Name:		Centre/Index Number:		Class:	

DUNMAN HIGH SCHOOL
Preliminary Examination
Year 6

Economics (Higher 2)

Paper 1 Case Study Questions

9757/01
21 September 2022
2 hours 15 minutes

No Additional Materials are required.

READ THESE INSTRUCTIONS FIRST

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

Answer **all** questions.

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

This document consists of **9** printed pages including this cover page.

[Turn over

Answer **all** questions.

Question 1: Feeding Asia

Extract 1: Into the foodture: ASEAN plants the seeds for food security with agritech

As food demand continues to increase with population growth and a rising middle class, governments across Southeast Asia are looking at ways to bolster domestic food security and boost local production. The COVID-19 pandemic has also affected food supply chains and agricultural manpower all around the world. The impact has been keenly felt across Southeast Asia where farming is a critical part of many livelihoods. There has since been a ramp up on investment in agricultural technology (agritech). However, a common hurdle smallholder farmers face is that agritech solutions are not exactly cheap. A single drone to monitor field conditions can cost around US$1,000. Tapping on artificial intelligence, integrated solution platforms or blockchain technology may seem out of reach.

Source: *UOB FDI Advisory,* 26 August 2021

Extract 2: 'Pandemic-proofing': Insights from the Singapore Food Story

The impact of pandemics on food security can be very dire if food production, access and distribution are severely disrupted, as has been seen in the first half of 2020 because of COVID-19. As a city-state which is 90 per cent import dependent on its food supplies, Singapore's 'food story' offers salient insights on how it became one of the most food secure countries globally.

Singapore's strategies include self-reliance, mixing imports, self-production and food stock management.

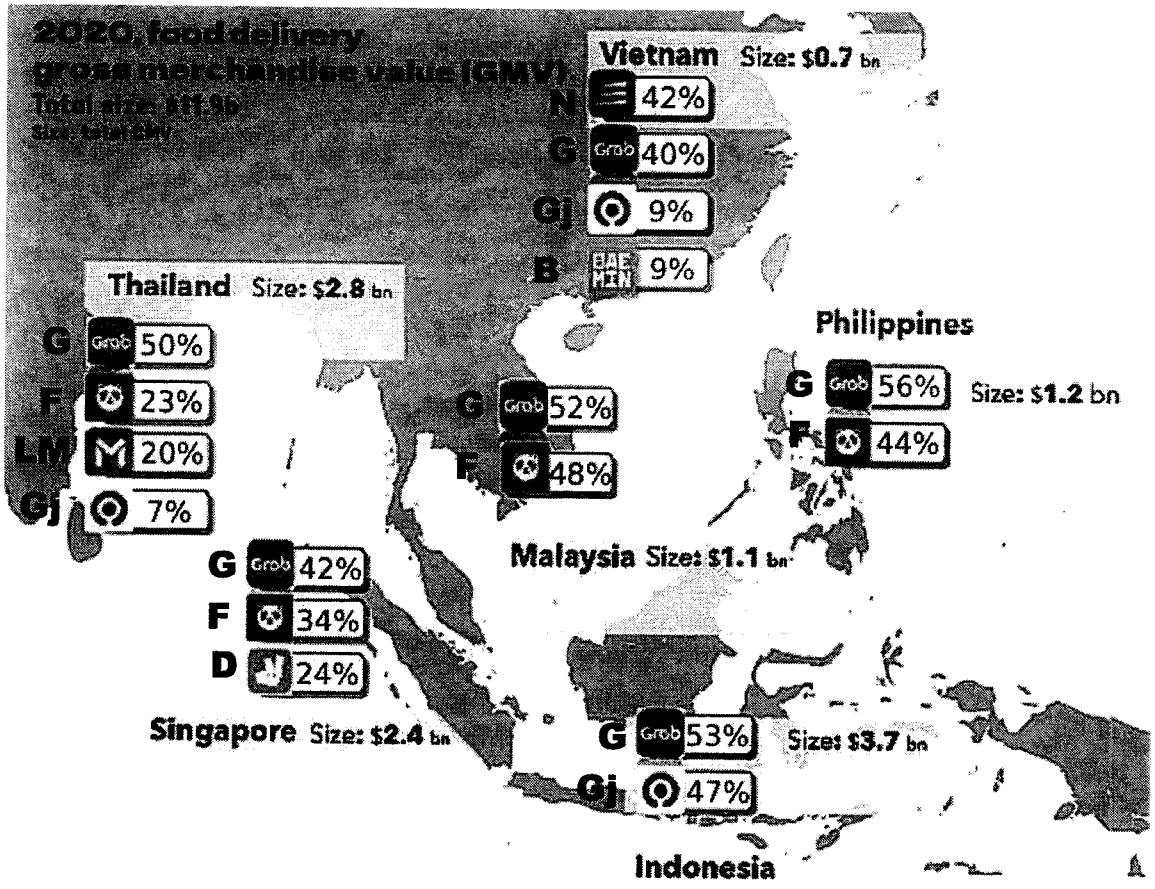
- The country has been focusing on space-limited, technology-enabled urban farming which currently provides about 10% of its needs. The target is to raise homegrown food production to 30 per cent by 2030, a goal more commonly known as '30 by 30'.
- Singapore also has a 'Resilience' strategy for food import sourcing. This strategy is implemented by importing from a geographically diverse group of countries for each food item. The government's food agency routinely sends out 'scouting' teams around the world to develop new sources and supply chains.
- Stockpiles are used by most countries to ensure availability of key food items during periods of scarcity. In Singapore, the government requires rice importers to hold stocks of roughly two months' worth of rice.

The affordability of food, as another important dimension of food security, depends on the price of food and the purchasing power of citizens. A zero-tariff policy on food, and efficient food logistics systems, are two factors which help prevent the need to raise prices.

Empowering its citizens with purchasing power adds to the favourable economic access of food. The average Singapore household has a relatively high GDP per household, and with zero tariffs on food, this makes food expenditures a relatively small part of household budgets. Additionally, during the COVID-19 pandemic, the Singapore government provided local consumers with income support, which helps in maintaining regular food consumption levels.

Source: Mely Caballero-Anthony, Paul Teng and Jose Ma. Luis Montesclaros, NTS Insight, June 2020

Figure 1: Food Delivery Gross Merchandise Value in selected ASEAN countries (2020)



B: Baemin **F**: Foodpanda **Gj**: Gojek **N**: New
D: Deliveroo **G**: Grab **LM**: LineMan

Source: MomentumWorks (accessed 6 Aug 2022)

Extract 3: GrabFood versus GoFood: The rivalry only escalates in Indonesia

A recent research revealed how the COVID-19 pandemic had spurred huge growth and dynamic competition among food-delivery providers in greater Jakarta, despite the dominance of two main players. Indonesia's food delivery dynamic duo are none other than GoFood, run by GoJek, and GrabFood, run by Grab. Months later, it's become clear that competition is nowhere close to slowing down, but competitive dynamics are changing, becoming more intense.

GoFood app continued to hold an edge over GrabFood based on greater loyalty among customers. However, GrabFood was making strong inroads on the back of heavy promotional and discount offers. "People still tend to switch to the one that provides the most discounts," says a brand consultant.

For now, neither company needs to worry much about over-reliance on discounting. Indeed, GoFood and GrabFood, with greater investor funding, now both find themselves with deeper pockets and resources to keep up the intense competition. Let's just hope that the rivalry continues to benefit the consumer.

Source: Robert Sawatzky, *Campaign Asia-Pacific*, Oct 20, 2021

Extract 4: Thailand warns food delivery app firms against overcharging amid coronavirus outbreak

Thailand's anti-monopoly watchdog has warned food delivery platforms they could face fines for charging higher commissions as online food orders surge amid the coronavirus outbreak. The announcement comes after malls and restaurants were ordered to close except for take-out orders in late March. Food delivery platforms have seen a spike in orders, with operators like Foodpanda seeing orders rise 20 times from a year ago. There have been complaints that food delivery platforms have increased their service fees for restaurants from 20 per cent to rates of up to 40 per cent.

Source: The Straits Times, 1 April, 2020

Extract 5: Southeast Asia's big appetite for food delivery

Online food delivery has been around as an option in Southeast Asia for a good number of years now. But the ease of smartphone apps, choice of digital payment options, and of course the COVID-19 situation has seen online food delivery adoption skyrocket in the region over the past year.

'Cloud kitchens' are delivery-only kitchens without a dining space. Like its other online competitors, Malaysia's newly-started cloud kitchen Dahmakan collects data to understand user preferences, and to improve its quality of service. Its company CEO shared in an interview that "Customers want affordable food. We use order histories and customer data to predict what customers will order in the coming week, which really helps us negotiate grocery orders for the next week. This allows us to lower our costs and pass on the savings to customers." He further added that "Dahmakan's food menu development is powered by feedback from customers. That's how we find popular dishes and recipes that people love... Every day, we make sure our menu has something that will appeal to every palate in the country."

Source: Joe Devanesan, 5 January, 2021

Questions

(a) Explain what is meant by "effective demand". Identify **one** evidence in Extract 1 of an increase in effective demand. [2]

(b) **(i)** Identify and explain the economic concept underlying the "hurdle" (Extract 1) faced by smallholder farmers in the adoption of agritech. [2]

(ii) Explain one reason why such "hurdle" may be of concern to governments. [2]

(c) To ensure the availability and affordability of food in periods of supply disruptions, the Singapore government adopts a multi-pronged approach.

Explain **one supply policy** and **one demand policy** directed at improving food security in Singapore. [4]

(d) **(i)** With reference to Figure 1, identify the market structure that exists in the food delivery market in Indonesia and compare the market concentration in Indonesia and Thailand. [2]

(ii) Discuss the extent to which the number of firms in the market is a good indicator of the intensity of market competition. [8]

(e) Discuss whether the pursuit of self-interest by firms would bring benefits to the society. [10]

[Total: 30]

Question 2: From trade wars to COVID-19 pandemic – a tale of unrelenting assault on global trade and growth

Extract 6: Labour market persistence from recessions

The COVID-19 pandemic has led to the sharpest deterioration in Australian labour market conditions in several decades. GDP fell by 7 per cent in June quarter 2020. The unemployment rate peaked at close to 7½ per cent in mid-2020 and the underemployment rate also increased sharply.

Many of those affected will be re-employed or have their hours increased once the virus is contained. However, COVID-19 may also have persistent effects on some segments of the labour market. This could occur if workers' skills decline due to a lack of use or because this is perceived to have occurred. Moreover, the COVID-19 contraction might speed up the process of structural change in the economy. Recessions can also affect labour markets if they result in lower potential economic growth. One way this can occur is through lower business investment. The potential for downturns to have long-lasting effects on the labour market has important implications for policymakers: recessions are even more costly if they have enduring effects, which means macro stabilisation policies should respond more aggressively.

Source: Iris Day and Keaton Jenner, *Reserve Bank of Australia Bulletin*, 17 September 20202

Extract 7: International trade during the COVID-19 pandemic: Big shifts and uncertainty

The year 2020 was marked by some of the largest reductions in trade and output volumes since World War II. Nevertheless, initial pandemic-era expectations for a double-digit decline in world merchandise trade in 2020 did not materialise. The volume of global trade has recovered to the pre-pandemic level at an extraordinarily fast pace from around mid-2020.

It is worth emphasising that the trade collapse of early 2020 did not hit all products to the same extent and the rising tide did not lift all parts of the global trade system equally either.

Services trade: Not surprisingly, trade in travel and tourism services slumped dramatically but trade in digitally delivered services, such as telecommunication and information technology services, boomed.

Merchandise / Goods trade: Trade in several types of goods and services plummeted, while trade in others increased markedly. The product structure of merchandise trade changed significantly: trade in several products nosedived (e.g. fuels, aircrafts, cars, mechanical machinery, steel), while trade in some other products increased (e.g. protective equipment and pharmaceutical products, food, and 'home nesting' products such as domestic appliances and electronics). Hence, while China's production was hit deep in January 2020 but it rebounded much quicker than production in other regions. This supported meeting demands by other countries for 'home nesting' products and certain medical products and led to a steep rebound of exports.

