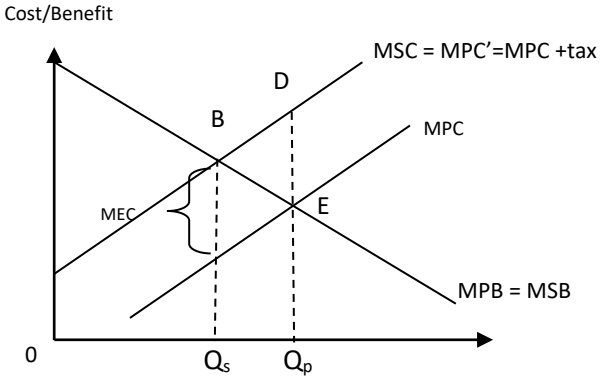


Quantity of e-vaporiser

Figure 3

To discourage consumption, an indirect tax is imposed on producers. When an indirect tax is imposed on producers it raises the producer's cost of producing e-vaporisers. This would lead to falling supply and hence higher prices. The higher price would thereby raise the MPC of consumption. When the tax is equal to MEC, MPC will rise to MPC' such that the consumption will coincide with the socially efficient level of consumption MSC as seen in figure 3. This reduces Qp until the new market output coincides with Qs, thus improving the inefficient allocation of resources in the e-vaporisers market.

E1 : The tax forces the consumer to internalise the external costs imposed on third parties. Imposing a tax enables the government to raise revenue. The revenue raised can be channeled to reduce the harm inflicted on third parties or for moral suasion. Imposing indirect tax allows for flexibility in that they can be varied or adjusted according to the magnitude of the problem or the size of the MEC. However, the value of the external cost is mostly arbitrary and very difficult to estimate due to the external cost being intangible and differing between the various third parties. This makes it difficult for the government to determine the right amount of taxation or charge to be imposed on the consumers. There is a possibility that the government may under or over-tax the consumption of goods. (Draw diagram and explain.) However. Since the demand for e-vaporisers is likely to be price inelastic because of the addictive nature of vaping, consumers may not be very responsive to the measure and a large tax would be necessary to reach the socially desirable outcome. However, The Malaysia govt should also use the education through campaigns etc to address information failure to reduce the market failure arising from consumption of e-vaporisers.

R2: Singapore - Ban is used in addressing the market failure arising from consumption of e-vaporisers.

The government may impose a ban on the sale or consumption of the product when the MEC is so large that it is likely the socially optimal level is zero or near zero (where MSC=MSB at zero output). As shown in Figure 4 the Singapore government's view is that e-vaporisers exert a very high cost on society, and the divergence between MPC and MSCSG is so large that the socially optimal quantity is one that is close to or at zero, thus justifying an outright ban on the market for e-vaporisers.

Thus, a ban would mean that no firm or consumer can sell or consume the good respectively and hence the quantity falls to zero, eliminating the deadweight loss and correcting market failure. With the high levels of MEC, the social optimal output is zero (MSB=MSC). It is appropriate to ban the good as there is a presence of a deadweight loss (shaded area) when the good is consumed but no deadweight loss when zero is consumed as shown in Figure 4.

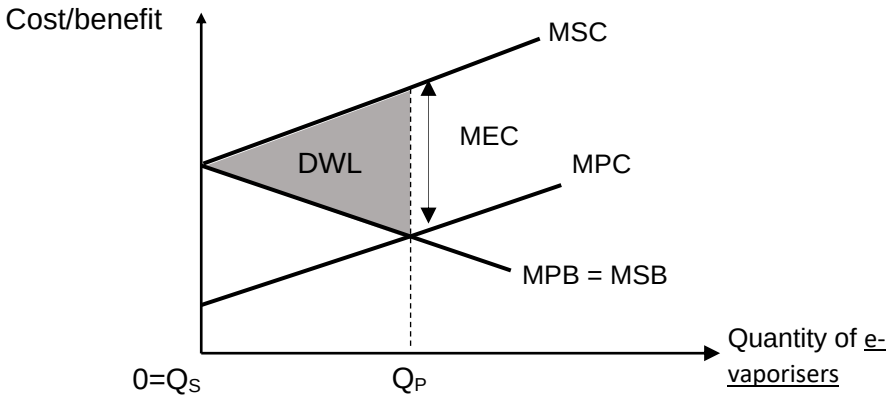


Figure 4: Market failure in e-vaporisers with ban *imposed.*

E1 : The ban effectively reduces the negative externality and information failure issue of consuming e-vaporisers. Since in Singapore the MEC is estimated to be sufficiently large, banning the product produces a desirable outcome for the society.

However, banning the consumption requires strict enforcement for it to be successful, which may require high administrative costs incurred in channeling resources to enforce compliance. For instance, the hiring of officers to monitor and carry out routine checks to ensure no sales and usage of e-vaporisers need to be done.

Thus, for the ban to be successful Govt needs to ensure effective monitoring and border controls to prevent illegal smuggling of e-vaporisers into the country. In Singapore under the Tobacco (Control of Advertisements and Sale) Act, any person who is convicted of selling, offering for sale, possessing for sale, importing, or distributing e-vaporisers, is liable to a fine not exceeding $10,000 or to imprisonment for up to six months or to both for the first offence. Additionally, the government has also decided that a fine of up to $2,000 per offence is to be imposed if someone is found to have used e-vaporiser. However, even after ban there might be illegal consumption of the e-vaporisers, for example The Strait Times recently reported that students who are residing at the halls claimed that a vaping culture persists at dormitories operated by the NUS, NTU and SMU. Thus, Singapore government should also use moral suasion through education and campaign to address the market failure in the e-vaporiser market.

Note: students can also argue that a ban will result in a smaller DWL (instead of totally eliminating the DWL), thereby reducing the degree of market failure.

Overall Conclusion: In making the decision on e-vaporisers market intervention, governments will weigh factors such as costs, benefits, constraints and information.

Singapore and Malaysia governments' have differing approaches because of their differing views on the costs, benefits, and constraints of usage of e-vaporisers. In Singapore, a ban is easier to implement as it has an effective regulatory and monitoring system to ensure compliance and to prevent black market activities. It is likely to be more effective to control and manage at borders to eliminate illegal imports of e-vaporisers. The society is also generally compliant and less likely to view the ban as a challenge to their right to consume e-vaporiser. The number of people

affected by the ban is also smaller as e-vaporiser have not taken off yet in Singapore, making it easier to ban the good. Money collected from fines can used for monitoring and stronger and stricter rules can benefit Singapore because of being attractive to tourists and businesses. The Malaysia government, meanwhile, may find it harder to implement a ban even if they consider e-vaporisers to be harmful as the country is much bigger with more borders, increasing the likelihood of smuggling and black-market activities. The number of people affected may be large also and this move could be politically unpopular. Additionally since the population density is very high in Singapore, the third party costs are relatively much higher than Malaysia. Moreover, a ban entails high monitoring costs which might stretch policing resources in Malaysia, which already faces huge budgetary constraints. Thus, the Malaysian government plans to use excise tax and moral suasion like campaigns to address youth's misconception on the harmful effects of vaping.

Mark Scheme

Knowledge, Application, Understanding and Analysis		

L3	• A **clear** and coherent answer that is **relevant** to the question requirements and applied to its context (i.e. **ban in** Singapore **and tax in Malaysia** to address overconsumption in the market for e- vaporiser).
	• Answer covers sufficient **scope** (i.e. areas of analysis) for the *two* distinct requirements:
	  ○ **Requirement 1:** Provide detailed explanation on the economic case for excise tax in Malaysia in the market for e- vaporiser
	  ○ **Requirement 2:** Provide detailed explanation on the economic case for ban in Singapore in the market for e- vaporiser
	• Answer is **accurate** and has sufficient **depth**:
	  ○ Detailed and **accurate** explanation of economic concepts with **analytical** application to the question.
	  ○ Economic analysis is supported by **accurately** labelled and explained diagrams (i.e. firm's diagram) and relevant real-world examples
		8–10

	• Answer is **mostly relevant** to the question requirements. • Answer **lacks scope** (e.g. considers **only ban or tax)** • Answer may contain **minor inaccuracies** and has **insufficient depth** with **cursory** application to the question (e.g. incomplete or inaccurate explanation of economic concepts, incomplete or no explanation of diagrams and little or no use of real-world examples).	5–7
L1	• Answer is **mostly irrelevant** to question requirements. • Economic concepts are not explained and/or **inaccurate**. • Economic analysis **lacks coherence** and **accuracy**. • Lacking in use of diagrams or wrong diagrams are used.	1–4
Evaluation		
E3	• **Two well-explained** evaluative judgements that are supported by arguments presented in the answer and linked to the context of the question **PLUS a summative conclusion**.	5
E2	• **Two** evaluative judgements, one of which is explained.	3–4

E1	• Evaluative statements that are **unexplained** or not supported by the arguments presented in the answer OR a judgement that is not linked to the context of the question, OR • One explained evaluative judgement.	1–2

Question 4

Supply chain disruptions caused by Russia-Ukraine war and tighter monetary policy, combined with expectations of recession, leave the global economy more vulnerable and raises the risk stagflation. Growth slows and inflation remains elevated in many countries.

The Straits Times, July 2022

a) Explain why the Russia-Ukraine war and expectation of a recession raise the risk of stagflation in a country.

Suggested Answer:

Part (a) Question Interpretation

Command phrase	Explain	Make clear the theory behind the Cause-and-Effect relationship and explain thoroughly, with clear analysis of how the causes (factors) leads to the effect (stagflation).
Content	R1: Cause 1- Russia-Ukraine war leads to SRAS falling and cost-push inflation R2: (i) Cause 2- Expectation of a recession leads to AD falling (ii) Combined shifts SRAS fall> AD fall, GPL increase and RNY falls	Explain causes of stagflation – how Russia-Ukraine war leads to cost-push inflation and expectation of a recession leads to economy slowing down/ recession.
Context	None	Can use any country

The answer requires a thorough explanation of the causes of stagflation. A rigorous analysis should clearly identify which factor cause slow growth and which factor cause inflation using AD/AS analysis and diagrams to explain rising GPL and falling RNY. Answers should use information in the preamble to explain the possible causes.