Source: OECD, 10 March 2022

Extract 8: Global trade is deteriorating fast, sapping the world's economy

Even before the global COVID-19 pandemic, global growth and trade had been slowing.

In September 2019, President Trump of the United States increased tariffs on US$112 billion worth of Chinese imports, threatening American consumers with higher costs for shoes, apparel and electronics. As China slapped retaliatory tariffs on US$75 billion of American imports, Mr. Trump threatened to extend tariffs to US$550 billion worth of Chinese imports.

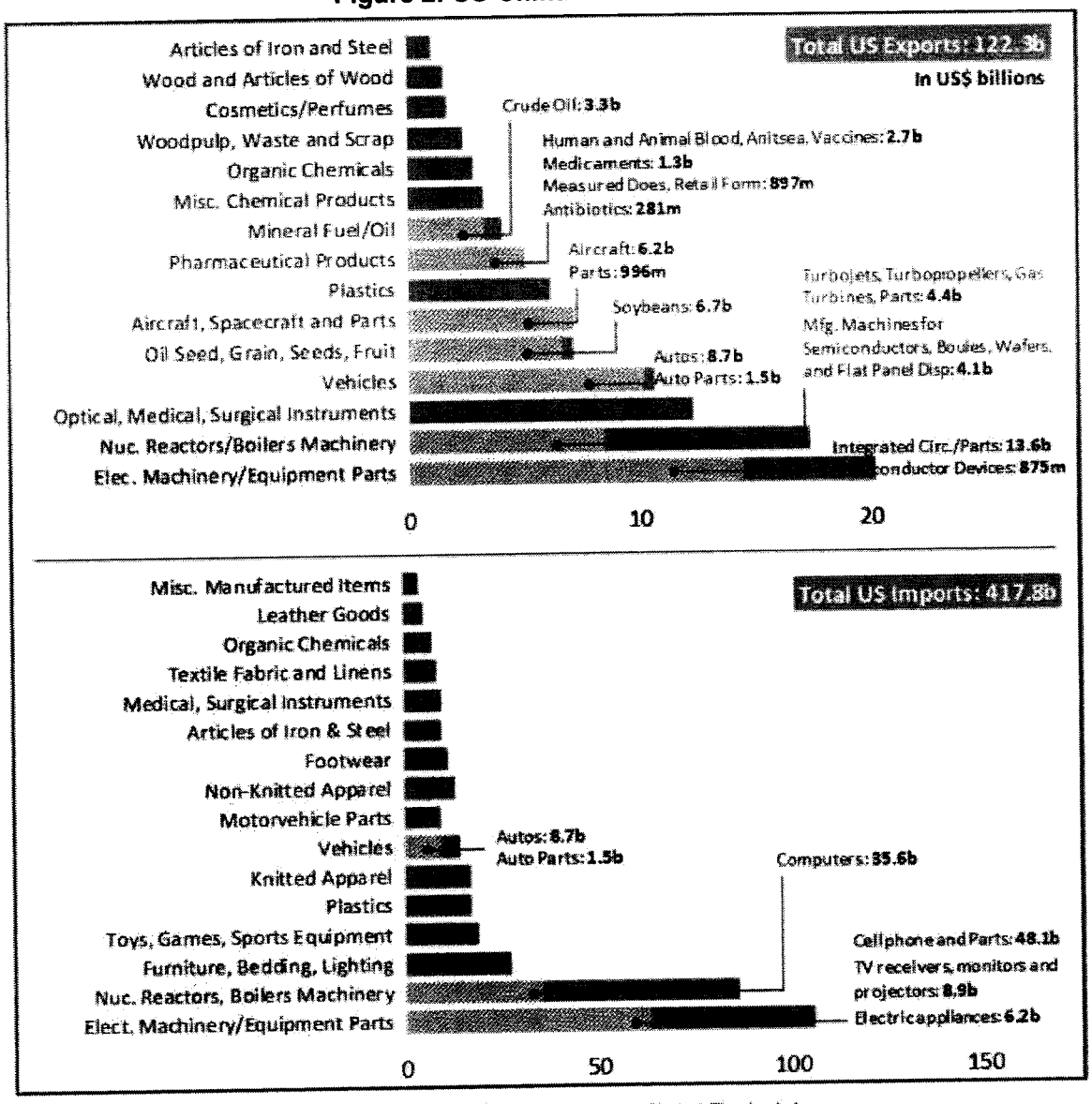
Both the United States and China — the world's two largest economies — have seen a pronounced cooling in commercial activity in recent months, a trend exacerbated by the tariffs they have imposed on each other's exports, raising costs for businesses and consumers, and discouraging investment.

"Trade conflicts heighten uncertainty," the W.T.O.'s director-general said in a statement. Such uncertainty would have a knock-on effect on firms and households.

The trade war is already menacing many economies that are dependent on exports. Singapore's economy is now contracting. Japan, South Korea and Taiwan all sell large volumes of manufactured goods to China. They have suffered diminished sales as China slows. Germany has become a prominent source of concern in Europe. German manufacturing troubles stem in part from the fact that Chinese companies facing tariffs on exports to the United States are shrinking their purchases of German-made machinery. German companies are also reluctant to invest given Mr. Trump's active threats to expand the trade war to include tariffs on German cars sold in the United States.

Source: Peter S. Goodman, New York Times, 1 October 2019

Figure 2: US-China Trade in 2019



Source: Congressional Research Service (CRS) with data from Global Trade Atlas.

Note: Dashed portion of the bar depicts a subset of the product category.

Questions

(a) With reference to Extract 6 and using production possibility curve diagram(s), explain the impact of unemployment and underemployment on the standard of living in the short run and long run. [4]

(b) **(i)** With reference to Figure 2, calculate and explain the bilateral trade balance in the trade between US and China. [2]

(ii) The changes in trade patterns caused by the COVID-19 pandemic demonstrate that comparative advantage is just one of the factors affecting pattern of trade.

Explain the above statement with the use of case evidence. [4]

(c) Extract 8 describes a type of protectionist measure. Explain **one** alternative type of protectionist measure. [2]

(d) Assess the effect of US-China trade war on the two countries involved. [8]

(e) "The trade war is already menacing many economies that are dependent on exports" such as Singapore, Japan, South Korea and Taiwan. (Extract 8)

Discuss the policy options available to export-dependent economies to deal with the menacing effects of the US-China trade war. [10]

[Total: 30]

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DUNMAN HIGH SCHOOL
Preliminary Examination
Year 6

Economics (Higher 2)

9757/2

Paper 2 Essay Questions

12 September 2022
2 hours 15 minutes

Additional Materials:
No Additional Materials are required

READ THESE INSTRUCTIONS FIRST

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

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

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

This document consists of **4** printed pages including this cover page.

[Turn over

Answer **three** questions in total.

Section A

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

1 **(a)** Explain what needs to be considered when a government makes rational decision on whether to intervene in the market for single-use plastic products (SUPPs). [10]

(b) Plastic pollution is a major environmental issue. Countries should strengthen domestic policies, and work towards the reduction of plastic pollution.

Discuss whether a government's plan to ban SUPPs is likely to be better than a policy of charging SUPPs in reducing plastic pollution. [15]

2 Maritime and air freight transport provide the essential transportation services that enable global merchandise trade. In the first half of 2020, U.S. maritime container imports declined. Container shipping firms cancelled scheduled sailings to lower costs and mitigate a downward pressure on freight rates due to overcapacity. In mid-2020, increased economic activity and sharply rising consumer demand led to a recovery in merchandise trade. During that time, container shipping firms struggled to restore capacity to previous levels.

Source: United States International Trade Commission (https://www.usitc.gov/research_and_analysis/tradeshifts/2020/special_topic.html accessed 10 August 2022)

(a) Container shipping firms acted to mitigate a downward pressure on freight rates in the **first half** of 2020.

Using demand-supply analysis, explain how such a move works and its impact on the industry's revenue. [10]

(b) Discuss what determines whether the buyers or sellers are more likely to bear the cost of the change in freight rate in **mid-**2020. [15]

3 Created by the Consumers Association of Singapore (CASE) and supported by the Competition and Consumer Commission of Singapore, Fuel Kaki is a fuel price comparison website. The website lets motorists compare fuel prices across retailers, check loyalty programmes and promotions, and estimate the price they will pay per litre after discounts.

Source: Cindy Co, CNA, 13 Jan 2020

	Diesel	**92-octane petrol**	**95-octane petrol**	**98-octane petrol**	**Premium petrol**
Caltex	S$2.93	S$2.89	S$2.94	N.A.	S$3.58 (Platinum 98)
Esso	S$2.81 Diesel	S$2.80 Regular	S$2.85 Extra	S$3.32 (Synergy Supreme+)	N.A.
Shell	S$2.93	N.A.	S$2.94	S$3.43	S$3.63 (Shell V-Power)
Sinopec	S$2.91	N.A.	S$2.94	S$3.41	S$3.54 (SINO X Power)
SPC	S$2.91	S$2.89	S$2.93	S$3.41	N.A.

Source: Fuel Kaki (access 10 August 2022)

(a) Explain the likely impact of the Fuel Kaki website on the
- prices and profits of petrol retailers, and
- government's microeconomic goals. [10]

(b) Faced with such a development, discuss **two** strategies available to petrol retailers to increase their profits. [15]

Section B

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

4 2020 was a year of extremes. Travel all but ceased for a period. Oil prices wildly fluctuated. Trade in medical products reached new heights. Household spending shifted to consumer goods rather than services and savings ballooned as people stayed home amid a global shutdown. Most of the drivers of excess external imbalances pre-date the pandemic and include fiscal imbalances as well as structural and competitiveness distortions.

Source: IMF.org, accessed 28 June 2022

(a) Explain the consequences of "fiscal imbalances" on an economy. [10]

(b) In view of the above events, assess the effectiveness of implementing the different types of supply-side policies for achieving inclusive and sustainable growth. [15]

5 With Singapore's GDP growth for 2020 projected at -4 to -1%, inflation was expected to average between -1 and 0% for the year. Against such a macroeconomic backdrop, MAS announced a downward recentering of the Singapore dollar nominal effective exchange rate (S$NEER).

Unlike Singapore whose monetary policy is centred on exchange rate, US uses interest rate as its monetary policy tool. In response to the economic fallout from COVID-19, the US Federal Reserve, the country's central bank, slashed its key interest rate.

(a) Explain why the move by MAS to loosen monetary policy is deemed to be appropriate. [10]

(b) Discuss whether a cut in US interest rates would be of overall benefit to Singapore's economy. [15]

6 Economic cooperation between Vietnam and Japan has grown steadily over the years. Japan is the largest provider of official development assistance (ODA) to Vietnam and Vietnam's fourth largest trade partner. Japan's direct investment in Vietnam ranks first among countries investing in Vietnam. Bilateral cooperation in human resource development and tourism are also being promoted.

Source: Embassy of the Socialist Republic of Vietnam in Japan (accessed 22 Aug 2022)

Explain the advantages and disadvantages of economic cooperation and discuss whether a developing economy like Vietnam has more to gain than an advanced economy like Japan from such a cooperation. [25]

DUNMAN HIGH SCHOOL
Preliminary Examination
Higher 2 Economics
Suggested Answers and Mark Schemes

PAPER 1

Question 1: Feeding Asia

Suggested Answer

(a) Explain why is meant by "effective demand". Identify <u>one</u> evidence in Extract 1 of an increase in effective demand. [2]

1m for effective dd:
- the amount of a good that consumes are willing to purchase, backed by their ability to pay

1m for evidence:
- "rising middle class" → suggesting that more hhs are earning higher levels of Y and hence possess the purchasing power / ability to pay

(b) (i) Identify and explain the economic concept underlying the "hurdle" (Extract 1) faced by smallholder farmers in the adoption of agritech. [2]

1m for identification:
- accept BTE or iEOS

1m for explanation:
- smallholders → operate on a small scale compared to large conglomerates → given the high cost of agritech, the cost per unit o/p for small firms would be large → unable to match the low prices charged by larger firms (face lower LRAC) → exit the industry, i.e. the iEOS effectively acts as BTE

(ii) Explain one reason why such "hurdle" may be of concern to governments.[2]

Accept reasons including:
- keeps out small firms / BTE → mkt dominance
  - raise prices, esp of something as critical as food which should not be allocation based on the ability-to-pay principle of the market → inequity
  - charge a mark-up of P over MC → allocative inefficiency
- hurdle for smallholders → limits the extent to which food production can increase and prices kept stable / affordable → undermines food security / inequity
- hurdle for small holders, favours larger firms → large firms enjoy supernormal profits while small firms may be squeezed out of the market → inequity

(c) To ensure the availability and affordability of food in periods of supply disruptions, the Singapore government adopts a multi-pronged approach.

Explain <u>one supply policy</u> and <u>one demand policy</u> directed at improving food security in Singapore. [4]

<u>Supply policy</u> (choose one)
- 30-by-30 with policies to support agritech,
- Diversification of import sources
- Stockpiling

These policies ensure the stability of supply even in periods of external ss disruptions by augmenting the available ss with domestic production / imports for other countries / release from stockpiles. The ability to stabilise ss is also key to avoiding food price inflation, keeping food affordable.

<u>Demand policy</u>
In periods of ss disruptions, the shortage would put an upward pressure on food prices, pricing out lower-income hhs. With income support → increase purchasing power, creating effective dd for food → makes food affordable.

2m each

(d) (i) With reference to Figure 1, identify the market structure that exists in the food delivery market in Indonesia and compare the market concentration in Indonesia and Thailand. [2]

1m for identification of market structure
- Duopoly (accept also oligopoly)

1m for stating the difference
- Market concentration <u>higher in Indonesia</u> than in Thailand

(ii) Discuss the extent to which the number of firms in the market is a good indicator of the intensity of market competition. [8]

THESIS: In theory, the larger the number of firms, the more intense the competition.
- Availability of substitutes → high PED and high XED → hence the need to keep prices down (price competition) and work to create product differentiation (non-price competition)

ANTITHESIS: However, it is observed that competition is more intense in Indonesia with just two food delivery platforms, (case evidence: price discounts) than it is in Thailand with three large food delivery platforms (case evidence: as opposed to price discounts, platform operators are raising the charges)

- Indonesia - with just two food delivery platforms, competition is intense (case evidence: price discounts)

  Explain price competition
  (i) gain market share and enjoy network effects
  (ii) may even drive out competitors eventually

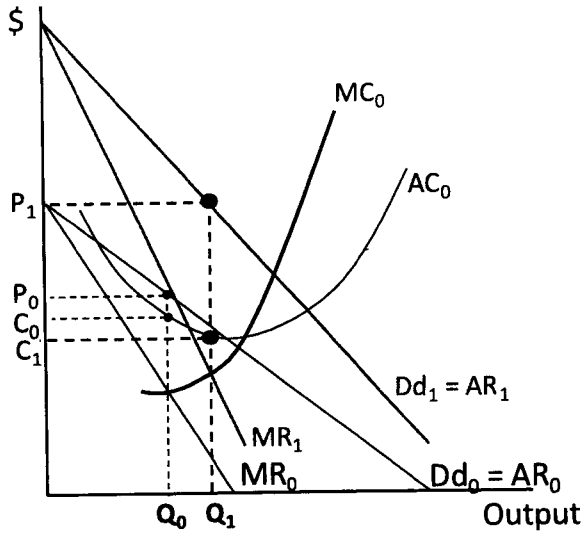
  accept: SR deviation from profit-maximisation e.g. growth max, limit pricing, etc

- Thailand – with three large food delivery platforms, competition appears to be less intense (case evidence: as opposed to price discounts, platform operators are raising the charges)

Explain exercise of market power (choose one)

(i) Grab as the dominant firm enjoys strong market power, allowing it to be able to raise price

(ii) collusion e.g. price leadership / cartel



EVALUATION:

Need to look beyond the number of firms to consider

Relative size of firms

- Thailand: clear case of dominant firm (Grab 50%, the other two share out the remaining) → price collusion likely to develop since given the wide gap in the market share, the other smaller firms are unable to mount effective competition against the market leader
- Indonesia: although there are only two food delivery platforms, their size / market share are comparable → able to compete more effectively against each other

Investor funding

- Price competition / price war is costly (may involve SR losses) → able to sustain only with investor support

L2 4-6	Addresses the question fully: • Intensity of market competition → price / non-price competition, 2 or more firms involved Scope & depth • Balanced answer with T & AT • Use of analytical framework, supported by sound economic reasoning Supported with case evidence
L1 1-3	Scope or depth • One-sided analysis • Answer that is largely descriptive Answer that is largely theoretical
E2 2	Reasoned conclusion
E1 1	For an unsupported evaluation statement(s) that lacks explanation

(e) Discuss whether the pursuit of self-interest by firms would bring benefits to the society. **[10]**

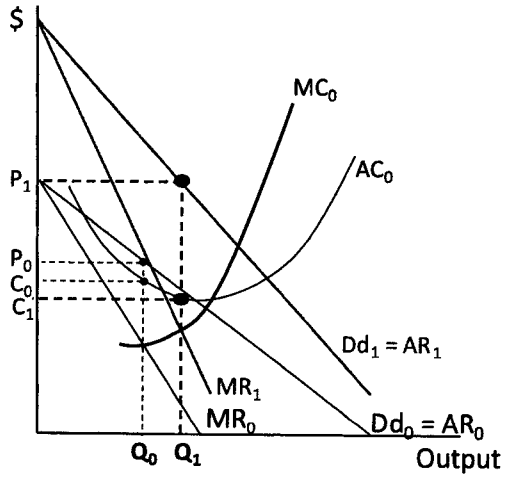
THESIS:

Dahmakan

- uses data to negotiate grocery orders → lowers MC and AC → increase profit (firm's goal) + lower prices (benefit consumers)
- use of customer feedback to develop food menu → increase dd (AR) → increase profit (firm's goal) + better cater to crs' t&p (benefit crs)

ANTITHESIS:

- Thailand – lockdown → dd rises & becomes more price inelastic → delivery firms respond by simply following the profit-maximising condition → increasing charges to F&B owners → increase profit (firm's goal), which would be passed on to F&B firms & crs (worse off)
- Indonesia - aggressive px discount → benefit crs in the SR but if it leads to emergence of one dominant firm, F&B firms & crs may be worse off



EVALUATION:

- Depends on the choice of strategy to increase profits (from analysis above)
- But the choice of strategy is dependent the market structure – MpC that Dahmakan exists in v.s. oligopoly that food delivery platforms exist in
- Tampered by gov intervention as in the case of Thailand

L2 5-7	Addresses the question fully: • "pursue of self-interest by firms" → strategies to increase profits • "benefits to society" → relate to gov's goals of E&E, crs' goal of utility maximisation Scope & depth • Balanced answer with T & AT • Use of analytical framework, supported by sound economic reasoning Supported with case evidence
L1 1-4	Depth or scope • One-sided answer that is well-developed • Balanced answer that is descriptive Answer that is largely theoretical
E2 2-3	Reasoned conclusion
E1 1	For an unsupported evaluation statement(s) that lacks explanation

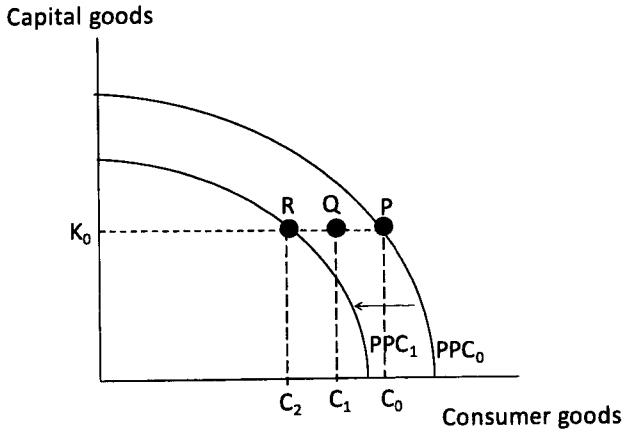
Question 2: From trade wars to COVID-19 pandemic – a tale of unrelenting assault on global trade and growth

Suggested Answers

(a) **With reference to Extract 6 and using production possibility curve diagram(s), explain the impact of unemployment and underemployment on the standard of living in the short run and long run.** **[4]**

SR: unemployment & underemployment represented as point inside the PPC (P) → producing less o/p than the maximum output possible given factor Q&Q and technology → lower material SOL

LR:
Workers' skills decline due to a lack of use
=> PPC shifts inwards due to decrease in factor quality / productivity → decrease in the maximum output possible given factor Q&Q & technology → lower material SOL



2m each
1m – for the implication on material SOL
1m – for accurately drawn diagram, well-referenced to in text

(b) (i) **With reference to Figure 2, calculate and explain the bilateral trade balance in the trade between US and China.** **[2]**

US ran a $295.5bn trade deficit against China.

1m for identification of trade position – US ran a trade deficit or China had a trade surplus
1m for value of the deficit / surplus (must include units of measurement)

(ii) **The changes in trade patterns caused by the COVID-19 pandemic demonstrate that comparative advantage is just one of the factors affecting pattern of trade.**

Explain the above statement with the use of case evidence. **[4]**

CA only explains the ss or cost factor affecting PoT. Changes in PoT can also be drive by dd factors.

CA as a determinant of PoT (ss or cost factors)
Among the top exports of US to China are "optical, medical, surgical equipment", and "aircraft, spacecraft and parts" (Fig 2)
=> US with its advanced technology enjoys CA in the production of higher-end manufactured goods over China, being able to produce such goods at lower opportunity cost than China.

Other determinants of PoT (dd factors)
The product structure of merchandise trade changed significantly: trade in several products nosedived (e.g. fuels, aircrafts, cars, mechanical machinery, steel), while trade in some other products increased (e.g. protective equipment and pharmaceutical products, food, and 'home nesting' products such as domestic appliances and electronics). (Figure 2)
=> While China enjoys CA in lower-end manufactured goods, certain among them stood out in terms of the outsized value of trade compared to others e.g. cellphones and parts, TV receivers, monitors and projectors, computers, etc. This is better explained through dd factors – lockdowns and work-from-home arrangements shifted crs' t&p towards 'home nesting products'.

2m each
1m – for use of case evidence
1m – for explanation of the underlying factor influencing PoT

Qn reads "caused by COVID-19 pandemic"
- *non-CA factor chosen must be related to the pandemic*

(c) Extract 8 describes a type of protectionist measure. Explain one alternative type of protectionist measure. **[2]**

Non-tariff measures include
- quotas
- subsidies
- voluntary export restrictions
- technical specifications and standards
- administrative regulations

Voluntary export restraints (VER): where the exporting country is persuaded by the importing country to voluntarily reduce their exports under threats of all-round trade restrictions

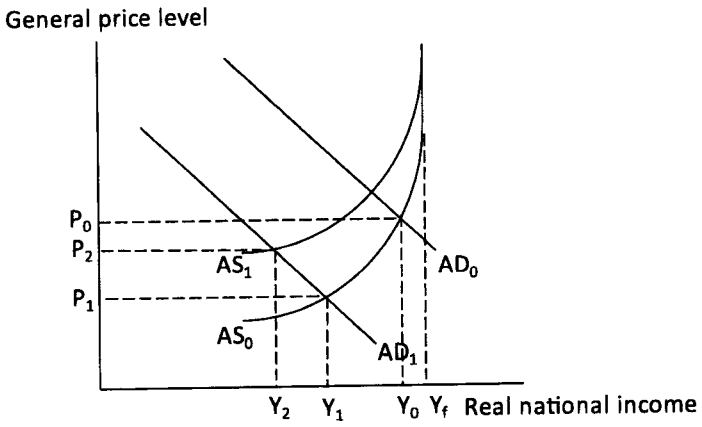
1m – for identification of any non-tariff measure
1m – for explanation of the measure

(d) Assess the effect of US-China trade war on the two countries involved. [8]

Economic welfare / material SOL
Increased tariffs on Chinese imports, threatening American consumers with higher costs for shoes, apparel and electronics (Extract 8)
=> Higher consumer prices → erosion of purchasing power / real income (holding nominal income constant) → less utility derived, reduced material SOL
OR higher cr prices → leave crs with reduced cr surplus → loss of economic welfare
The adverse effect applies to China just as it does to US since China too imposed tit-for-tat tariffs on imports from US.