Introduction

- Definition: Stagflation is the simultaneous appearance in an economy of slow growth, high unemployment, and rising prices

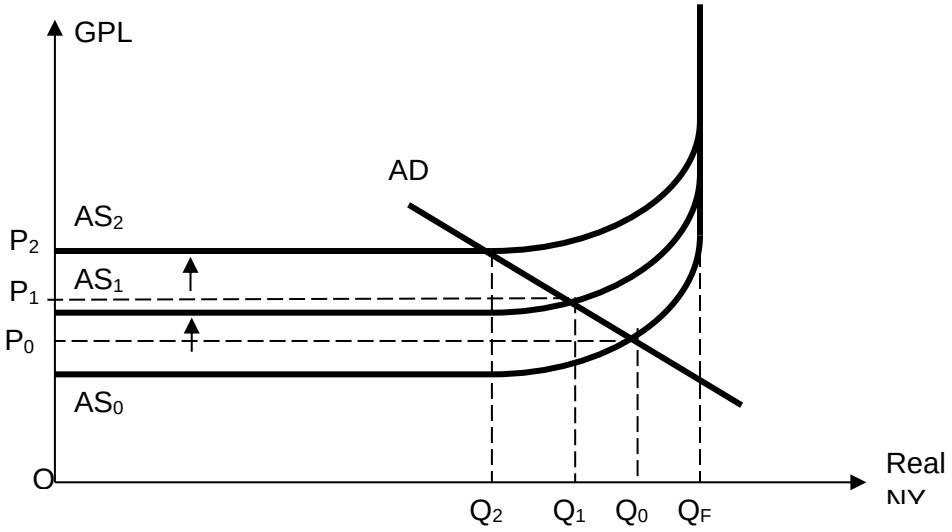
R1: Russia Ukraine War led to increase in cost-push inflation

Supply chain disruptions caused by Russia-Ukraine war:

- Supply unresponsive to demand and resources are geographically immobile
- Goods and services may be limited in supply
- As a result of such immobility, the costs of production rise.

- E.g.: Singapore imports all her raw materials, food and many products. When prices of materials and factor inputs (e.g. oil, gas, grain) rise due to the supply-chain disruption, importers/ producers will face higher cost of production and will pass on the cost to the consumers in Singapore.

Hence, Russian-Ukrain war led to supply chain disruption that results in cost-push inflation. Persistent rises in costs of production independent of aggregate demand. Firms typically respond to the rising cost by passing on part of the increase to consumers in the form of higher prices and also by cutting back on production. This translates to a fall in aggregate supply (AS) causing the AS curve to shift from AS_o to $AS_1$to AS_2 as illustrated in Figure 1. This results in a **shortage** that causes a rise in general price levels from P_o to P_1 to P_2. If this increase is sustained, cost-push inflation occurs.

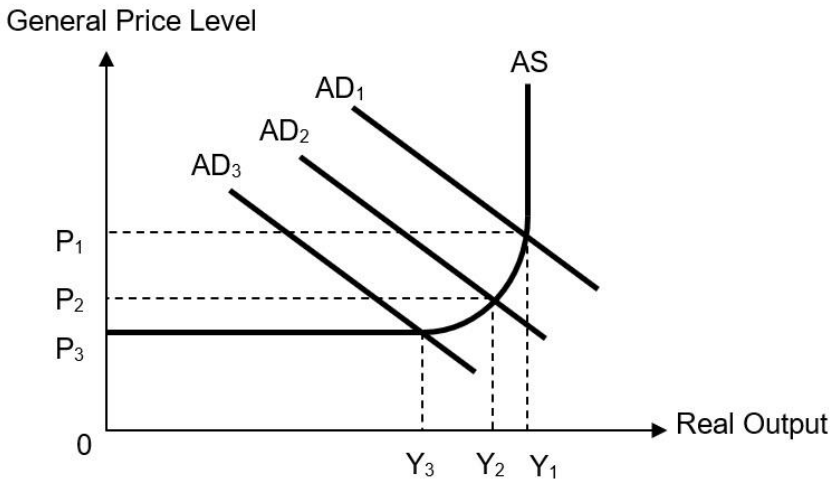


R2: (i) Expectations of recession can lead to slower growth/ recession

- A pessimistic economic outlook among domestic consumers and firms may result in slower growth/ recession.
- Due to uncertainty and fears regarding how the future, domestic consumers and firms may be pessimistic about their future incomes, jobs, and profits respectively. As a result, domestic consumers cut back on consumption expenditure (C) while firms cut back on investments (I).
- The fall in C and I leads to a fall in AD from AD1 to AD2 (Figure 2). This triggers the reverse multiplier effect
- The initial fall in AD from AD1 to AD2 will cause an unplanned rise in firm's inventory. To maintain their inventory, firms will cut down production.
- They will employ less resources such as labour. As more labour are retrenched, they receive less in wages. The fall in the purchasing power of the labour force would lead to a multiple fall in induced consumption.
- This results in a multiple leftward shift in the AD from AD1 to AD3, resulting in a bigger fall in real NY falls.
- Demand for labour falls as labour is a derived demand and unemployment increase

- When demand for labour falls, wages fall, reducing purchasing power of consumers; material and non-material SOL falls

Figure 2:



R2: (ii) Combined shifts: SRAS fall> AD fall

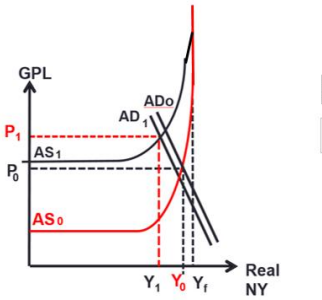


Figure 3

Stagflation occurs when the fall in SRAS outweighs the fall in AD. As seen from Fig 3, inflation occurs as GPL increase from P0 to P1. RNY falls from Yo to Y1, depicting a recession. With a fall in RNY, purchasing power falls and demand for goods and services fall. Hence the demand of labour falls as labour as a derived demand and unemployment increases.

Conclusion

- In summary, Russia-Ukraine war and expectation of a recession raise the risk of stagflation in a country.
- Government can intervene and use G policies to address problems caused by stagflation.

Mark scheme

Level	Knowledge, Application/Understanding and Analysis	Marks
L3	For a well-developed answer that has: ● **good scope** - explains how Russia-Ukraine war and expectation of a recession raise the risk of stagflation in a country; and ● **good rigour** - thoroughly analyses the how each factor leads to stagflation using AD/AS analysis and diagrams; and combined shifts to show SRAS fall> AD fall, resulting in rising prices and falling RNY	8 – 10
L2	For an under-developed answer that: ● **lacks scope** – explains only one factor, Russia-Ukraine war or expectation of a recession, raises the risk of stagflation in a country; and/or ● **lacks rigour** – descriptive explanation of how each factor leads to stagflation; and/or incomplete analysis on the combined shifts of SRAS and AD	5 – 7
L1	For an answer that shows some understanding of the causes of stagflation. Answer is descriptive and superficial, lacking in development and/or there are major conceptual errors that affect the accuracy of the essay.	1 – 4

b) Discuss whether demand-side policy is the most effective way an economy could address stagflation.

Introduction: Demand-side policies include fiscal policy, monetary policy and exchange rate policies aimed increase AD (expansionary) to increase RNY.

Body:

R1: Expansionary demand side policies like FP can help to increase EG cannot reduce inflation

(Note: Expansionary FP, MP and ERP are all acceptable answers)

- Define fiscal policy: deliberate attempt by the government to influence the level of economic activity, in this case to reduce unemployment, by changing the level of government expenditure and taxation.
- Explain how an expansionary fiscal policy can address recession/ economic growth.
  - ↑G on final gds/svcs such as building infrastructure, spending on education and healthcare □↑AD.
  - Government can also reduce direct taxes to lower AD. By ↑personal income tax ↑Yd → ↑C → ↑AD. Also, ↓corporate income tax ↑post-tax profits more funds for investment ↑I → ↑AD.

- The ↑AD shortage of goods and services higher prices and profits. Thus, more incentive for firms to increase production ↑national output, NY and employment, thus reducing cyclical unemployment.
- Explain and evaluate the problems that may arise from the use of expansionary fiscal policy to reduce unemployment.

Evaluation/ Limitations:

a. Problem of rising inflation

- ↑G and ↓direct taxes →↑AD →↑GPL
- If the economy is near, at full-employment, demand-pull inflation can occur (for as long as AS cannot increase fast enough to meet the rise in AD)
- The problem of inflation is one of the important trade-offs of expansionary fiscal policy.
- As such, there is an extent to which expansionary FP can address stagflation, as increases in AD and RNY will be at an expense of more inflation in the country.

b. **Small multiplier** → government needs to pump in more money to solve the problem of low EG/ recession→ budget deficit balloons.

Through the multiplier effect, the initial rise in government expenditure will result in a larger change in NY. In fact, the total change in NY = k x initial change in G. In Singapore, expansionary fiscal policy may not be very effective in solving slow economic growth/recession because of the small multiplier effect.

Spore's K is small due to high MPW arising from high MPS and MPM. The high MPS arises from compulsory savings through CPF contribution where 20% of gross income is saved. In addition, households save another proportion for precautionary and other purposes. Overall, Singapore's savings is very high due to CPF/ compulsory savings. The high MPM is due to Spore's limited resources. Hence, we import virtually all final gds/svcs and raw materials.

Therefore, with a small multiplier, the govt has to spend even more or reduce tax further in order to achieve the desired outcome

c. Crowding-out effect (Not in Singapore)

- It occurs when the ↑G is financed by borrowing from private capital markets. The ↑DD loanable funds ↑I/R →□↑COB → ↓I, thus crowds out private investment.
- If the crowding-out effect is large, this means that there will be a large fall in private investments.
- Explain further how a fall in private investment can hinder future economic growth.
- The crowding-out effect can be expected to be small because the amount of government borrowing to finance its expenditure is small. Again due to its ability to finance spending from its past savings.

e. Time lag

The use of fiscal policy involves many time lags. The first of which is called the recognition lag where government needs to ascertain the problem. After which is the decision-making lag and implementation lag. The time lag depends very much on the efficiency of the government. In many situations, this whole process is hindered by bureaucracy.

The problem with this is that if the time lags are very long, instead of solving the problem, the policies worsen them because of changes in economic conditions.

f. Whether the G should focus on EG or reducing inflation as the priority depends on the Nature of economy

- There is a trade-off between achieving EG at the expense of inflation
- The government of a <u>developing country</u> may prefer to prioritise economic growth and low unemployment over inflation, since it requires the rapid economic growth to improve the material standard of living of households, and to create employment for its largely unutilized labour force. Although increase in prices may result in fall in purchasing power, households in developing countries tend to have little savings; hence the impact of price increases is not as significant compared to developed countries.
- In addition, the government of a <u>developing country</u> may prefer to priorities economic growth and low unemployment over inflation, as it is operating further away from the full-employment level of national income, at the Keynesian range. Hence the developing country is less prone to dd-pull inflation.
- However, the government of a <u>developed country</u> may be more concerned with maintaining price stability, due to the high level of accumulated savings. When inflation is high, the real value of savings will be eroded, causing households to lose the purchasing power of their savings, causing a rapid fall in material standard of living. As developed economies are likely to have attained high levels of real GDP per capita and hence high material SOL, achieving economic growth may be less of a priority.
- In addition, a developed country operating near the classical range may be more concerned with price stability. Prioritizing economic growth will result in demand-pull inflation.