EG and unemployment
Pronounced cooling in commercial activity... the tariffs they have imposed on each other's exports, raising costs for businesses and consumers, and discouraging investment (Extract 8)
Trade conflicts heighten uncertainty... knock-on effect on firms and households (Extract 8)
SR:
- Tariffs on imported factor inputs / component parts → increase unit COP for firms → decrease AS
- Uncertainty → expectations of future income / profits decline → decrease C & I → decrease AD
- Decrease AS + decrease AD → contraction in RNY, increase in unemployment

LR:
- Decrease in investment → limit expansion of productive capacity in the LR → AS only increases slowly over time → decrease potential EG



Evaluation:
Depends on
- Trade-to-GDP ratio
  - China more dependent of X to drive EG as opposed to US which is a consumption-driven economy
  - China exports more to US than US China → US able to (and actually did) impose tariff on a wider range of goods whereas China less able to retaliate since US did not export as much to China

  Either way => spillover effect of trade war on China more severe
- Mitigating factors
  - how well-diversified their export markets are e.g. China's Belt and Road Initiative → diversification of export markets to reduce reliance on US, similarly diversify sources of imports to reduce cost increase
  - gov policies to cushion the adverse impact

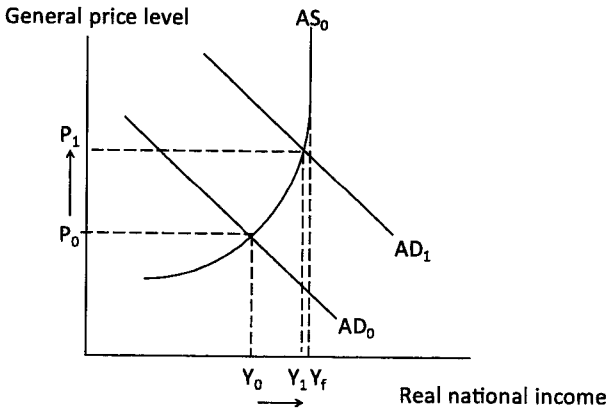
L2 4-6	Addresses the question fully: • trade war (not a simple case of protectionism) • economic impact Scope & depth • Balanced answer – alternative perspectives • Use of analytical framework, supported by sound economic reasoning Supported with case evidence
L1 1-3	Scope or depth • One-sided analysis • Answer that is largely descriptive Answer that is largely theoretical
E2 2	Reasoned conclusion
E1 1	For an unsupported evaluation statement(s) that lacks explanation

(e) "The trade war is already menacing many economies that are dependent on exports" such as Singapore, Japan, South Korea and Taiwan. (Extract 8)

Discuss the policy options available to export-dependent economies to deal with the menacing effects of the US-China trade war. [10]

Policy 1: Expansionary MP
(choose one)
- Japan, South Korea, Taiwan: conventional MP – i/r cuts
- Sg: managed depreciation

Explain the effect of managed depreciation on P_X, P_M and the resultant effect on BOT, AD, RNY, unemployment (incorporate the ML condition, multiplier analysis) → cushion the "menacing effects" of the US-China trade war on their economies



Policy limitations:
- While managed depreciation raises AD, it would reduce AS through raising prices of imported fops → limit the expansionary effect on the economy
- May spark off bout of competitive devaluation → overall little net benefit

Point evaluation: US/China may divert their exports to the ROW, accepting lower prices → may help to partially counter the rising prices of imported fops

Policy 2: Expansionary FP

Explain the effect of expansionary FP (via increase G, increase transfers to increase C_d, tax cuts to increase C & I) on AD, RNY, unemployment → cushion the "menacing effects" of the US-China trade war on their economies

Policy limitations:
- Crowding out effect may limit policy effectiveness
- Economic uncertainty may limit effectiveness of tax cuts in stimulating C & I
- Unsustainable if the trade war is protracted

Evaluation:
Expansionary FP is still the better policy
- Given the heightened trade tensions → expect US to pressure economies on currency manipulation e.g. through threat of trade restrictions similar to the tariffs on China → managed depreciation might not be an appropriate policy
- Expansionary FP has ss-side effects too → with AD and AS increasing, that would improve policy effectiveness in supporting EG

L2 5-7	Addresses the question fully: • deal with the menacing effects of trade war → what are the 'effects' that need to be addressed? Scope & depth • Balanced answer with policies + limitations • Use of analytical framework, supported by sound economic reasoning Supported with case evidence
L1 1-4	Depth or scope • One set of policy-limitation analysis that is well-developed • Two policies that are not well-developed Answer that is largely theoretical
E2 2-3	Reasoned conclusion
E1 1	For an unsupported evaluation statement(s) that lacks explanation

ESSAY Q1

(a)	Explain what needs to be considered when a government makes rational decision on whether to intervene in the market for single-use plastic products (SUPPs). [10]
(b)	Plastic pollution is a major environmental issue. Countries should strengthen domestic policies, and work towards the reduction of plastic pollution. Discuss whether a government's plan to ban SUPPs is likely to be better than a policy of charging SUPPs in reducing plastic pollution. [15]

Suggested mark scheme

Part (a)

Introduction

- Government seeks to maximise net social welfare, BCA approach
- Government intervention=> needs political support
- Government intervention in the market for SUPPs
  - Single-use plastics, or disposable plastics, are used only once before they are thrown away or recycled. These items are things like plastic bags, straws, coffee stirrers, soda and water bottles and most food packaging.

Body

Explained the basis of a government's rational decision-making process => an explanation of a need to weigh up costs and benefits, intended and unintended consequences, constraints (fiscal budget) and trade-offs

- Marginalist Principle
  Government in pursuit of maximisation of society's net welfare, would steer consumption of SUPPs up to the point where the marginal social benefit (MSB) = marginal social cost (MSC) of the last unit

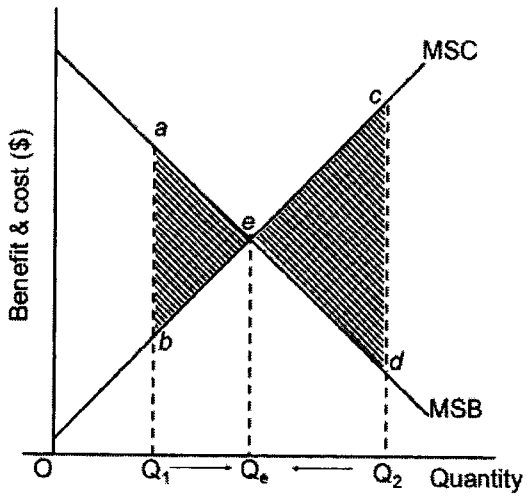


Figure 1: Rational decision making by government

At output below Q_e, say at Q_1,

- the last unit consumed/usage adds more to society's benefit (aQ_1) than it does to society's cost (bQ_1). Society's welfare can be increased by raising usage from Q_1 to Q_e as it would add as much as Q_1aeQ_e to society's benefit but only Q_1beQ_e to society's cost, yielding a net social benefit or economic welfare of *abe*. Seen in another way, restricting usage of plastic bags to Q_1 would mean forfeiture of society's economic welfare (or welfare loss) of *abe*.

At output above Q_e, say at Q_2,

- the last unit consumed/usage adds more to society's cost (cQ_2) than it does to society's benefit (dQ_2). Society's welfare can be increased by lowering usage from Q_2 to Q_e as it would create as much as $Q_e ec Q_2$ of cost savings for society while forgoing only $Q_e ed Q_2$ of social benefit, avoiding a potential welfare loss of *edc*.

At Q_e,

- marginal social cost = marginal social benefit = eQ_e. At this point, it is not possible to increase the society's net benefit or economic welfare further by adjusting the level of output. This is the point of optimisation where society's economic welfare is maximised.

Government needs to consider

- Intended benefits => the extent of market failure => negative externality & imperfect information in this SUPPs:
  - achieve allocative efficiency by correcting the over-consumption of SUPPs, MEC to the environment which is ignored by consumers and firms. Charging for the usage => internalise the MEC => reduce usage => eliminating the DWL (candidates to explain with a diagram
  - Used roughly 300 million tons of SUPPs each year and half of it is disposable! World-wide only 10-13% of plastic items are recycled. The nature of petroleum based disposable plastic makes it difficult to recycle and they have to add new virgin materials and chemicals to it to do so. Additionally there are a limited number of items that recycled plastic can be used.
  - Petroleum based plastic is not biodegradable and usually goes into a landfill where it is buried or it gets into the water and finds its way into the ocean. Although plastic will not biodegrade (decompose into natural substance like soil,) it will degrade (break down) into tiny particles after many years. In the process of breaking down, it releases toxic chemicals (additives that were used to shape and harden the plastic) which make their way into our food and water supply.
  - These toxic chemicals are now being found in our bloodstream and the latest research has found them to disrupt the Endocrine system which can cause cancer, infertility, birth defects, impaired immunity, and many other ailments
- Unintended consequences:
  - adverse impact on business, different perspectives for different businesses, eg food caterers => higher unit COP
  - difficulties in refuse disposable / additional cost on consumers

For a government to make rational decisions:

a. the government needs to have accurate, complete, timely information
b. in reality, quality information, rather than readily available, is often difficult and costly to obtain. For instance, a government needs to hold numerous public consultation sessions to gather necessary information – cost of decision making.
   Information is imperfect and might be asymmetry=> varies from whose POV
   Eg: Singapore Government has encouraged NTUC to start charging for the usage of plastic bags (per transaction model) since 2021 in selected outlets. Then Government with supermarkets reviewed the results-using the available data, revise their expected values of benefits and costs, and assess whether a course correction is necessary. In 2022, Government made the necessary changes, based on current economic situations => making adjustment to her original plan => implementation period will be delayed by a year to mid-2022, based on per transaction model.

Conclusion
The government may consider the extent of market failure in deciding to intervene in this market
In the case of SUPPs, if a government deems the intervention to be essential such that net benefit is high => review & make necessary adjustments => rational decision marking

	Knowledge, Application, Understanding, Analysis	
L1	Response did not use MSB/MSC framework or analysis	*1-4*
L2	Some attempt to explain marginalist principle with diagram Lacked exemplification => SSUPs	*5-7*
L3	A well-developed explanation of 2 factors a government would consider whether to intervene in market for SUPPS	*8-10*

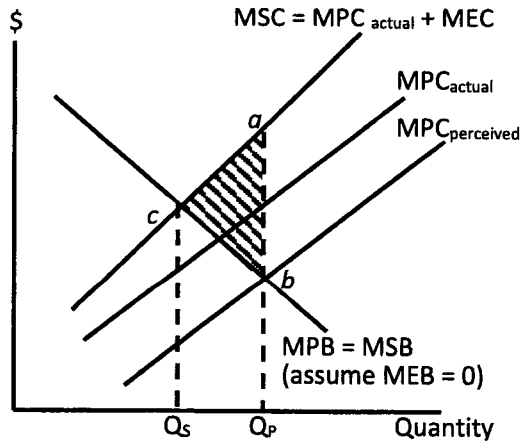
b) Plastic pollution is a major environmental issue. Countries should strengthen domestic policies, and work towards the reduction of plastic pollution.

Discuss whether a government's plan to ban SUPPs is likely to be better than a policy of charging SUPPs in reducing plastic pollution. [15]

Suggested mark scheme

- Compare the 2 types of government intervention: ban SUPPs vs charging SUPPs, in reducing plastic pollution
  - Singapore: 4 per cent, Singapore's plastic recycling rate is the lowest compared to other waste streams. This means that most plastics are incinerated after just a one-time use.
  - Additionally, poor waste management leads to plastic pollution in the environment. Every year, around 11 million tonnes of plastics leak into the oceans, where it breaks down into microplastics that linger in the waters for hundreds of years.
  - Reducing plastic consumption is still the best answer to tackling plastic waste

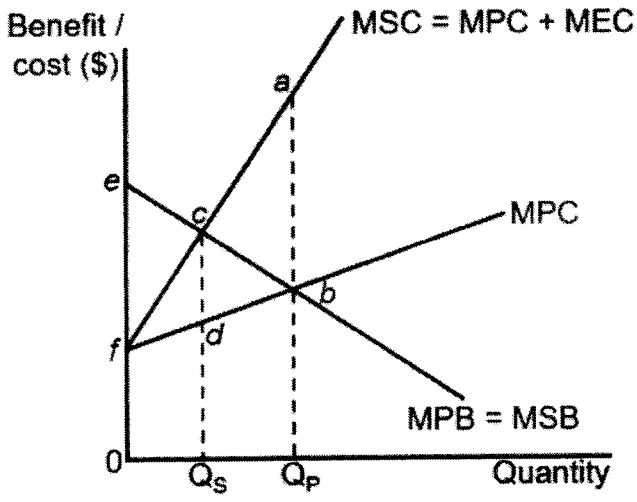
- Over-consumption of SUPPs due to both negative externality & imperfect information



(accept sparate diagrams=> externality & imperfect information)

The over-consumption of SUPPs may be depicted as one where consumers under-estimate the cost of consuming the good (e.g. effect of plastics pollution on their own health). In this case, the perceived MPC is less than the actual MPC. To add to the problem of imperfect information, the consumption of SUPPs also gives rise to negative externality/MEC. Together with the under-estimation of the actual private cost, the existence of external cost raises the MSC even further above the $MPC_{perceived}$. Consumers, making decisions based on perceived costs and benefits, will therefore consume at Qp, more than the socially optimal level Qs. Due to this over-consumption, Qp Qs, society has to bear a cost (area $Q_S caQ_P$) that is in excess of the benefits (area $Q_S cbQ_P$), giving rise to a welfare loss or deadweight loss of area *abc*.

Policy 1: Ban SUPPs



If the private optimal quantity for the usage of SUPPs where MPB = MPC is Q_P. There exists a very large magnitude of external costs (shown by the divergence between the MSC and MPC) at output level Q_P, yet the social optimal quantity exists at a very small output level Q_S where MSB = MSC. For the units Q_SQ_P produced and consumed in excess of the socially optimal level, the additional cost to society (area $Q_Sca Q_P$) exceeds the additional benefit to society (area $Q_Scb Q_P$), and a deadweight loss of area *abc* arises.

In situations like this, the governments could ban SUPPs, Australia has had a plastic bag ban since 2018. India followed the UK with a ban on straws, cutlery and food packaging in July 2022. Although the society still incurs a welfare loss, it has been reduced with the use of a ban. The original welfare loss is represented by area *abc*. Following a ban, quantity consumed falls to zero, equivalently an under-consumption of OQ_S units. The welfare loss in this instance is represented by area *cef*, the excess of MSB over MSC had OQ_S units been consumed. Comparing the deadweight loss before and after the ban, it can be seen that while the ban in does not remove deadweight loss altogether, it reduces the size of the deadweight loss.

However, in the short run, the deadweight loss arising from the ban might be larger than the deadweight loss in the absence of the ban. A government should consider moving away from an outright ban to alternative measures. In Australian plastic bags still can be found in all supermarkets => chargeable => to reduce usage

Policy 2: Charging SUPPs to reduce wastage => plastic pollution

A government may choose to impose a policy of charging the usage of SUPPs, eg, large supermarkets will be required to ***charge*** a minimum of 5 cents for each disposable carrier *bag* from mid-2023, in reducing plastic usage => hopefully the charge will internalise the value of the marginal external costs (MEC) generated at the socially optimum level of output. (Work like an indirect tax)

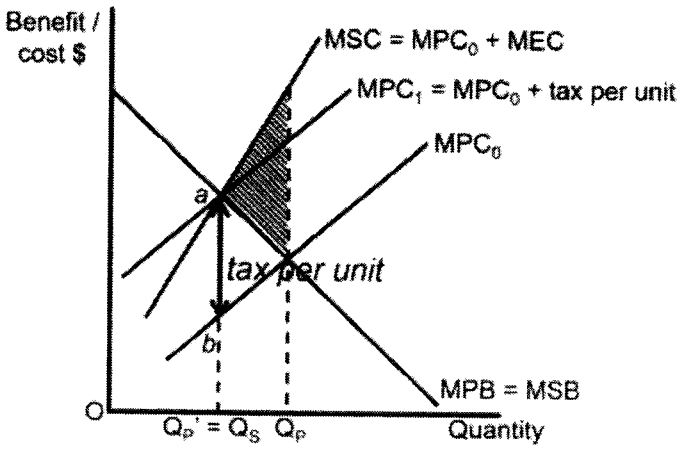


Figure: Indirect tax to correct negative externality

In the figure above, the charge for the usage works like an indirect specific tax equal to *ab* per unit of output will increase consumers marginal cost, shifting the marginal private costs (MPC) upwards to MPC_1. The new private optimum level of output occurs at Q_P' where MPC_1 = MPB, down from the original private equilibrium output Q_P where MPC_0 = MPB. The new private optimal output Q_P', MSC = MSB. In other words, by charging the usage of SUPPs, an amount equivalent to the MEC at Q_S. Faced with the higher cost, consumers will therefore cut back its usage to the socially optimal level, eliminating the deadweight loss.

- Encourage consumers to use alternatives => reduce plastic pollutions
- Source of revenue for supermarkets => other usage for this fund
- Higher unit cost for other industries => food catering business, consumers may have to sought other method for refuse disposal

(candidates can compare to zero charges/FOC => successful in reducing wastages => reduce plastic pollution)

Judgement: Which is better?

- Problems of charging:
  - i. Imperfect information on the part of the government – set the charges above / below the socially optimal level
  - ii. Supermarkets need to monitor and enforce at self-checkout counters => affecting productivity level
  - iii. Political resistance/ customers unhappiness => patronise smaller outlets => not required by las to charge for the usage of plastic bags
  - iv. Higher unit COP for related industries => these higher COP will be passed to consumers in the form of higher prices
- Use any FRESH criteria to compare
  - Which has a higher cost to the society?
  - Any Incentives to reduce pollution? Whether Singapore should have a recycling facility for plastic bottles? Better public education to reduce plastic pollution?
  - Certainty & allocative efficiency

	Market-based	**Command and Control**
Certainty in outcome	Uncertain, depends on the extent to which the market responds to such measures	Certain – by mandate
Allocative Efficiency	Efficient; Individuals respond by weighing their cost and benefit	Inefficient; Blanket rule applies to all, regardless of individual cost and benefit

	Knowledge, Application, Understanding, Analysis	
L1	For an answer that shows some knowledge of 2 types of government policies => ban vs charging SUPPs - Without economic framework/ analysis	**1-4**
L2	▪ Some attempt to explain the 2 policies, with good use of diagrams ▪ Descriptive answers, lacked exemplification ▪ One-sided answer => no limitations for the 2 policies ▪ Explain 1 case only	**5-7**
L3	▪ Well-developed analytical explanation of how the 2 policies help to reduce plastic pollution, with goof use of diagrams ▪ Balanced answer => at lease 1 limitation for each policy	**8-10**
	Evaluation	
E1	For an unsupported judgment => which policy is better in reducing plastic pollution	**1**
E2	For an answer that makes some attempt at an evaluative appraisal about which policy is better	**2-3**
E3	For an evaluative conclusion which synthesizes economic arguments to arrive at well-reasoned judgments.	**4-5**

ESSAY Q2

Maritime and air freight transport provide the essential transportation services that enable global merchandise trade. In the first half of 2020, U.S. maritime container imports declined. Container shipping firms cancelled scheduled sailings to lower costs and mitigate a downward pressure on freight rates due to overcapacity. In mid-2020, increased economic activity and sharply rising consumer demand led to a recovery in merchandise trade. During that time, container shipping firms struggled to restore capacity to previous levels.

Source: United States International Trade Commission (https://www.usitc.gov/research_and_analysis/tradeshifts/2020/special_topic.html accessed 10 August 2022)

(a) Container shipping firms acted to mitigate a downward pressure on freight rates in the **first half** of 2020.

Using demand-supply analysis, explain how such a move works and its impact on the industry's revenue. [10]

(b) Discuss what determines whether the buyers or sellers are more likely to bear the cost of the change in freight rate in **mid**-2020. [15]

Part (a)

1. Explain how such a move works

Either

Declining demand for maritime container imports → decrease in derived dd for container shipping → surplus at original price (freight rate) → downward pressure on freight rate in a free market (market adjustment process)

To mitigate the downward pressure, container shipping firms cancelled scheduled sailings → ss decreased as dd declined → removal of surplus (accept also: reduction in surplus) → relieve downward pressure on freight rate

OR

Declining demand for maritime container imports → decrease in derived dd for container shipping → surplus at original price (freight rate) → decrease in eqlm P & Q (market adjustment process)

As container shipping firms cancelled scheduled sailings, ss decreased → shortage created → freight rates pushed back to original level (market adjustment process)

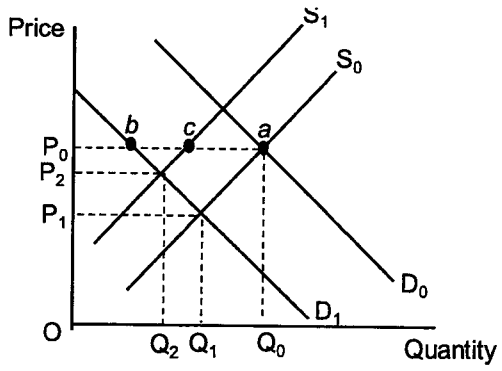


Figure 1

2. Impact of cancellation of scheduled sailings on the industry's revenue

Declining demand for maritime container imports → decrease in eqlm P & Q (from Figure 1) → decrease in industry revenue

Cancellation of scheduled sailings → decrease in ss → increase P, decrease Q (market adjustment process of relevant)

Effect on TR depends on PED
- DD likely to be price inelastic
- Justification: Container shipping is the only way to move merchandise cheaply in bulk, large price gap between alternative of air freight makes it a weak substitute
- Implications on TR: increase in P brings about a < proportionate decrease in Qd → TR increase, mitigate the decrease in TR from the fall in dd

Note: For shipping firms to choose such a course of action must mean that doing so will increase their TR (or at least mitigate the decrease in TR from the fall in dd) → dd has to be price inelastic dd (at least perceived to be so by the shipping firms)

* reference to Figure 1 or draw new diagram

Knowledge, Application, Understanding, Analysis		
L3	Fully addressed the question • **how such a move works** o explained the decrease in dd causing a surplus at the original price, which would cause a downward pressure on px if not alleviated o explained the reduction in ss eliminating the surplus • **Impact of cancellation of scheduled sailings on the industry's revenue** o explained the effect of a in ss on TR (must necessarily show favourable change, presented EITHER as increase in TR v.s. absence of intervention OR smaller decrease in TR) o PED, well-applied to given context • Well-referenced diagram(s)	***8-10***
L2	• In the main, conceptually accurate, supported by diagram. • Expect some gaps in explanation	***5-7***
L1	• High L1: Unexplained statements + absence of / inaccurate diagram • Low L1: Fundamental conceptual errors, largely irrelevant	***1-4***