R2: Use SS-Side policy (sign FTA to find alternative sources/ lower COP, LRAS policies in increase R&D to find alternative food sources) to reduce inflation caused by supply-chain disruptions

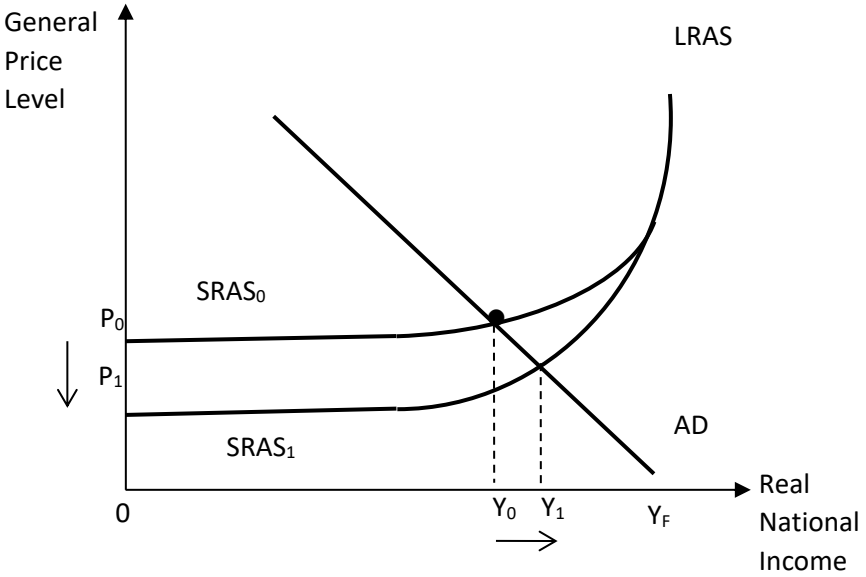
Alternatives available to alleviate cost-push inflationary pressures due to supply-chain disruptions caused by Russian-Ukraine war

***i. Analyse how monetary policy centred on the exchange rate (e.g. Singapore) helps to alleviate cost-push inflation due to* Russian-Ukraine war**

- Appreciation of the domestic currency helps to curb inflationary pressures
- The MAS pursues appreciation of the S$ buying Singapore dollar.
- As S$ strengthens, price of imports as denominated in domestic currency falls

- Given that Singapore imports a lot of her raw materials as mentioned in (a), a stronger S$ helps to lower costs of production for firms→ increase in SRAS → downwards shift in SRAS → fall in GPL → fall in cost-push inflation
- This thus tackles the problem of rising global commodity prices and helps firms to manage rising costs, thus raising the AS and alleviating cost-push inflation
- RNY increases from Y0 to Y1, purchasing power increase, demand for g&s increase, demand for lb increase, unemployment falls.

Figure 3: Increase in SRAS



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Evaluation:
Limitations
- A stronger S$ also undermines price competitiveness of exports → worsen BOT
- According to Marshall Lerner Condition, if PEDx+PEDmI>1, an appreciation of currency will lead to a decrease in net exports, hence AD falls
- Hence, for economies with high import content in its final exports, ERP appreciation could be an appropriate policy to reduce inflationary pressure in the country. However, it may be inappropriate to use appreciation in a country that is approaching or already in a recession. A further appreciation could worsen the problem of recession in a country.

ii. Analyse how signing more FTAs with other countries helps to alleviate cost-push inflation due to rising global commodity prices

- Signing FTAs with other countries rich in resources needed by Singapore would compel prospective trading partners to reduce trade barriers that would facilitate the price reduction (via export tariff removal) of these commodities. The increased flow of commodities from alternative countries would serve to ease the inflationary pressures due to the higher commodity cost from traditional commodity supply sources.
- Reduces COP and increases SRAS (see Fig)

Limitations/ EV:

- However, searching for alternative sources and completing the agreement is a long and arduous process of negotiations which may not provide an immediate resolution to the inflationary pressures

iii. Analyse how other supply-side policies via boosting innovation to help to alleviate cost-push inflation

- Identify that supply-side policy aims to increase innovation/invention of alternative food/ raw material sources
- Provide more incentives to encourage innovation, eg. Productivity & Innovation Credit (PIC) is a tax deduction given to firms who invest in R&D, innovation and training (more advanced machines/equipment or better-skilled workers)
- → develop new food and raw material substitutes → rely less on imported food and raw materials
- increase productivity of factor inputs
- Government itself can also increase spending on R&D to yield improved technology that can enhance quantity and quality of capital
- LRAS increases, GPL falls, reduce cost-push inflation

Limitations/EV:

- Such measures do not yield immediate or guaranteed results, eg. takes time for R&D to take effect
- Increased government spending could strain the government budget

Possible overall Judgment and EV:

- **Demand-side policy is not the most effective way an economy could address stagflation as there is a trade-off between EG and inflation. SS-side policies are more effective as it reduces GPL and increases RNY simultaneously.**
- **Government may use both demand-side policies and supply-side policies are there are two problems, demand-side to spur growth, as well as supply-side policies to address inflation**

Knowledge, Application, Understanding, Analysis		
L1	– *An answer which is descriptive* – *Little / non-existent use of economic theory / framework* – *Glaring conceptual errors*	***1 – 4***
L2	– *An undeveloped explanation in terms of scope of analysis. Some conceptual errors in the development of the answer.* – *Some use of AS/AD framework in the explanation of whether* demand-side policy is the most effective way an economy could address stagflation – *Good one-sided demand-side or Supply-side is given to address if the policy* is the most effective way an economy could address stagflation – *Trade-offs of the policies to address inflation and slow growth are undeveloped.*	***5 - 7***

L3	– *A balanced and well-developed answer with precise and correct application of concepts, explaining whether* demand-side policy is the most effective way an economy could address stagflation – *A total of 2 policies including trade-offs of the policies used to address inflation and slow growth.* – *Good use of examples to illustrate the point.*	***8 - 10***
Evaluation		
E1	*An unexplained judgement ➔ An unexplained evaluative conclusion/comment*	***1-2***
E2	*Limitations of Policies* *Evaluative assessment supported by economic analysis* *Substantiation of an evaluative comment and/or conclusion* • *Consideration of severity of trade-offs between EG and inflation* • *Consideration of SR & LR goals* • *Etc*	***3 - 5***

Question 5

5. The government budget will continue to be expansionary for financial year 2021, with an expected deficit of $11 billion, or 2.2 per cent of Singapore's gross domestic product.

Source: The Straits Times, 16 Feb 2021

(a) Using the concept of circular flow of income, explain how the government's preparation for a budget deficit could lead to a bigger change in Singapore's national income. **[10]**

(b) Discuss the possible trade-offs in Singapore's macroeconomic objectives as a result of the government's planned budget deficit. **[15]**

(a) Using the concept of circular flow of income, explain how the government's preparation for a budget deficit could lead to a bigger change in Singapore's national income. **[10]**

Question Analysis	
Command	Explain how - Step-by-step process
Content	• Define circular flow of income • Explain what is meant by "preparation for a budget deficit" – increase government expenditure and/or decrease taxes • Explain how an initial increase in government expenditure affects the flow of income and expenditure between different sectors in the Singapore economy using the circular flow of income model • Explain how increased government expenditure will lead to a bigger increase in national income using the AD-AS model to illustrate the multiplier process.
Context	Singapore
Synopsis ***Requirement 1:*** *Students are expected to explain how an initial increase in government expenditure (given the government's preparation for a budget deficit) affects the flow of income and expenditure between different sectors in the Singapore economy using the circular flow of income model.* ***Requirement 2:*** *Students are expected to explain how increased government expenditure will lead to a bigger increase in national income using the AD-AS model to illustrate the multiplier process.*	

Introduction

Budget for a deficit is an expansionary fiscal policy (increase government expenditure and/or decrease taxes) which aims to attain higher economic growth.

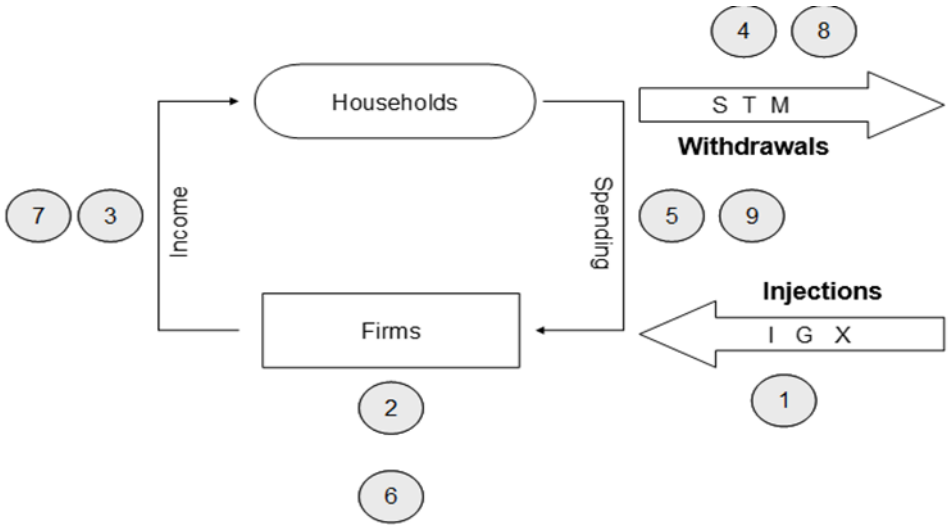
In this question, we will be explaining how an increase in government expenditure will lead to a bigger increase in national income using the circular flow of income and AD-AS model to illustrate the multiplier process.

The circular flow of income and expenditure model shows the flow of income and expenditure between the different sectors in the economy.

Body

Requirement 1: Explain how increased government expenditure would affect the flow of income and expenditure between different sectors in the Singapore economy using the circular flow of income model with numerical illustrations.

An increase in injections in the circular flow model either caused by increases in investments (I), government expenditure (G) or exports (X) would expand the circular flow of income.



Suppose there is an increase in government expenditure equal to $100m on the construction of the Changi Terminal 5 [see ①]. The government would pay $100m to the firm(s) building the terminal [see ②]. This would raise national income by $100m, since national income measures that value of goods and services being produced.

The firm(s) will pay $100m to all the FOP (land, labour, capital and entrepreneurship), which are provided by the households [see ③] that contributed to the building of the terminal.