Part (b)

1. Change in freight rate in mid-2020

Combination of increase in dd + price inelastic supply → sharp increase in freight rates

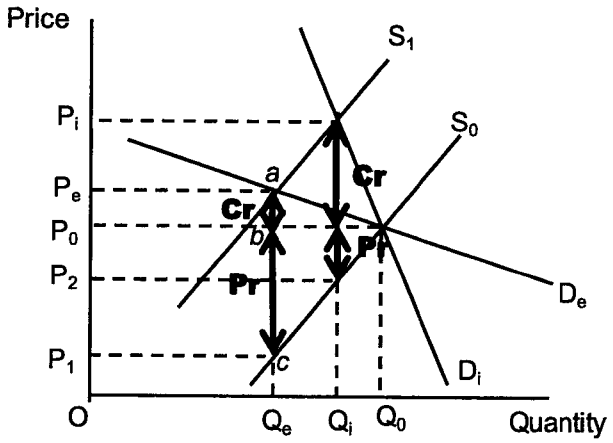
- In mid-2020, increased economic activity and sharply rising consumer demand led to a recovery in merchandise trade
- Container shipping firms struggled to restore capacity to previous levels

2. Incidence of the cost increase on buyers and sellers of merchandise goods

Increase in freight rates → raises COP for sellers of merchandise goods (either bc factor i/ps have to be shipped, or final goods that are produced overseas and shipped to the country)

Incidence depends on PED value relative to PES

- PED determinants, applied to specific types of goods
  - availability of substitutes, degree of necessities, proportion of budget spent, etc
- PES determinants, applied to specific types of goods
  - mobility of fops, spare production capacity, ability to hold stocks, etc.
- When dd is inelastic relative to ss (see D_i), buyers bear the greater burden of the cost increase, converse is true when dd is elastic relative to ss (see D_e)



3. Evaluation

Above analysis assume free market & perfect competition. Relaxation of assumptions could mean that:

- Gov policies e.g. price control on necessities would limit the effect of cost increase on crs – borne largely by prs
- Deviation from perfect competition → other considerations e.g. price rigidity in oligopoly → cost increase fully borne by firms

Knowledge, Application, Understanding, Analysis		
L3	Fully addressed the question • Incidence of cost increase in crs & prs • PED and PES concepts, well-applied to different types of goods Depth • Economic reasoning (including derivation of incidence) • Well-referenced diagrams, must go beyond merely reading values off diagram	***8-10***
L2	Depth or scope	***5-7***
L1	High L1: Unexplained statements Low L1: Fundamental conceptual errors	***1-4***

Evaluation		
E3	For an evaluative conclusion which synthesizes economic arguments to arrive at well-reasoned judgment	**4-5**
E2	For an answer that makes some attempt at an evaluative appraisal.	**2-3**
E1	For an unsupported judgment.	**1**
E	For evaluation that is not directed at the question	**0**

ESSAY Q3

Created by the Consumers Association of Singapore (CASE) and supported by the Competition and Consumer Commission of Singapore, Fuel Kaki is a fuel price comparison website. The website lets motorists compare fuel prices across retailers, check loyalty programmes and promotions, and estimate the price they will pay per litre after discounts.

Source: Cindy Co, CNA, 13 Jan 2020

	Diesel	92-octane petrol	95-octane petrol	98-octane petrol	Premium petrol
Caltex	S$2.93	S$2.89	S$2.94	N.A.	S$3.58 (Platinum 98)
Esso	S$2.81 Diesel	S$2.80 Regular	S$2.85 Extra	S$3.32 (Synergy Supreme+)	N.A.
Shell	S$2.93	N.A.	S$2.94	S$3.43	S$3.63 (Shell V-Power)
Sinopec	S$2.91	N.A.	S$2.94	S$3.41	S$3.54 (SINO X Power)
SPC	S$2.91	S$2.89	S$2.93	S$3.41	N.A.

Source: Fuel Kaki (access 10 August 2022)

(a) Explain the likely impact of the Fuel Kaki website on the
- prices and profits of petrol retailers,
- government's microeconomic goals. [10]

(b) Faced with such a development, discuss **two** strategies available to petrol retailers to increase their profits. [15]

Part (a)

Prices and profits of retailers
- crs better able to compare prices and switch to lower-priced petrol / diesel → limit firms' price-setting ability by exploiting imperfect information on the part of crs → dd becomes more price elastic → price declines without Q necessarily rising (since all firms keep prices down) → holding all else constant, profits decline

Gov's microeconomic goals
- Decrease size of supernormal profits → decrease sustained redistribution of Y from hhs to firms → reduce equity
- Accept also: Decrease in prices of petrol which mainly benefits the higher-Y hhs with cars → may be less equitable
- Reduce size of mark-up of P over MC → reduce allocative inefficiency

<insert graph>

Knowledge, Application, Understanding, Analysis		
L3	Fully addressed the question • Prices & profits of retailers • Gov microeconomic goals of E&E Depth • Economic reasoning • Well-referenced diagrams, must go beyond merely reading values off diagram	***8-10***
L2	Depth or scope	***5-7***
L1	High L1: Unexplained statements Low L1: Fundamental conceptual errors	***1-4***

Part (b)

Strategies include:

- Product differentiation e.g. marketing & product innovation, loyalty programme
- Cost cutting e.g. process innovation, self-service
- Pricing e.g. price discrimination, price leadership

Consider possible limitations of each of the strategies

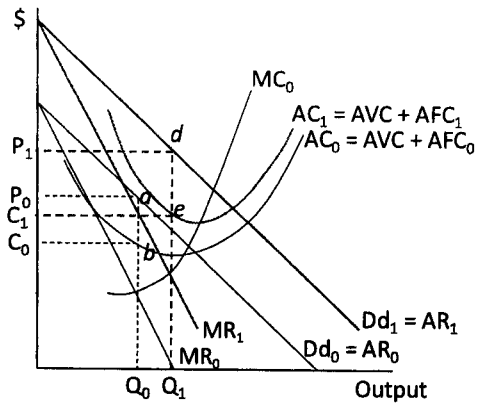


Figure 1: Advertising

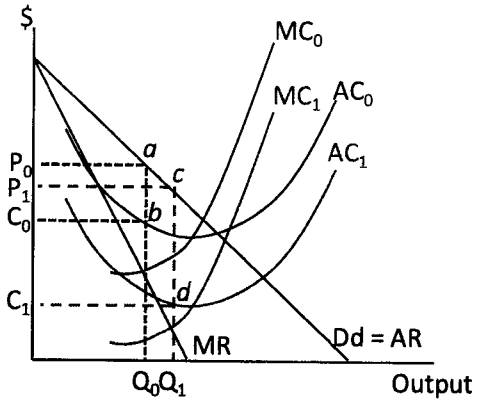


Figure 2: Self-service

**may also illustrate using kinked dd curve (price rigidity even with cost reduction)*

Advertising

- increase dd + makes it more price inelastic but adds to costs
- profit increase where increase TR > increase TC

Limitations

Uncertainty, may be countered by rivals' efforts given mutual interdependence

Self-service

- Decrease variable cost (wages)
- profit increase

Limitations

Uncertainty, depends on receptiveness of crs who may perceive deterioration in quality of service

Evaluation: which is the better strategy

With price comparison website, it becomes important to build product differentiation (non-price competition) => advertising more important but nimbleness always important to respond to dynamic changes in market conditions

Knowledge, Application, Understanding, Analysis		

L3	Fully addressed the question
	• Analysis of strategies to increase profit, i.e. effect on profit must be made explicit
	• For scope, choice of strategies should span
	  o Price and non-price strategies
	  o Strategies to increase revenue and strategies to decrease cost
	• Well-balanced: considered both workings and limitations of each strategy
	• Well-applied to the context of petrol retailing
	Depth
	• Economic reasoning
	• Well-referenced diagrams, must go beyond merely reading values off diagram
		8-10

L2	Depth or scope	***5-7***
L1	High L1: Unexplained statements Low L1: Fundamental conceptual errors	***1-4***
	Evaluation	
E3	For an evaluative conclusion which synthesizes economic arguments to arrive at well-reasoned judgment	**4-5**
E2	For an answer that makes some attempt at an evaluative appraisal of the measures.	**2-3**
E1	For an unsupported judgment about the measures.	**1**
E	For evaluation that is not directed at the question	**0**

ESSAY Q4

2020 was a year of extremes. Travel all but ceased for a period. Oil prices wildly fluctuated. Trade in medical products reached new heights. Household spending shifted to consumer goods rather than services and savings ballooned as people stayed home amid a global shutdown. Most of the drivers of excess external imbalances pre-date the pandemic and include fiscal imbalances as well as structural and competitiveness distortions.

Source: IMF.org, accessed 28 June 2022

(a) Explain the consequences of "fiscal imbalances" on an economy. [10]

(b) In view of the above events, assess the effectiveness of implementing the different types of supply-side policies for achieving inclusive and sustainable growth. [15]

Suggested Mark Scheme

Fiscal imbalances – mismatch between government expenditure (G) and revenue (T) => fiscal budget deficit in this case G>T

- *Candidates need not explain vertical & fiscal imbalances (not in syllabus)*
- *Accept expansionary FP explanation*

"*Most of the drivers of excess external imbalances pre-date the pandemic and include fiscal imbalances…*" fiscal budget deficit usually used by governments in times of recession to raise AD thru the component G (rather than reducing T) => to increase real national output (actual growth) and reduce cyclical unemployment.

As AD increases, from AD_0 to AD_1, ceteris paribus, firms will have to draw down inventories to meet the unanticipated increase in demand. The unplanned disinvestment signals to firms to increase output in the next production cycle so as to restore their inventories to the optimal level and, in so doing, demand more factor inputs (including labour) and paying out more factor income. As national income rises, income-induced consumption (C_d) increases, causing another round of increase in AD, setting off the multiplier effect where additional spending creates additional income which induces more spending. At each successive round, the increase in income-induced consumption gets smaller because of the leakages in the form of saving, taxes and imports. Eventually the multiplier process will end and a new equilibrium national income is attained when $\Delta J = \Delta W$. In the diagram, a rightward shift of AD from AD_0 to AD_1 leads to an increase in real NY from Y_0 to Y_1, moving closer to the full employment income level Y_f, ceteris paribus. This is actual growth where real national income has risen. Accompanying that is a reduction in cyclical unemployment.

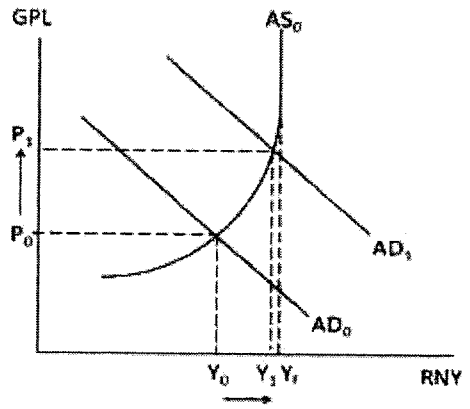


Figure: Short-run effects of budget deficit => expansionary demand-management policies

Other Consequences (*candidates can explain any 2)*

- In SR, by raising AD, lead to greater competition for resources (holding the supply of factors of production constant). This bids up factor prices and adds to firms' unit cost of production, part of which will be passed on to consumers in the form of higher prices of final goods and services, seen in the above figure as an increase in the general price level from P_0 to P_1 as AD rises from AD_0 to AD_1.