The expenditure by the government will thus, increase household's income by $100m [see ③]. Households who received the increase in income, will save(S), purchase imports(M), pay income tax(T) [see ④] and buy more consumer goods and services [see ⑤].

For simplicity, let's assume that households would always use a fix percentage, say 80%, of their increased income to purchase consumer goods. (This is known as the marginal propensity to consume (MPC), where MPC=0.8)

Then out of $100m, they receive, households will spend $80m on consumer goods such as cars, TV, food, laptops [see ⑤] etc. This is known as the **induced consumption** which refers to consumption induced or generated by changes in income.

Due to the $80m expenditure by households, firms will need to produce $80m worth of consumer goods. This would raise national income by an additional $80m [see ⑥]. These firms will pay $80m to all FOP provided by households that contributed to the production of these consumer goods [see ⑦]. Hence the household sector experiences another wave of rising income.

Households who received the increase in income of $80m, will save(S), purchase imports(M), pay income tax(T) [see ⑧] and buy more consumer goods and services [see ⑨].

Then out of $80m, they receive, households will spend $64m (since MPC=0.8) on consumer goods such as cars, TV, food, laptops etc [see ⑨].

Firms will need to produce an additional $64m worth of these consumer goods. This would raise national income by an additional $64m. These firms will pay $64m to all FOP provided by households that contributed to the production of these consumer goods.

The cycle then repeats itself where money flows from producers to households in the form of wages, rent, interest and profits and money flows back to producers as expenditure on goods and services by households.

This results in a continual cycle of increased production of goods and services i.e. national income followed by increase in expenditure on goods and services followed by increase production of goods and service i.e. national income. This process continues until the initial injection is equal to the withdrawals.

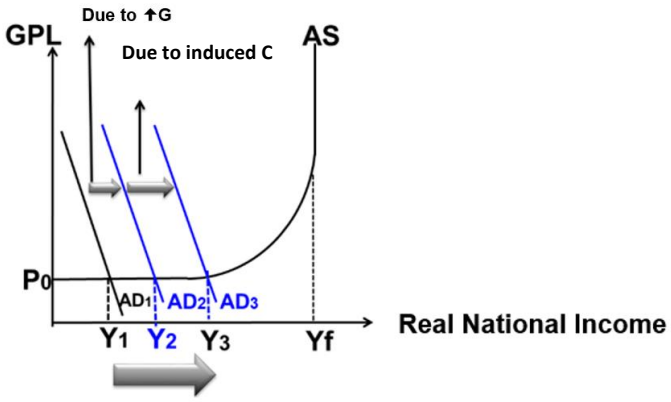
Requirement 2: Explain how increased G will lead to a bigger increase in national income using the AD-AS model to illustrate the multiplier process.

We have seen from the above explanation of the circular flow of income model that the national income will rise by many times more than the initial increase in G. This is known as the Multiplier Process.

The multiplier process explains how a change in AD will lead to a more than proportionate change in national income.

For the multiplier process to run its full impact, it is assumed that the general price level is fixed and the economy is able to meet any rise in expenditure as it is operating at a level of income that is well below the full capacity. This assumption means that the economy is operating at spare capacity on the Keynesian range. Income that leaks from the circular flow through savings, taxes and imports are known as withdrawals.

The immediate effect of the increase in government expenditure (initial injection) is an increase in AD by the exact amount of the new spending i.e. AD_1 to AD_2 in the figure below.



The initial rise in AD from AD_1 to AD_2 due to the initial injection (i.e the rise in government expenditure), leads to a rise in equilibrium real national income from Y_1 to Y_2. However as explained in the Circular Flow of Income, due to the successive rounds of expenditure by households on consumer goods, AD will continually rise from AD_2 to AD_3 leading to a further increase in real national income from Y_2 Y_3.

Hence the multiplier process magnifies the initial increase in injection (in this case the rise in government expenditure) into successive rounds of consumption spending (induced consumption) and an ultimate multiplied increase in national income from Y_1 to Y_3.

The multiplier process can be summarised via the formula:

$\Delta Y = k \times \Delta AD$
Where k is the multiplier and ΔAD represents the initial injection.

Mark scheme:

Knowledge, Application, Understanding and Analysis		
L3	**Requirement 1** Explanation of how increased government expenditure would affect the flow of income and expenditure between different sectors in the Singapore economy using the circular flow of income model with numerical illustrations was **accurate and in-depth, with few conceptual errors**. **Requirement 2** Explanation of how increased government expenditure will lead to a bigger increase in national income using the AD-AS model to illustrate the multiplier process was **accurate and in-depth, with few conceptual errors**. **Good use of examples were used to aid the explanations in both requirements.**	8 – 10

L2	**Requirement 1** Explanation of how increased government expenditure would affect the flow of income and expenditure between different sectors in the Singapore economy using the circular flow of income model with numerical illustrations was **accurate but lacked depth and scope. There were some conceptual errors**. **Requirement 2** Explanation of how increased government expenditure will lead to a bigger increase in national income using the AD-AS model to illustrate the multiplier process was **accurate but lacked depth and scope. There were some conceptual errors**. **Some examples were used to aid the explanations in both requirements.**	5 – 7
L1	**Requirement 1** **Circular flow of income model was not used** in the explanation of how increased government expenditure would affect the flow of income and expenditure between different sectors in the Singapore economy **OR the model was explained incorrectly**. **Requirement 2** **AD-AS model was not used** in the explanation of how increased government expenditure will lead to a bigger increase in national income **OR the model was explained incorrectly**. **No examples were used at all to aid the explanations in both requirements.**	1 – 4

(b) Discuss the possible trade-offs in Singapore's macroeconomic objectives as a result of the government's planned budget deficit. [15]

Question Analysis	
Command	Discuss – 2-sided response
Content	• Identify the macroeconomic objectives – sustained economic growth, price stability, full employment, balance of trade • Planned budget deficit means that the Singapore government is embarking on an expansionary FP i.e. increase government expenditure and decrease taxes • Explain the effects of an expansionary FP on RNY and from there, analyse the trade-offs with the other macroeconomic objectives
Context	Singapore

Synopsis

Requirement 1:
The focus of requirement 1 is the internal macroeconomic objectives – sustained economic growth, price stability and full employment. Students are expected to explain how the expansionary FP achieves actual economic growth and explain the trade-offs with other internal macroeconomic objectives like price stability, unemployment and inclusive economic growth.

Evaluation for requirement 1:
Students are expected to explain that the achievement of actual economic growth from expansionary FP does not cause trade-offs with the internal macroeconomic objectives.

Requirement 2:
The focus of requirement 2 is the external macroeconomic objectives – balance of trade and currency changes. Students are expected to explain how the achievement of actual economic growth from the expansionary FP caused trade-offs with the external macroeconomic objectives like balance of trade and currency changes.

Evaluation for requirement 2:
Students are expected to explain that the achievement of actual economic growth from expansionary FP does not cause trade-offs with the external macroeconomic objectives.

Introduction

The macroeconomic objectives of the Singapore government can be divided into internal objectives (i.e. sustained economic growth, price stability and full employment) and external objectives (i.e. favourable balance of trade and currency changes).

Budget for a deficit is an expansionary fiscal policy (increase government expenditure and/or decrease taxes) which aims to attain higher economic growth. This will help to attain other aims but at the same time worsen other aims which will be the tradeoffs. Tradeoff means the resulted conflicting aims when government is trying to achieve economic growth by budgeting a deficit.

Body

Requirement 1: Explain how the expansionary FP achieves actual economic growth and explain the trade-offs with other internal macroeconomic objectives like price stability, unemployment and inclusive economic growth.

- ***Explain how the expansionary FP helps to achieve actual economic growth***

As mentioned above, planning for a budget deficit means that the Singapore government is embarking on an expansionary fiscal policy. In this case, the government would be increasing government expenditure, which could be in the form of expenditure on infrastructures, such as building of the Changi Terminal 5, new MRT lines, BTO flats etc… which increased 'G' component of AD and/or increasing transfer payments e.g. GST vouchers, U-Save vouchers, CDC vouchers etc… which increased disposable income and purchasing power of households, resulting in increase 'C' component of AD.

The government could also be reducing taxes such as personal income taxes, which will increase disposable income and purchasing power of households and increase 'C' component of AD or reducing corporate taxes, which will increase profitability and hence increase 'I' component of AD. The initial rise in AD, will cause an unplanned fall in the firm's inventory. To maintain their inventory, firms will need to employ more resources such as labour. As more labour are hired, they receive more in wages. The purchasing power of the labour force rises. This leads to a multiple rise in induced consumption. Each subsequent rise in induced consumption will be increasingly smaller. This results in a multiple rightward shift in the AD curve, where AD is rising at a decreasing rate. The overall rise is AD has resulted in a multiple rise in real NY. The larger the size of the multiplier, the larger the rise in AD and hence real NY. See Figure 1 below.

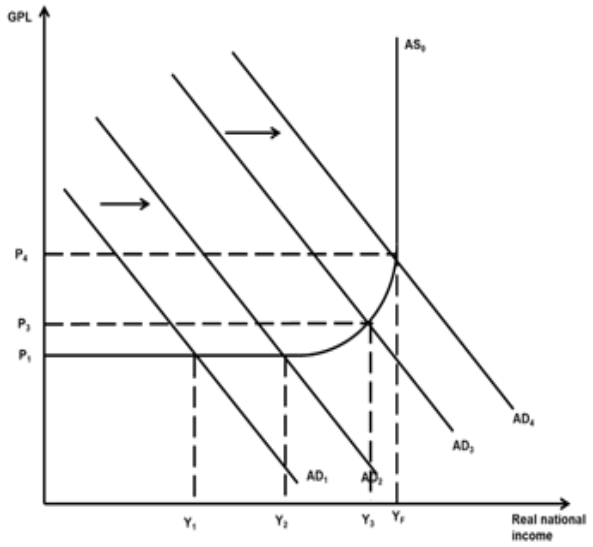


Figure 1

- ***Trade-off #1: Actual economic growth & price stability***

As seen from Figure 1 above, as AD increases, firms' demand for resources (eg labour and land) increase in order to produce more output, but if the scarce resources get lesser and lesser, the firms may have to pay higher wages to workers to attract them to work longer hours for instance. This will cause an increase in the firms' cost of production which will be transferred to consumers in the form of higher prices for the goods and services. Demand pull inflation will result. Hence, in achieving higher economic growth, this will adversely impact price stability. As AD increases from AD_0 to AD_4, GPL increases from P_1 to P_4.

- ***Trade-offs #2 & #3: Actual economic growth & structural unemployment and* income inequality**

The reduction of taxes such as corporate tax will increase profitability for firms which makes it attractive for foreign firms to invest. As more FDI comes into the Singapore economy, more capital-intensive jobs will be created, which require higher skilled workers. As such, the Singapore economy transformed itself from dependence on exporting low-end manufacturing to high-end knowledge-based goods and services.