- The inflationary pressure raises the prices of the country's exports relative to its trading partners. Assuming the demand for the country's exports to be price elastic, an increase in export prices will bring about a greater than proportionate fall in quantity demanded, reducing export revenue. Simultaneously, assuming a high degree of substitutability (positive and high cross elasticity of demand), domestic consumers to turn to imports as inflationary pressure at home mounts. Together, the fall in export revenue and increase in import expenditure could bring about a deterioration in the trade balance e.g. shift the BOT position from a surplus to a deficit or increase the size of the trade deficit.

    - In other words, the higher growth rate and reduced unemployment are achieved at the expense of price stability and healthy BOT position.

- Crowding out effect => when a government increases its levels of spending to boost the economy OR for public health (COVID 19 – hospital expenditure + vaccination expenditure), it may have to borrow money to finance the increased expenditure. This puts the government (public sector) in direct competition with the private sector for the limited pool of funds available in the economy. The increase in demand for loanable funds, holding the supply of loanable funds constant, drives up interest rate. This raises the cost of borrowing relative to the expected rate of returns from investment. Many previously viable investments are now expected to yield negative net returns.

  If we further assume an open capital market, the increase in the domestic interest rate relative to interest rates in other countries attracts inflow of hot money, creating an excess demand for the country's currency in the foreign exchange market. In a freely floating exchange rate system, this will bring about an appreciation of the country's currency, eroding export competitiveness.

  In other words, as G increases, the resultant increase in interest rate discourages I. The subsequent appreciation of the exchange rate also causes X and C_d to fall. Government spending is said to crowd out private investment and external demand. In the extreme case of complete crowding out, the expansionary fiscal policy is rendered totally ineffective.

    - Crowding-out effect tends to be weak in a deep recession – households and most firms are reluctant to demand for loans to finance higher levels of C and I given the bleak economic outlook.
    - Crowding-out effect is not a concern in Singapore's context. Owing to our fiscally prudent government, Singapore has sufficient reserves.

- Inflexibility of government expenditure + opportunity cost => government expenditure cannot be easily reversed as a large proportion of its spending reflects longer-term economic and social commitments, e.g. schools, hospitals, roads and defence. Continued large injection of government spending at a time when the other AD components are picking up pace may cause the economy to over-heat, stoking demand-pull inflation. The inflexibility of G could therefore have a destabilising effect on the economy.

- Economies might suffer from fiscal cliff, eg US in 2021 & 2012 => need to reduce fiscal budget deficit => hence governments may not have sufficient funds to inject into the economy during

post-COVID => austerity => contractionary impact on the economy (*candidates need not explain the k process, mirror from the expansionary impact)*

	Knowledge, Application, Understanding, Analysis	
L1	Response did not use AD/AS framework or any economic analysis	*1-4*
L2	Some attempt to explain the consequences of fiscal imbalances with diagram Lacked exemplification	*5-7*
L3	A well-developed explanation of both SR & LR consequences Immediate effect + any 2 other consequences	*8-10*

b) In view of the above events, assess the effectiveness of implementing the different types of supply-side policies for achieving inclusive and sustainable growth. [15]

- Events: AD might increase at a slower rate or even fall => lockdown, household spending shifted to consumer goods rather than services, savings ballooned as people stayed home amid a global shutdown.
  AS falls: increase in COP => oil prices wildly fluctuated; structural and competitiveness distortions.

- Actual growth refers to an increase in the real national output over a period.

- Potential growth is a long-run concept that is associated with the increase in the economy's full-employment national income.

- Inclusive growth is an economic growth that creates opportunity for all segments (broad-based) of the population and distributes the benefits of increased prosperity across society, creates productive employment opportunities for the majority of the country's population.

- Sustainable economic growth refers to a rate of growth which can achieved without causing significant other significant economic problems (such as depleted resources and environmental problems), particularly for future generations. It implies a positive and stable growth rate over an extended period of time.

- Supply-side policies =>
  i) cost-cutting measures (impact can be seen in SR)
  ii) enhance long-run growth potential – giving incentives and encourage R&D (elements of risk)
  iii) to improve FOP mobility
  iv) to increase level of competition & to remove barriers to competition
  OR
  market-oriented policies (where current policies or institutions shackle growth, the government steps in to free up markets. These policies are designed to reduce distortions of current policies on prices and incentives, encourage private enterprise and improve market efficiency, e.g. fiscal reforms, privatisation, deregulation, trade liberalisation and trade union reforms) vs interventionist policies (these are policies to counter the inadequacies of the market to provide the necessary conditions for growth, e.g. infrastructure development, human capital development and enhancing productivity and innovation)

Thesis: Supply-side policies are effective in achieving inclusive and sustainable growth
(*candidates can explain any 2 types)*

Type of supply-side policy => how it helps to achieve both inclusive and sustainable growth => any limitation

- Three dimensions together will drive future prosperity => sustainability and inclusion will not be possible without growth. The aspiration around economic growth needs to be not only about increasing wealth but broader well-being (broad based, to avoid social unrest). That growth can spur inclusion by creating opportunities and broad-based progress, lowering inequality, and raising the dignity of work.

- Supply-side policies on labour market, human capital, infrastructure => can achieve both inclusive and sustainable growth. Eg, In Singapore, SkillsFuture Singapore (SSG), CET courses, infrastructure development => increase employment opportunities for the lower income workers => with better skills and higher pay => improve productivity => better resource allocation => achieving both inclusive and sustainable growth

Anti-thesis: Supply-side policies may not be effective in achieving both inclusive and sustainable growth

- The benefits of economic progress do not necessarily trickle down to the poor, often economic progress leads to rising income inequality (demand & supply framework for high skilled vs low skilled workers => supply of needed skills is not keeping pace with the demand=> worsening income gap)

- Supply-side policies attracted many MNCs to capital cities => however housing and construction regulations which drive up prices of accommodation in many big cities, making it unaffordable for job seekers from other parts of the country to move into these cities to take on jobs even though these big cities are the ones that have vibrant regional economies and are increasing demand for workers > worsening wage differential between urban & rural areas.

- Economic growth achieved but at the expense of the environment (negative externality => over production => eg. chemical industry => sustainability investments attracted by government supply side policies lead to new jobs and business models, but at the same time an energy transition typically hits the poorest first, affect the environment negatively, such as clearing the forest in the cheapest way

Evaluation & conclusion

- Judgement => can supply-side achieve both types of growth?
- Governments aim to achieve both inclusive & sustainable growth, net-zero emissions by 2050
- More than 1 billion people lifted out from extreme poverty => thru governments policies => multi-pronged => demand-management policies, trade polices => insufficient to depend solely on supply-side policies
- Depending on the characteristics of different economies => countries like Singapore, with strong fiscal budget and smaller economies may find supply-side policies more effective / useful to achieve both growth compared to less developing countries => with fiscal budget deficit, supply-side policies may not be effective, they need economic growth to lift the people out from poverty, rather than worry about inclusive and sustainable growth => it is almost impossible to sacrifice higher income/consumption in order to protect the environment/forest for future generations. Every country will have to set its own threshold for what its population can accept and afford in making environmental /climate-related transitions.

- While developed countries may be more concerned about reskilling, productivity => to ensure inclusive & sustainable gth => to reduce social unrest, protest by the youth =>increasing youth unemployment – not broad-based growth + more environmental awareness
- Technology is a big driver of productivity, but technological changes imply structural changes in skills workers need => trade-off between SR & LR

	Knowledge, Application, Understanding, Analysis
L1 **1-4**	For an answer that shows some knowledge of supply-side policies - Without economic framework/ analysis Comparing different types of policies eg FP, monetary policies
L2 **5-7**	▪ Some attempt to explain at least 2 types of supply-side policies, with good use of diagrams (such as - AD/AS, DD/SS of labour, MSC/MSB) ▪ Explain economic growth in general, descriptive answers on the inclusive and sustainable gth ▪ One-sided answer => no antithesis OR ▪ Balanced answer but only 1 type of supply-side policy
L3 **8-10**	▪ Well-developed analytical explanation of how any 2 types of supply-side policies help to achieve both inclusive gth and sustainable gth ▪ Balanced answer => at least 1 anti-thesis
	Evaluation
E1 **1**	For an unsupported judgment
E2 **2-3**	For an answer that makes some attempt at an evaluative appraisal about whether supply-side policies are effective in achieving both types of growth
E3 **4-5**	For an evaluative conclusion which synthesizes economic arguments to arrive at well-reasoned judgments.

ESSAY Q5

With Singapore's GDP growth for 2020 projected at -4 to -1%, inflation was expected to average between −1 and 0% for the year. Against such a macroeconomic backdrop, MAS announced a downward recentering of the Singapore dollar nominal effective exchange rate (S$NEER).

Unlike Singapore whose monetary policy is centred on exchange rate, US uses interest rate as its monetary policy tool. In response to the economic fallout from COVID-19, the US central bank, the Federal Reserve, slashed its key interest rate.

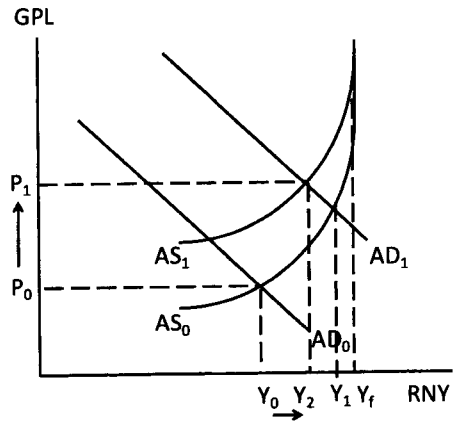
(a) Explain why the move by MAS to loosen monetary policy is deemed to be appropriate.[10]

(b) Discuss whether a cut in US interest rates would be of overall benefit to Singapore's economy. [15]

Part (a)

Effect on RNY & unemployment

Downward recentering of S$NEER
- have the effect of increasing AD (increase X + expenditure-switching between M and Cd)
- would also decrease AS (increase imported fops prices and unit COP)



Normally, downward recentering of S$NEER would create inflationary pressure both on dd- and cost-side
- weakening of SGD → increase AD → dd-pull inflationary pressure
- weakening of SGD → decrease AS → cost-push inflationary pressure

Combination of above would reinforce each other to put a sharp upward pressure on GPL

However,
(1) Given the weakness of the GDP growth
→ economy is operating away from full employment level, with available spare capacity
→ increase in AD need not stoke price increase (reference to earlier AD/AS diagram or depict on a new diagram for emphasis)

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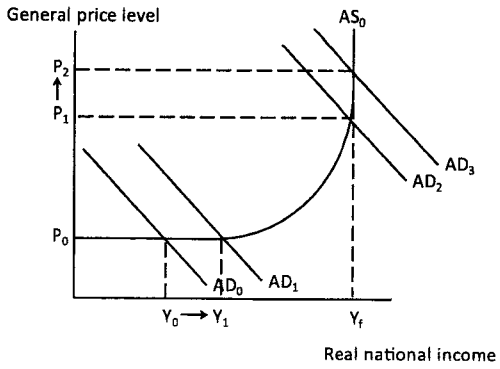


(2) Set against an inflation that is expected to average between −1 and 0%,
- ER depreciation would more likely offset the downward pressure in GPL rather than cause inflation

OVERALL: Policy move by MAS is appropriate in that it
- goes some way to close the negative o/p gap with higher level of RNY, lower u/e
- without creating inflationary risks

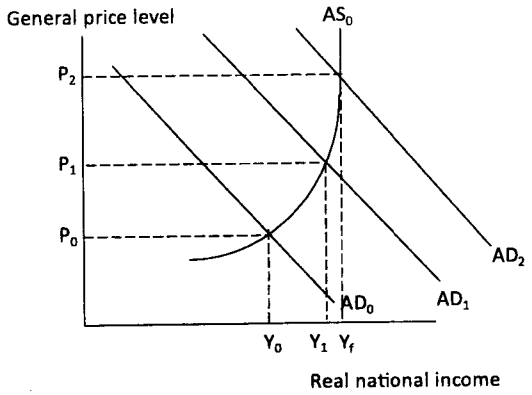
Knowledge, Application, Understanding, Analysis		
L3	Fully addressed the question • impact of managed depreciation, relating to relevant macroeconomic goals • applied to the context of prevailing macroeconomic conditions & macroeconomic outlook Depth • Economic reasoning • Well-referenced diagrams, must go beyond merely reading values off diagram	***8-10***
L2	Depth or scope	***5-7***
L1	High L1: Unexplained statements Low L1: Fundamental conceptual errors	***1-4***

Part (b)

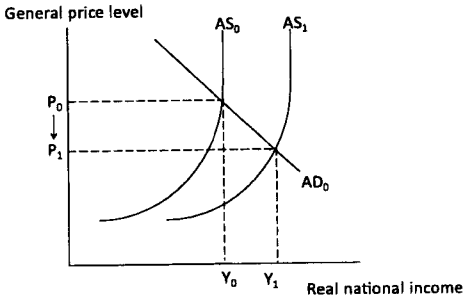
Transmission channel #1: via its influence on domestic i/r

Open economy MP trilemma
=> Sg, in choosing to keep an open K mkt and control over its ER, must cede control of i/r
=> as an i/r taker, when major economy like US cuts i/r, i/r in Sg move in tandem

Implications:
- Decrease cost of borrowing → increase C & I → increase AD (SR) → by the k process, RNY rises, unemployment declines
- Having this stimulus on top of the boost from the downward centering of S$NEER → overshooting of AD → dd-pull inflationary pressure



- Increase in I → increase AS in the LR → potential growth



Evaluation: Benefits might not be significant, just as adverse effects might not be significant for reasons including
- small k size
- smallness of domestic market relative to domestic market
- bleak economic outlook → C & I might not increase despite lowering of cost of borrowing
- C & I in Sg tend to be interest inelastic

Transmission channel #2: via US trade

Fed's decisive move to provide MP stimulus, if successful, would boost US actual growth
→ rising US Y, rising w&a to purchase g&s including M

For Sg this means an increase in DD_X
- increase TR_X & hence improving BOT (adding to Sg's BOT surplus)
- increase AD → further stimulus to economy

Evaluation: Reasons to believe benefits are likely to be significant:

- US is one of Sg's key X market => increase X to US would lead to significant increase in overall X dd
- Nature of Sg's X: non-necessities (e.g. electronic components) → high YED => rising Y in US would lead to significant increase in DD_X
- As the largest economy in the world, a strong US recovery (aided by monetary stimulus by Fed) → lift global economic growth (appetite for imports) → benefit to Sg directly (via X to US) and indirectly (when GDP of Sg's other export markets are also lifted by US growth)
- X is the largest of AD components

OVERALL EVALUATION:

- SR: works mainly through transmission channel 1 (most immediate) → of limited benefit to Sg
- Over the longer run: Fed's MP stimulus work with a time lag to boost actual EG in US → transmitted to Sg via channel 2 → would be of more significant impact

Knowledge, Application, Understanding, Analysis		
L3	Fully addressed the question • focused on Sg economy, relating to the 4 macroeconomic goals • considered both transmission channels: (i) via domestic i/r movement, (ii) via trade channel • balanced argument, considered both positive and negative effects Depth • Economic reasoning • Well-referenced diagrams, must go beyond merely reading values off diagram	***8-10***
L2	Depth or scope	***5-7***
L1	High L1: Unexplained statements Low L1: Fundamental conceptual errors	***1-4***
Evaluation		
E3	For an evaluative conclusion which synthesizes economic arguments to arrive at well-reasoned judgment	**4-5**
E2	For an answer that makes some attempt at an evaluative appraisal	**2-3**
E1	For an unsupported judgment	**1**
E	For evaluation that is not directed at the question	**0**

ESSAY 6

In 2014, Vietnam and Japan set up the strategic partnership for peace and prosperity in Asia, marking a significant milestone in the bilateral relations. Economic cooperation between Vietnam and Japan has grown steadily over the years. Japan is the largest provider of official development assistance (ODA) to Vietnam and Vietnam's fourth largest trade partner. Japan's direct investment in Vietnam ranks first among countries investing in Vietnam. Bilateral cooperation in human resource development and tourism are also being promoted.

Explain the advantages and disadvantages of economic cooperation and discuss whether a developing economy like Vietnam has more to gain than an advanced economy like Japan from such a cooperation. [25]

- https://vnembassy-jp.org/en/strengthening-vietnam-japan-extensive-strategic-partnership
- https://vju.ac.vn/news/japan-vietnam-cooperation-in-training-of-high-quality-human-resources-for-infrastructure-engineering-nde206.html

L1	A brief explanation about advantages and disadvantages of economic cooperation. Listing of gains of economic cooperation on economic aims of Vietnam and Japan.	1 – 8
L2	An explanation which discusses more than one type of flows (trade, capital, labour flows) and the impact (advantages and/ or disadvantages) on economic aims of Vietnam and Japan. Lack of clear links made to economic aims and comparison of gains between Vietnam and Japan. Answer demonstrates some use of economic concepts, but explanation is under-developed (some effort made to link arguments to economic aims).	9 – 14
L3	Well-developed explanation of how economic cooperation would impact economic aims of Vietnam and Japan, both in a positive as well as negative manner. Coverage of points include trade flows, capital flows as well as labour flows. Good use of economic concepts and answer demonstrates understanding of the Vietnam and Japan context, making clear links to economic aims and comparison of gains. Impact on microeconomic aims (efficiency or equity) are also discussed. • No need CA table, but without mention of CA – max 17m • Trade + 1 other flow + CA – max 17m • Impact on microeconomic aims (efficiency or equity) – max 19m, cover advantages/ disadvantages/ comparison • Need AD/AS & Labour flow diagram • Differentiate between labour market impacts and labour flow between countries.	15 – 20
E3	On top of E2, provides insights for comparison of gains of economic cooperation for Vietnam and Japan.	4 – 5
E2	Judgement is based on economic analysis and adequately substantiated.	2 – 3
E1	For an unexplained assessment, or one that is not supported by economic analysis.	1

Japan and Vietnam have come together in agreement to increase trade between them and to gain economic benefits from cooperating in terms of direct investments, human resource development and tourism.

Advantages of economic cooperation

- Advantages on macro goals

- An advantage is trade creation, where preferential trading fosters greater specialisation according to comparative advantage (CA). This causes a shift in production from higher cost domestic producers (eg, Japan) to lower cost sources (eg, Vietnam). Japanese consumers can now obtain goods more cheaply from Vietnam, while more jobs are created in Vietnam.
    - Why developed country will trade with developing country.
    - A country has a **comparative advantage** in the production of a good if it can produce the good at a *lower opportunity cost* than its trading partner. The **Law of Comparative Advantage** states that if countries specialise in the products in which they have comparative advantage, then trade could be mutually beneficial to all countries.
    - Differences in factor endowment lead to differences in relative prices of factors between countries and these differences in turn affect relative prices of goods and services. Countries can specialise in producing goods that require the factors for which they have abundant supply and can hence likely to be able to produce at lower opportunity cost while trading to obtain goods and services that they do not produce or produce at higher opportunity cost.
    - Japan, with its relatively abundant capital, skilled labour, is a net exporter of products that are skill-intensive or technologically-intensive such as cars and precision instruments, net importer of less skill-intensive products like clothing and shoes. Vietnam has relatively greater abundance of low-cost labour, raw materials, is a net importer of technologically intensive goods, net exporter of labour-intensive goods.
- Economic cooperation increases market size and allows firms to exploit internal economies of scale (EOS). The increase in trade may also lead to external EOS as there may be improvements in infrastructure (eg, better transportation, financial services, etc) of the members of economic cooperation. This will translate into lower prices of exports and imports due to lower transport and handling charges.
- Removal of trade barriers exposes domestic industries to greater competition. This induces them to ensure that they are more productive and allocative efficient (to ensure survival). They may be induced to undertake R&D in process and product innovation. The former improves efficiency of production methods and hence cuts unit cost of production while the latter improves quality and reliability of the goods available.
- Economic cooperation encourages more foreign investments (eg, Japanese firms set up production units within Vietnam). This could encourage a more rapid spread of technology through the sharing of process and production methods between the countries involved.
- Economic cooperation could encourage freer labour movement, where areas with surplus to areas with a deficit (eg, Vietnam has a surplus of low-wage workers, in deficit of high-skilled talent), increasing output and overall welfare of two countries as a whole. Labour migration permits the recipient countries to expand beyond what was possible before the infusion of new workers. The workers' home countries may in return receive wages and salary remittances. There will also be reduction in number of unproductive individuals at home.
- Economic integration may help decrease inequalities in the distribution of wealth among member countries. Closer economic relations between members will help less developed members grow. Capital may flow towards the less developed country which may offer more profitable opportunities for investments (due to unexploited potential). Freedom of movement also provides natives of a less developed country to migrate to a more advanced country with better job prospects.
- Improvement in terms of trade as members have increased bargaining power with the rest of the world.
- Overall, more choice and stable prices for consumers, greater security and more opportunities for businesses and markets, improved economic stability and growth.

Disadvantages of economic cooperation

- There is a limit to EOS. The development of large companies may eventually result in operations being too bureaucratic and inefficient resulting in diseconomies of scale, i.e. large companies may face internal diseconomies of scale due to the lack of co-ordination. Large firms will be sub-divided into many specialised departments such as sales, purchasing, personnel etc. As these departments grow in size the

task of co-ordination their activities become more complex. This will lead to productivity declining and hence unit cost of production will increase.

- Greater cooperation between firms in two countries may encourage oligopolistic collusion which would keep prices high to the consumers. It may also encourage mergers and acquisitions which would increase monopoly power.
- Resources may flow from less efficient member (eg, Vietnam) to more efficient member (Japan) of the economic cooperation due to free capital and labour movements. Downside: this leads to less efficient member becoming underdeveloped.
- Trade diversion, which may lead to production and consumptions switching from a **lower cost non-member** to a **higher-cost member,** resulting in inefficiencies in production and misallocation of resources.
- High cost of administration

Discuss:

- Greater movement of goods, services, capital, labour and knowledge across the two countries.
- Economic cooperation has led to both positive and adverse impact on Japan's and Vietnam's aims – microeconomic (efficiency + equity) + macroeconomic (sustained growth, low inflation, healthy balance of payments and low unemployment).

Define the different economic aims.

- Sustained growth → involve actual growth (increase in national income) and potential growth (increase in productive capacity).
- Unemployment refers to FOPs not being utilised in the production of good and services. People in the labour force are without work but are actively seeking jobs.
- Inflation refers to a sustained increase in the general price level.
- BOP is a statement of all the international transactions of a country with the rest of the world over a period of time, usually a year. BOP comprises current account and capital account.
- Efficiency refers to both productive and allocative efficiency. Productive efficiency → firms are producing at the lowest cost possible. Allocative efficiency → optimal amount of the right type of goods are produced such that society's welfare is maximised.
- Equity in income distribution refers to a distribution of income that is fair and just.

Thesis: Developing economy like Vietnam has more to gain than an advanced economy like Japan from such a cooperation - greater trade and capital flows has helped achieve higher actual growth, lower unemployment and a healthy BOP. Greater labour flows and capital flows to achieve greater efficiency, sustained growth

Antithesis: Developing economy like Vietnam does not have more to gain than an advanced economy like Japan: Economic cooperation has led to higher structural unemployment and income inequality, unequal distribution of gains between the two countries, brain drain etc

Conclusion

Developing economy like Vietnam has the potential to realise more gains from economic cooperation as long as

- resource allocation is in line with the theory of CA.
- Govt policies establish conducive investment environment – pro-business policies (e.g. low corporate tax rate), a strong intellectual property rights framework, excellent infrastructure and a skilled workforce have also helped to attract foreign I.

- Policies like training to help reduce structural UN, transfer payments to reduce income inequality.