Therefore, low-skilled workers may find themselves at the mercy of rapid economic growth as their skills and knowledge become obsolete. As a result, these workers may be made redundant as they can be replaced by machines quite easily, which raises structural unemployment in Singapore. This will lead to decreased demand for low-skilled workers, resulting in a leftwards shift of DD curve from D0 to D1 which caused decreased wages from W0 to W1 (see Figure 2). On the other hand, demand for higher skilled workers will increase -> rightwards shift of DD curve from D0 to D1 -> increased wages from W0 to W1 (Figure 3). Hence, income gap between the low-skilled and high-skilled workers widened, resulting in income inequality.

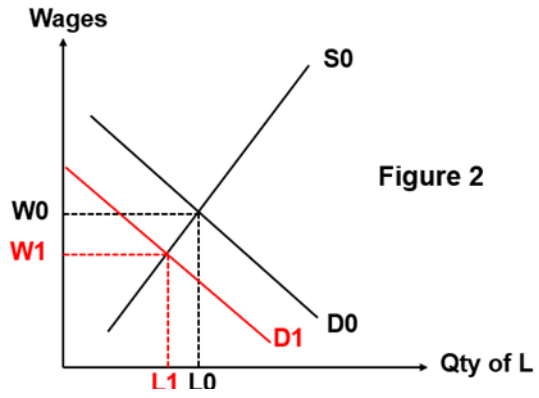


Figure 2

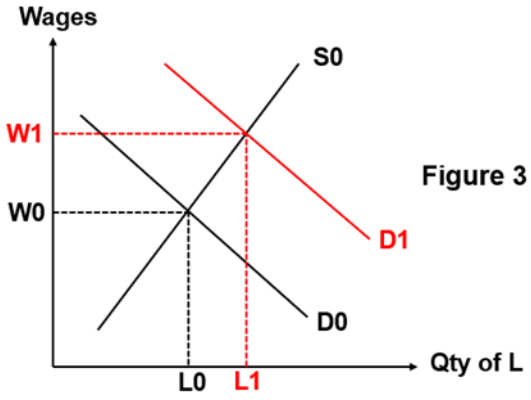


Figure 3

E for R1: The achievement of actual economic growth from expansionary FP does not cause trade-offs with the internal macroeconomic objectives.

- ***Economic growth and lower unemployment***

As seen from Figure 1 above, increased AD due to the implementation of expansionary fiscal policy by the Singapore government will lead to increased actual economic growth i.e. increased RNY from Y1 to Y3. This will result in increased production of goods & services, hence firms will

increased demand for labour as labour is in derived demand; increasing employment or reducing cyclical unemployment in the country.

- ***Economic growth and improving income inequality***

The Singapore government has spent on education and retraining such as SkillsFuture, which aims to ensure a competitive and career resilient workforce. It enables working adults regardless of their starting qualifications, to continue to build and deepen their skills and competencies, throughout their lives.

This reduces occupational immobility and helps workers to stay relevant in view of changing demands in the job markets. As a result, it allows workers in all sectors to remain relevant and generate stable incomes and promote productivity growth which is essential for inclusive growth.

Encouraging lower-skilled workers to go for upgrading of skills and re-training through subsidizing education and training helps raise the productivity of workers and hence their incomes. As shown in Figure 4 below, rising productivity leads to rising demand for labour from DDL0 to DDL1. Higher demand leads to higher wages from W0 to W1.

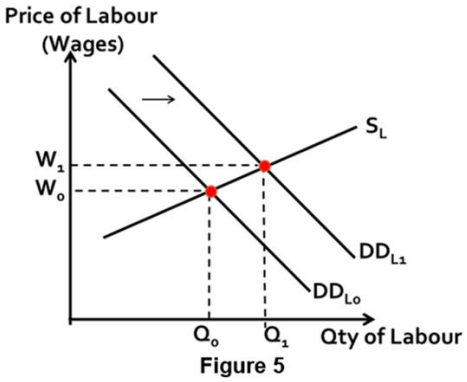


Figure 5

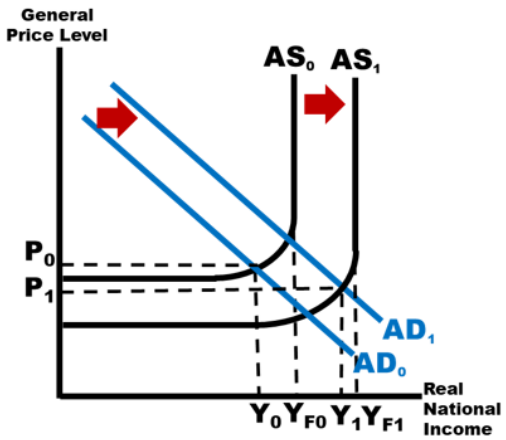
The Singapore government adopts a progressive tax model e.g. raising the tax rates for higher income groups, hence it is able to reduce income inequality.

The adjustment in taxes would generally increase government revenue and allow the government to redistribute income. To reduce income inequality, the Singapore government has provided transfer payments in the form of subsidies such as GST vouchers, U-save vouchers, CDC vouchers etc… on various groups who are left behind when there is economic growth. This include those who do not hold jobs such as retirees, the sick and disabled, students, housewives, the elderly and those who are unskilled.

- ***Economic growth and improving productive efficiency hence maintaining price stability***

The reduction of taxes such as corporate tax will increase profitability of firms and hence attract FDI into Singapore. Increased FDI will increased 'I' component of AD and also increase productive capacity (through increase in quantity &/or quality of capital &/or labour or technology), which will increase LRAS.

As long as AS increases more than the increase in AD, which is likely the case in Singapore given our small multiplier size due to high marginal propensity to save (as a result of compulsory saving i.e. CPF) and high marginal propensity to import (as we lack natural resources and need to import almost everything), therefore AD will increase by a smaller extent. Hence, Singapore will be able to achieve non-inflationary growth or sustained economic growth. The rise in both AS and AD, raises real GDP from Yo to Y1 while lowering GPL from Po to P1.



Furthermore, the Singapore government has been giving subsidies to firms to encourage innovation and the use of technology such as the 'Productivity and Innovation Credit'. This would help to increase productive capacity (e.g. through increased technology / increased quality of capital) which increases LRAS and also reduce cost of production for firms as production becomes more efficient with the use of technology and more innovative ways of production, which will increase SRAS.

Requirement 2: Explain how the achievement of actual economic growth from the expansionary FP caused trade-offs with the external macroeconomic objectives like balance of trade and currency changes.

- ***Economic growth and balance of trade deficit***

As seen from the explanation for trade-off #1, persistent increase in GPL due to continuous increases in AD will cause Singapore's exports to be less price competitive. When the PED of our exports is >1 as there are many substitutes for our exports, the quantity demanded for our exports will decrease more than proportionately, resulting in a decrease in export revenue.

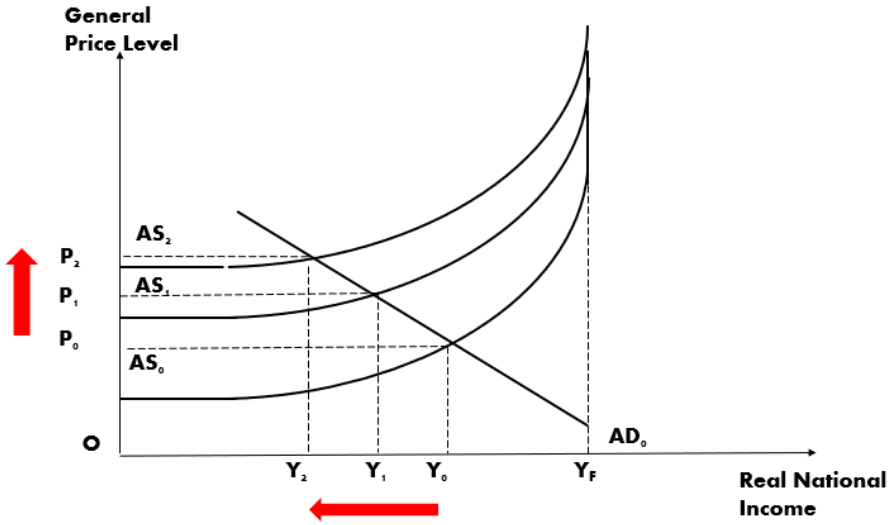
Domestic consumers will also look to buying cheaper foreign goods and services given that the persistent increase in GPL makes domestic goods more expensive. Therefore, demand for imports will increase (assuming that the imports and domestic goods are substitutes), which will result in increased import expenditure.

- ***Trade-off with currency changes***

From the above explanation, decreased quantity demanded for Singapore's exports will result in decreased demand for SGD, which will cause a depreciation of the Singapore currency.

Depreciation of the Singapore currency is not favourable for the Singapore economy as we are dependent on imports (given that we lack natural resources). Depreciation of SGD will mean that imported goods and services will be more expensive in terms of the weaker SGD and since PED for imports is price inelastic (given our reliance on imports), increased price of imports will result in increased import expenditure. This will worsen our BOT deficit and also cause decrease in AD and hence actual economic growth.

Furthermore, depreciation of SGD will result in increased price of imported raw materials, causing an increase in cost of production for firms. Increased cost of production will lead to decreased SRAS (upwards shift of SRAS curve from AS0 to AS1), resulting in increased GPL (from P0 to P2) and hence cost-push inflation and decreased actual economic growth (decreased RNY from Y0 to Y2). See Figure 6 below. Increased GPL will further decrease the export competitiveness of Singapore exports and worsen BOT deficit.



E for R2: Explain that the achievement of actual economic growth from expansionary FP does not cause trade-offs with the external macroeconomic objectives.

- ***Economic growth and BOT surplus***

The Singapore government has been actively spending to develop local enterprises, anchoring quality investments, nurturing innovation etc.. through various schemes such as the SME Co-Investment Fund, National Productivity Fund, Enterprise Innovation Scheme etc…, which would help to increase productive capacity (i.e. increase LRAS) and reduce cost of production (i.e. increase SRAS), therefore, it is unlikely that GPL will increase too drastically. GPL might even fall if increased AS is more than increase in AD.

In this case, Singapore exports will still remain relatively price competitive. Even if quantity demanded for Singapore exports do fall, it is unlikely to fall extensively, resulting in a smaller decrease in export revenue. Likewise for import expenditure, it will not increase extensively. Hence, BOT deficit might not be too extensive.

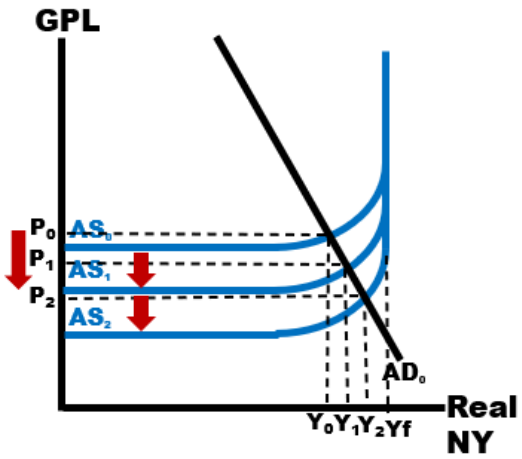
Given the push towards innovation and technology, Singapore's exports could become more competitive in terms of quality and variety. Rather than depending only on price

competitiveness, Singapore could gain an advantage in developing better quality and more innovative exports, which will help to increase DD and cause the DD to be more price inelastic as Singapore differentiates its exports from other countries. Therefore, X revenue would increase, and M expenditure would decrease (given that domestic goods become more desirable than imported ones), hence resulting in BOT surplus.

- ***Economic growth and appreciation of SGD***

Given that Singapore could experience BOT surplus instead (from the explanation above), there will be increased demand for SGD, which cause an appreciation of the dollar.

Appreciation of SGD will cause imported raw materials to be cheaper in terms of the stronger SGD, hence reducing cost of production and increasing SRAS, leading to decreased GPL (from P0 to P2) and increased actual economic growth (increased RNY from Y0 to Y2). See Figure 7 below. This will also enable Singapore's exports to be more price competitive (assuming that the decrease in COP outweighs the appreciation of SGD).



Summative Conclusion

**Students should use 'CRATES' to help them craft an effective summative conclusion. Students must ensure that the points raised in the summative conclusion are different from the ones mentioned in R1, R2 and evaluation.*

During this period when there is a slowdown in the global economic climate, priority aim of the government will definitely be to boost up the growth rate of the country. Planning a budget deficit is definitely one of the choice policy of the government.

By implementing such an expansionary fiscal policy to attain economic growth will definitely complement certain goals but will also result in tradeoffs such as price instability which may impact the households and firms.

Hence, government may need to implement other policies to reduce the extent of the tradeoffs. Such as supply management policies to increase the aggregate supply in order to lower the general price level.

Besides budgeting a deficit to attain higher growth rates, the government can also choose to implement other policies such as trade policy, supply management policy. But government must be aware of the limitations of the policies as well as their tradeoffs.

Mark Scheme:

Knowledge, Understanding, Application and Analysis		
L3	**Requirement 1:** • Explanation of how the expansionary FP achieves actual economic growth is accurate and in-depth, with the use of AD-AS framework and good use of examples. *[Must have]* • Explanation of trade-offs between actual economic growth and other internal macroeconomic objectives is accurate and in-depth, with the use of AD-AS framework and good use of examples. *[Explain at least 2 internal macroeconomic objectives]* **Requirement 2:** • Explanation of how the achievement of actual economic growth from the expansionary FP caused trade-offs with the external macroeconomic objectives is accurate and in-depth, with good use of examples. *[Only 1 external macroeconomic objective is required – BOT]*	8 – 10
L2	**Requirement 1:** • Explanation of how the expansionary FP achieves actual economic growth is accurate but lacked depth, with some use of AD-AS framework and examples. • Explanation of trade-offs between actual economic growth and other internal macroeconomic objectives is accurate but lacked depth, with some use of AD-AS framework and examples. **Requirement 2:** • Explanation of how the achievement of actual economic growth from the expansionary FP caused trade-offs with the external macroeconomic objectives is accurate but lacked depth, with some use of AD-AS framework and examples.	5 – 7
L1	• Question requirements are interpreted inaccurately. • Inappropriate economic concepts, theories and principles are used. Inaccurate economic analysis. • Inappropriate or wrong diagrams are used.	1 – 4
Evaluation		
E3	Well-explained evaluative judgements about 2 requirements + a summative conclusion	5

E2	A well-explained evaluative judgement about 1 requirement + an evaluative statement for the second requirement – 3m A well-explained evaluative judgement about 1 requirement + an evaluative statement for the second requirement + a summative conclusion – 4m OR Well-explained evaluative judgements about 2 requirements – 4m	3 – 4
E1	An evaluative statement for 1 requirement – 1m A well-explained evaluative judgement about 1 requirement OR evaluative statements for 2 requirements – 2m	1 – 2

Question 6

With the global economic recovery disrupted by inflation, supply chain issues and conflicts, the trend of nationalism-driven protectionism may be gaining popularity.
Ricardo Balbieri, Director-General of the Italian Treasury, recently advocated that the EU "must continue to follow the values of multilateralism and free trade [but] will have to support certain industries." ***Adapted from various news agencies***

a) Describe two types of protectionist policies and explain how each would affect trade. **[10]**

b) Discuss whether the use of protectionist policies or a policy of greater free trade is the preferred approach for governments to achieve economic growth. **[15]**

Part (a) Suggested Answer

Question Analysis	
Command	Describe – To give a detailed account in words (of a certain phenomenon)
Content	• (Bilateral) Trade – exchange of goods and/or services across international borders • Protectionist policies – examples such a tariff and a non-tariff policy
Context	Unstated/Open - encouraged to apply the economic analysis in a real-world bilateral trade setting.
Synopsis: Students are expected to explain how each of the tariff and a non-tariff (eg. subsidy) protectionist policies would cause import volumes of a country to fall with the support of the microeconomic analytical framework.	

Introduction

- **Define key terms:**
  Protectionism is the deliberate attempt to limit imports or promote exports by putting up trade barriers.
- **Outline approach to the question:**
  There are tariff and non-tariff trade barriers. Examples of protectionist measures that are commonly used are import tariffs, import quotas and export subsidies. This essay will explain how **tariffs** affects trade by **limiting imports** and how **export subsidies** affect trade by **promote exports**.

Body

R1: Tariff as a protectionist policy measure affects trade by lowering import spending (and raising domestic consumption expenditure)

- Many countries (such as the US, Japan and China) protect their key domestic sectors through imposing **tariffs**.

- Throughout history the US government has imposed import tariffs on numerous products such as on imported steel (2002), imported tyres (2009) and food and agricultural exports (2018-19).
- In 2018, the total tariff value imposed by China on US exports of electronics and machinery were US$20bn and US$18bn respectively.
- Japan imposes tariffs on 5 sensitive agricultural product categories (rice, beef and pork, wheat, dairy and sugar) to protect domestic producers. In March 2022, Japan raised its imported US beef tariffs from 25.3% to 38.5%.
- A **tariff** is a tax imposed on imported goods and it can be used by domestic countries (with no comparative or competitive advantage) to restrict imports (from countries with a comparative advantage or competitive advantage) and protect home industries. Tariffs artificially raise the price that domestic consumers pay for imported goods and make imports less price competitive than local products.
- Assuming buyers have a price elastic demand for imports, this will lead to a more than proportionate fall in quantity of imports, reducing the import volume (and import expenditure) by a significant proportion and increase the demand for local products.
- Figure 1 (in the next page) illustrates the case of a domestic goods market (e.g. sugar market in the U.S) whose available supply to consumers is made up of partly home produced (represented by SS_{dom}) and partly imported (represented by SS_{world}) goods. Pw is the world price where the U.S can buy all it wants and SS_{world}, the world supply curve, is perfectly price elastic. At price Pw, the quantity demanded is OM. Of this, quantity OJ is catered to by local produce and quantity JM is imported foreign production.
-

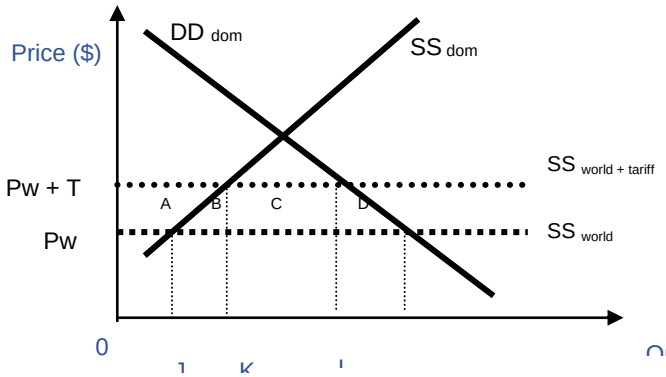


Figure 1: Effect of Tariff Imposition

- The present U.S government tariff on imported sugar is 1.66¢ per pound (lb). Assuming the US government imposes a tariff represented by the currency value T. This raises the price of the world supply curve into the US by the amount of the tariff, T – making imported sugar less price competitive and making it more difficult for foreign producers to compete with domestic U.S producers.
- As seen in **Figure 1**, the effective horizontal world supply curve thus shifts up to $SS_{world + tariff}$ and price rises to Pw+T. At this price, total domestic consumption in US falls from OM to OL and **domestic production of rises** from OJ to OK. Thus, the **amount imported by the US is reduced** from JM to KL.

- It is therefore evident that tariffs affect trade by **reducing the volume of imports** coming into the country. At the same time, it also has the effect of **increasing domestic consumption** of local produce (in place of the reduced imports).

R2: Subsidies as a non-tariff protectionist measure affects trade by raising exports revenue and lowering import spending (and also raising consumption expenditure)

- Adding to a list of trade disputes filed with the WTO, in 2012, the US filed a trade dispute claim against China regarding the **subsidies** the Chinese government provided to Chinese auto and auto-parts manufacturers. The WTO rules considers such a subsidy would distort trade and hence are prohibited.
- The Indian government's **subsidy** on raw sugar export in 2019 is another non-tariff protectionist measure to allow domestic producers to export their raw sugar at a relatively lower price as compared to other world exporters.
- **Subsidies** (as a non-tariff protectionist policy) are monetary grants given by the government to domestic producers enabling them **to sell more either domestically or abroad**.
- A subsidy can be given when the government decides to subsidise an industry as a mean of **protecting the producers from competition of lower-priced foreign goods**.
- A subsidy can also be given to promote exports - is given when the government decides to subsidise an industry as a means of helping to **improve the competitiveness** of the industry in the global market and hence, **increasing export volume**.
- With reference to **Figure 2**, the provision of the subsidy, raised the domestic production in the market from **Q_0 to Q_2** as domestic supply rise from S^0_d to S^1_d**.** The large subsidy causes the **domestic price to fall to P_{d1}, which is lower than P_W.**

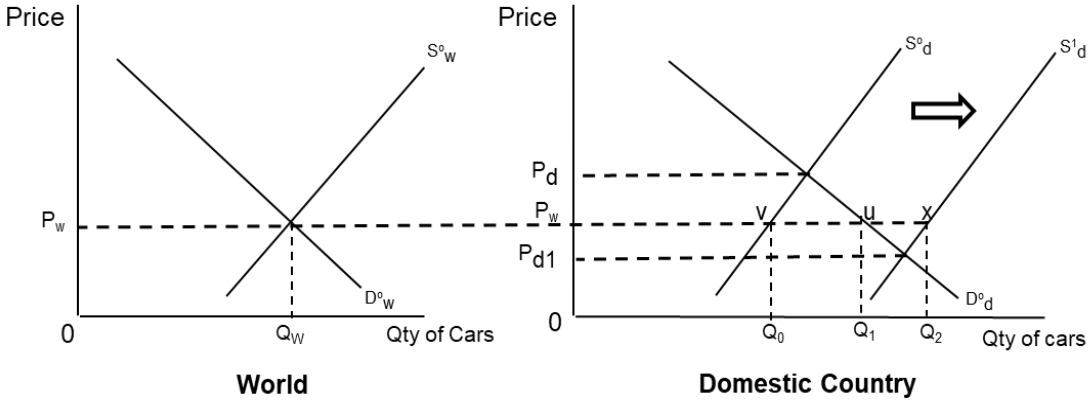


Figure 2: Effect of subsidies to promote exports

- Hence the country would now be a **net exporter** of the good, exporting **Q_1Q_2** at the price Pw. The price paid by domestic consumer would still be P_W but they would be **purchasing more local products** (from **Q_0 to Q_1) instead of imported goods.**

[As an alternative **non-tariff protectionist policy**, students may make write on **currency depreciation**.]

<u>Conclusion</u>

- The two protectionist methods discussed above (tariffs and subsidies) will affect trade by **lowering import expenditure (M)** and **raising export earnings (X)** while also bringing about **raising domestic consumption expenditure (C)** for the country implementing these measures.
- Assuming no other counteracting effects, though trade would be affected, the protectionist policies **may appear to have a positive domestic impact** for the country implementing either of these measures.
- However, the benefits reaped via these measures by consumers, producers and the economy can also be achieved by other policy approaches and the benefits via these protectionist measures may not be a prolonged one or may not be without its downsides.

Mark Scheme:

Knowledge, Application, Understanding and Analysis		
L3	Answer is **relevant to question requirements** and covers sufficient **breadth**: ○ To illustrate how trade can be affected by any two **protectionist policies/methods** by: ▪ **R1: reducing imports volume** via **import tariffs <u>or</u> subsidy to raise domestic production,** and/or ▪ **R2: raising exports volume** via **export subsidy <u>or</u> currency depreciation** Answer has sufficient **depth**: ○ **rigorous and detailed** economic analysis that demonstrate strong understanding of each **protectionist policy** by use of concepts such as **demand, supply, market price, equilibrium prices, comparative advantage or price competitiveness** – to support the analysis leading to the impact on trade volumes. ○ **relevant** and **clearly** labelled **DD-SS diagram(s) or appropriate framework** to support the economic analysis ○ **relevant to the context** of **any country** that engages in (bilateral) trade. For answers that provide a good breadth to explain the two protectionist (one tariff and one non-tariff) methods BUT **both focused on the import volumes** impact only **without application to any country** context	9 – 10 8
L2	• Mostly relevant to question requirements. • Economic concepts are relevant but may **contain minor inaccuracies**. • Economic analysis is accurate but **incomplete or lacks precision.** • Relevant diagrams are used but might **not be accurately explained or applied** to support economic analysis. • **<u>Success Criteria:</u>** ○ ONE **developed explanation** BUT an **undeveloped/cursory** the other policy ○ an **undeveloped explanation** of **BOTH protectionist policies** with **limited use of relevant economic concepts** – **up to 7 mk** ○ ONE **well-developed policy explanation** and an **undeveloped explanation** (with **limited use of relevant economic concepts)** – **up to 6 mk** ○ Identified the preferred policies with an **undeveloped explanation of BOTH policies** (with **<u>very limited</u> use of relevant economic concepts knowledge)** – **up to 5 mk**	5 – 7

L1	• Question requirements are interpreted inaccurately with no or minimal link to the protectionist policies. • Mere stating the changes or drawing shifts of demand and supply with **limited use of relevant concepts or inaccurate explanation**. • Inappropriate or lack of diagrams.	1 – 4

Part (b) Suggested Answer

Question Analysis	
Command	• Discuss whether – refers to an in-depth answer that considers all aspects of the topic/argument/view/assertion which will culminate to a stand.
Content	• achieve economic growth – a macroeconomic goal that can take various types and be represented by various economic indicators (- a common indicators are a rise in real national income or real gross domestic income. • Policy of greater free trade – a course of action that promotes increased exchange of goods and/or services and resources across international borders • Protectionist policies – tariff and a non-tariff (eg. export subsidy) policies aimed at limiting imports and/or promote exports
Context	• Unstated/Open - encouraged to apply the economic analysis in a real-world bilateral trade setting.
Synopsis: Students are expected to explain how each of the tariff and a non-tariff (eg. subsidy) protectionist policies would cause a country's import volumes to fall or (/and) export volume to rise with the complementary support of the microeconomic analytical framework.	

Introduction

- **Define "protectionism" and "greater free trade"**
  - **Protectionism** is the deliberate attempt to **limit imports or promote exports** by putting up trade barriers in the form of tariff and/or non-tariff measures.
  - **Greater free trade policy** is a course or principle of action that promotes increased volume of cross-border exchanges of goods and services including resources between countries
    - Facilitated when countries sign **Free Trade Agreements** (FTAs) are treaties between 2 or more economies which **make trade and investment easier**.
- **Outline approach to the question:**
  - **Both** protectionist and greater free trade policies can help **promote economic growth**.
  - This essay will explore how the 2 policy approaches achieves economic growth and which of these 2 policy approaches would be a preferred policy approach for a country.

Body

R1: Illustrate how protectionism helps a government achieve economic growth.

- From the explanation in part (a), the use of protectionist measures affects trade leading to a **rise in net exports** as well as a **rise in domestic consumption expenditure** leading to a rise in aggregate demand (AD).
- With reference to **Figure 4**, the **initial rise in AD** due to the rise in net exports (X-M) and/or domestic consumption (C), will cause an **unplanned fall in the firm's inventory**. To maintain their inventory, firms will need to employ more resources such as labour. As more **labour are demanded and hired**, they **receive more in wages**. The purchasing power of the labour force rises. This rise in purchasing power of labour or households leads to a **multiple rise in induced consumption**.
- Each subsequent rise in induced consumption (ie. C1, C2 and C3) will be increasingly smaller. This results in a **multiple rightward shift in the AD** curve, from AD_0 to AD_{0k1} to AD_{0k3} to AD_1, where AD is rising at a decreasing rate.
- The overall rise is AD has resulted in a **multiple rise in RNI from Y_0 to Y_1** – indicating **(actual) economic growth** is achieved.

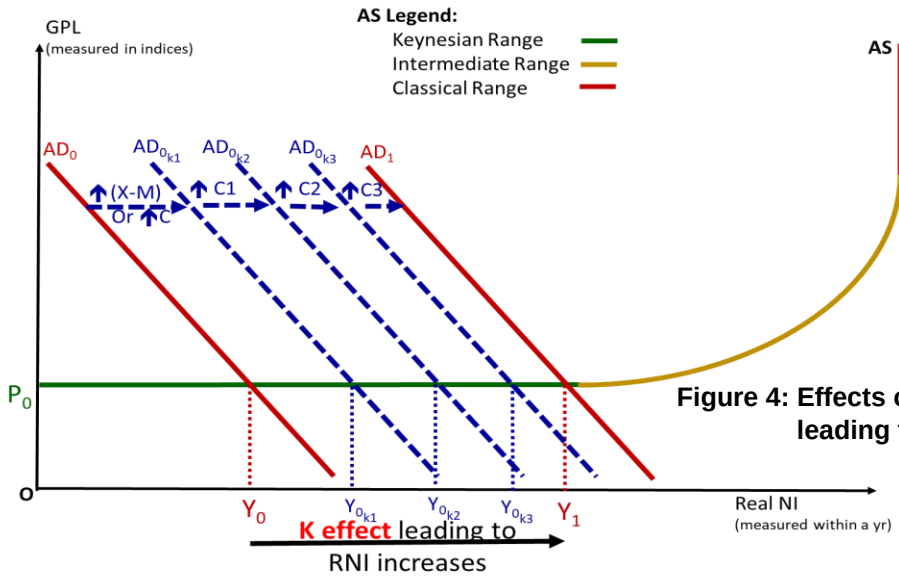


Figure 4: Effects of Protectionism leading to Economic Growth.

- **EV1: Protectionism as an approach to achieve economic growth may be justified in certain circumstances such as when a country is**:
  - **a lower state of development or a developing country** - Developing nations would usually **protect (infant) industries with potential comparative advantage**. The government protection from established foreign competition during their "growing up" period allows the infant industry to develop its comparative advantage. Once they are sufficiently developed with a production scale large enough to enjoy internal economies of scale, the firms will be able to price their goods more competitively and thus compete more effectively with overseas rivals.
    - However, depending on the duration of the protection and size of the economy, the protection (or lack of competition) if not accompanied with well-designed regulatory frameworks (particularly the timeline to removing the protection) would inadvertently allow inefficiencies to seep in and being shielded from competition may stunt the industrial growth potential of these industries as the benefits would be only confined within the domestic boundaries.

- **faced with an economic downturn** – a consequence experienced by some countries due to the **imposed border lockdowns** (to combat the contagion effects of the Covid pandemic) which adversely affected tourism and led to **supply-chain disruptions** which affected domestic production, employment as well as consumption – were, to some extent, contributory factors to the recent spate of nationalism-driven protectionism. The falling national incomes necessitated the need to diversify the economy and the development of infant industries.
  - However, the economic downturn that triggered the rational for protectionism to boost AD must be one that is on a **massive or global scale** and **not one which are isolated cases** where the countries facing the downturn can forge other bilateral or multilateral trade ties with alternative/new or existing trade partners.
- **not reciprocated in a similar manner** (due to the autonomy accorded) by the international trade partners or investors (ie. do not face retaliatory actions) - the economic growth would be possible if the country is accorded its right to pursue its national interest and adopt its preferred policy without depending heavily on other foreign nations **(ie. strategic autonomy).**
  - However**,** in the case of the subsidies measure, there are trading partners that are more inclined to retaliate (by counter-protectionist measures) and seek recourse from international regulators such as WTO due to the significant damage in terms of trade revenue suffered by them.
  - Nonetheless, even if the significant damage in trade revenue was suffered by some countries, they may still be unable to or would choose not to impose retaliatory counteractions as there may be long term gains or self-interest if the good trade relations between countries can be maintained.

R2: Illustrate how greater free trade helps a government achieve economic growth.

- **Greater free trade policy** is a course or principle of action that promotes increased volume of cross-border exchanges of goods and services including resources between countries facilitated by **Free Trade Agreements** (FTAs).
- FTAs are treaties between 2 or more economies which **make trade and investment easier**.
- Participating countries to the **treaty agree on certain obligations** that affect trade in goods and services, and protections for investors and intellectual property rights, among other topics. This includes tariff concessions, preferential access to certain sectors, faster entry into markets and Intellectual Property protection.
- When the FTAs Singapore signs with its trading partners become effective and the **trade barriers** [e.g. the import tariff measure described in part (a)] to a country's good's exports is **removed**.
- Greater free trade opens up larger markets for a country's products, allowing for **increased export opportunities**.
- Greater free trade encourages countries to leverage more on their ability to specialize in producing goods and services where they have a comparative advantage in. This specialization leads to higher efficiency, increased production, and technological advancement. This allows the country to **sell their exports at a lower or more competitive price**.
- Referring to **Figure 1**, with the signed FTA coming into effect, the **price of Singapore's exports** into the domestic market of its trading partners **would thus fall** to Pw – price without

the tariff imposed. Thus, the price competitiveness of Singapore's exports is maintained, and **amount imported by its trading partner has increased** from **KL** to **JM**.

- The increase in Singapore's exports means there is an **increase in net export revenue.**
- Greater free trade stimulates competition, which can drive companies to innovate to stay competitive. Resources and efforts channelled towards innovation can lead to the development of new technologies and improved products.
- Furthermore, countries with more open market environments often attract more foreign direct investment (FDI) or inward FDI, which can create jobs, transfer technology, and has the potential to contribute to economic expansion.
- The **increase in net exports and FDI** (due to the FTAs) leads to the **initial rise in AD** (Figure 5).

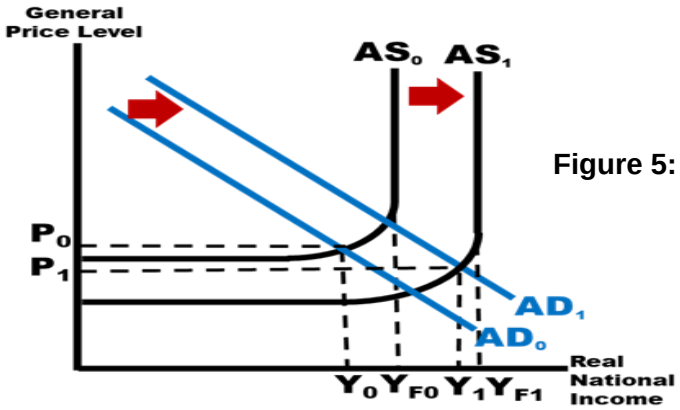


Figure 5: Greater Free Trade leading to Sustained Economic Growth

- As described earlier, the subsequent induced consumptions arising from increased labour demand and wages (via the multiplier effect) leads to an **eventual rise in AD from AD_0 to AD_1** leading to a **rise in RNI from Y_0 to Y_{F0}** - **actual economic growth** being achieved in the short run.
- However, the **development of new technologies** due to the inflow of investments and innovation efforts would tend to **improve the productive efficiency and comparative advantage** of the Singapore economy. This improved quantity and quality of capital assets (as well as labour via skills upgrading) **could have the dual effect of reducing the production cost as well as raising the productive capacity** of the economy.
- These supply-side effects would translate into a **downward shift of the SRAS** and a **rightward shift of the LRAS** respectively (seen as an AS rise from **AS_0 to AS_1**). As such, the consequence would be to help Singapore **achieve actual and potential economic growth**.
- Thus, it would be evident that greater free trade has the potential to help the country **achieve sustained growth** as illustrated in **Figure 5**.

- **EV2: Achieving the economic growth using greater free trade policy may be challenging.**

    - **Dependency on Foreign Markets:** Though trade (built on the foundations of productive efficiency or comparative advantage) is reputed to be an engine of growth, relying heavily on exports can make a country vulnerable to supply disruptions, changes in demand and economic conditions in its trading partners. If a major trading partner experiences an

economic downturn or introduces protectionist measures, the exporting country's economy could suffer.

- **Loss of Domestic Industries:** Greater free trade enables job creation and greater labour demand and increased employment. However, in some cases, heavily subsidized foreign industries or low-cost overseas competitors can flood domestic markets with cheap goods, making it difficult for domestic industries to compete. This can lead to worsening trade balances, the erosion or complete loss of entire industries, affecting national self-sufficiency and strategic sectors.
- **Job Displacement:** One of the main criticisms of free trade is that it can lead to job displacement and unemployment, particularly in industries that face competition from lower-cost foreign producers. As domestic firms struggle to compete, they may cut jobs or shut down, causing disruptions in local economies leading to cyclical and structural unemployment and negatively impacting workers.
- **Income Inequality:** Free trade can exacerbate income inequality. While it can benefit consumers through lower prices, those who are already in lower-income positions might not experience the same benefits as higher-income individuals. The loss of jobs in certain industries could contribute to a growing income gap.
- **Wage Pressure:** The competition from countries with lower labour costs can put downward pressure on wages in industries that are exposed to greater international trade. Workers in these industries might face reduced bargaining power and stagnant or declining wages.

Conclusion

EV3: Stand and supporting reasons which or when the policy approach may be preferred by the government.

- Whether a policy of protectionism or greater free trade is preferred approach to achieve EG depends on:
  - **Nature of the economy:** While a policy of greater free trade would generally be preferred by a **small and resource-scarce country**, a policy of protectionism may appear to be preferred for a **large, resource-rich country**.
  - **Trade-Offs:** While protectionism might protect certain industries, it can also lead to inefficiencies, reduced competitiveness, and less innovation in the long run for those industries. Greater free trade would promote competition and compel any inefficiencies to be acted upon immediately.
  - **Global Context**: In an interconnected world, the benefits of free trade are often linked to the willingness of trading partners to reciprocate. Protectionist policies can lead to trade tensions and retaliation from other countries while efforts to promote greater free trade may not be reciprocated by other countries.
  - **Economic Diversity:** The economic structure of a country matters. Nations with diverse economies might find that free trade allows them to leverage their strengths more effectively. However, countries at the same stage of development or not very diversified (such as 2 predominantly agrarian economies) may be inclined towards a policy of protectionism against each other.
  - **Policy Implementation:** Effective implementation of either approach requires well-designed policies and regulatory frameworks.

- **Transitional Considerations:** Abrupt shifts from one approach to another can disrupt industries and economies. Gradual transitions with complementary policies can be more effective.

- Both policy approaches are able to achieve economic growth, but the **policy of greater free trade** would be more likely to **achieve both actual and potential growth** (and thus sustained economic growth) whereas the **use of protectionist policy** is **unlikely to achieve potential growth**.
- Hence, **Protectionism** would be a **preferred short term measure** while **greater free trade** is a preferred **longer term** measure.
- In practice, many countries adopt **both approaches either at the same time or at different (short run and long run) points in time**, carefully considering the benefits of free trade while addressing the concerns and challenges through protectionist policies (eg. giving greater help to infant and declining industries) and targeted interventions (such as economic restructuring and skills retraining and upgrading for the declining sectors).
- The optimal balance between free trade and protectionism varies from country to country and **depends on the specific goals priorities and circumstances of each nation**.

[Alternatively, students may make use of the **C.R.A.T.E.S. framework** as a guide/basis for evaluating the two policy positions to achieve economic growth.]

Mark Scheme:

Knowledge, Understanding, Application and Analysis		
L3	Answer is **relevant to question requirements** and covers sufficient **breadth**: ○ Well-developed and balanced explanation of **how economic growth could be achieved** by: ▪ **R1**: the use of **protectionist policies** achieving **actual growth – via a rise in net Xs and C**, and ▪ **R2**: the use of a **policy of greater free trade achieving sustained growth (actual and potential) - via a rise in net Xs, C and I** Answer has sufficient **depth**: ○ **rigorous and detailed** economic analysis that demonstrate strong understanding of the use of **aggregate demand and aggregate supply analysis** to explain how the type of economic growth (ie. **actual, potential and sustained growth**) can be arrived at. ○ **relevant** and **precise** use of economic concepts (application of **AD/AS factors, multiplier effect** and the **relevant economic growth indicators**); ○ **accurate** and **clearly-labelled** diagrams to support economic analysis ○ Answer is **relevant to** the question and applies to the context of **countries known to have used both policy categories** to support the analysis. ○ For answers that provide a good breadth to explain the policy approaches **without application to any country** context	9 – 10 8
L2	• Answer is **mostly relevant** to question requirements. • Economic concepts are relevant but may **contain minor inaccuracies**. • Economic analysis is accurate but **incomplete or lacks precision** • Some indication of an **attempt to apply to a context but is incomplete**. Relevant diagrams are used but might **not be accurately explained or applied** to support economic analysis. • **<u>Success Criteria:</u>** ○ For answers that provide a good breadth to explain the policy approaches BUT **both focused on the rise in net exports on <u>actual growth only</u> – up to 7 mk** ○ ONE **developed explanation** BUT an **undeveloped/cursory** other policy approach ○ an **undeveloped explanation** of **BOTH policy approaches** with **limited use of relevant economic concepts & diagrams drawn – up to 7 mk** ○ ONE **well-developed policy explanation** and an **undeveloped explanation** (with **limited use of relevant economic concepts)**	5 – 7

	– **up to 6 mk** ○ an **undeveloped/cursory explanation** of **BOTH policy approaches** without **use of relevant economic concepts & diagrams** – **up to 5 mk**	
L1	• Answer is mostly irrelevant to question requirements. • Economic concepts are largely irrelevant and/or inaccurate. • Unclear and/or inaccurate economic analysis (an answer which merely lists and describes the measures). • Lacking in use of diagrams or wrong diagrams are used.	1 – 4
Evaluation		
E3	A summative conclusion that synthesizes which among the two policies would be preferred.	5
E2	Evaluative judgements about **BOTH** requirements in the body paragraphs that are built on appropriate economic analysis which are **directly relevant** to the question requirement and have **sufficient depth**. Observable evidence of valid/relevant evaluative ideas (**beyond one-liners** or **with elaboration**) for each of the policy positions	3-4
E1	Evaluative judgement about **one requirement** which are **directly relevant** to the question requirement and contains **sufficient depth**. For example, explaining the **limitations and/or trade off** from the use of either policy positions. Observable evidence of valid/relevant evaluative statements/points (**one-liners** or **with no elaboration**) for each of the policy positions	1-2