Victoria Junior College

Answers to 2017 H2 Economics Paper 2

Question 1

(a) Explain why private decision-making in an environment with different types of information failure leads to inefficient working of the price mechanism. [10]

(b) Discuss the policies that a government could adopt to address these causes of the inefficient working of the price mechanism. [15]

(a)
Introduction

Information failure can take the form of ignorance on part of consumers and asymmetric information between sellers and consumers.

Body

Private decision making by firms and consumers is based on the marginalist principle. Firms compare the marginal revenue (MR) against the marginal private cost (MPC) when deciding how many units of a good to produce offer for sale. In perfectly competitive markets, MR is equal to the unit price that it charges. The MPC of producing an extra unit is the additional payments for factors of production needed to produce the good. A rational producer who seeks to maximise total profits will produce and offer an additional unit of a good for sale so long as they earn a price ≥ MPC and the lowest price that firms are prepared to accept will be the MPC of producing the good. The market supply curve is the same as the firms' MPC curve. When there are no externalities, the MPC is also the marginal social cost (MSC). Consumers compare marginal private benefit (MPB) and marginal private cost (MPC) of a good in their buying decisions. The MPB is the additional satisfaction derived from buying one more unit. The MPC is the price offered by the seller. A rational consumer who seeks to maximise net total benefits will buy an additional unit of a good only if the MPB is ≥ price of the good. The highest price he is prepared to pay will be his MPB from consuming the good. The market demand curve is the same as the consumers' MPB curve

When consumers are **ignorant of the true MPB** of the good, private decision making will lead to market failure. When there is information failure in the form of ignorance on the part of consumers about the true benefits good, the highest prices they are prepared to pay will be the perceived MPB of the good rather than the true MPB of the good. Consider the case of a demerit good. A key characteristic of demerit good is that it is less beneficial to the consumer than he/she realises. The ignorance of the consumers causes them to overestimate the "true" MPB which the demerit good confers for themselves. For example, people consume cigarettes because they like the aroma or perhaps wish to project a certain self-image but they may not fully understand the harm that cigarette can do to their health. As a result of the consumers' ignorance about the true MPB of the good, they over-value the good and the market demand curve for cigarettes lies above the true MPB curve. This over-valuation of the good by consumers in their decision-making results in wrong price signals such that the market forces of demand and supply will lead to a market equilibrium output of Q units that is not socially optimal.

Costs / benefits ($/Q)

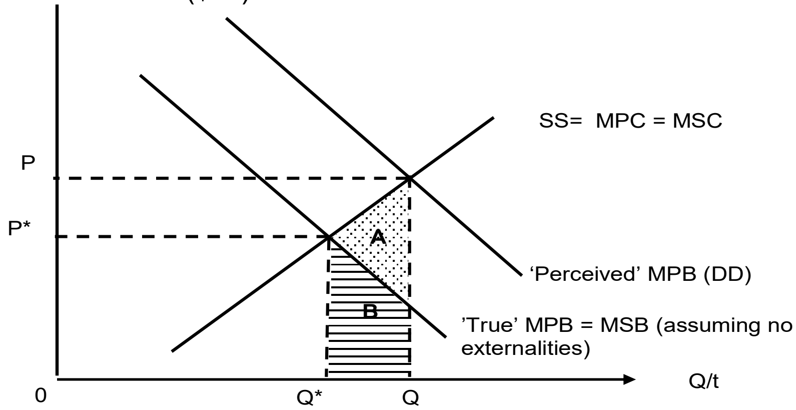


Fig 1

Mutually beneficial exchange between consumers and firms occur so long as the prices that consumers are willing to pay (which matches their perceived MPB) is greater or at least equal to the asking price by producers (which matches firms' MPC). As such, Q units will be transacted in this market.

However, the social equilibrium is at Q* units where MSB equals MSC. There is allocative inefficiency in the form of over-consumption/production of the good. The over-consumption/production of Q-Q* units results in a welfare loss of area A. This is because the total social benefit of those units is area B but the total social cost is A+B. The over-production/consumption hence result in welfare loss of area A. The price mechanism has thus failed to work efficiently.

Asymmetric information between the sellers and buyers of healthcare services leads to market failure in the form of over-consumption of the good. Doctors typically know more about the relevance of treatments or health checks compared to patients. The patient typically relies on the doctor as the agent to aid him in his decision about what and how much health care services to consume. However, doctors, with the aim of earning more revenue may advice patients to undergo treatments or tests that are unnecessary leading to the phenomenon of supplier-induced demand. This causes the consumers' perceived MPB to be higher than the true MPB. Since consumers demand according to their perceived MPB of the service, market forces will result in over consumption of the service. This results in welfare loss of area A because for each of the units between Qs and Qe, the true MPB (and hence MSB, assuming no positive externalities) is lower than the MSC and a net loss is incurred by society from producing / consuming those units.

Alternative explanation for asymmetric information:
- Focus on adverse selection caused by consumers having more information (insurance market) or sellers having more information (used car market).

Marks Scheme

L1	Answer contains knowledge of private decision-making and market failure caused by ignorance (merit or demerit goods) and asymmetric information. Answer may have conceptual flaws	1-4
L2	Answer either analyses ignorance OR asymmetric information in private decision making as causes of market failure OR Answer addresses both Ignorance AND asymmetric information in private decision making as causes of market failure but, is <u>underdeveloped</u>.	5-7
L3	Answer provides a detailed analysis of sources of market failure pertaining to both ignorance (demerit/merit goods) and asymmetric information (Moral Hazard or Adverse selection or supplier induced demand) + Answer explains private decision making by firms and consumers in detail	8-10

(b)

Introduction

When the price mechanism fails to achieve allocative efficiency due to information failures, the government could apply market oriented measures, command measures or public education to solve the problem. The measures will be accessed in terms of i) effectiveness to bring output to the social optimum level or at least lower the welfare loss, ii) whether the benefit is likely to exceed the cost of intervention and iii) long term fiscal sustainability.

Body

ADDRESSING IGNORANCE

The government can use public education to correct market failure associated with ignorance.

In using public education, the government reduces information failure in the market for merit / demerit goods by providing consumers with information about the "true" MPB of consuming an extra unit of a merit/demerit good for themselves and exhorts them to consume more/less of it, thereby improving their individual decision-making. T With reference to figure 1 in part (a), the aim of public education is to lower market demand to match the "True" MPB at Q*, such that the socially optimal output level can be attained. With accurate price signals from the demand side, the price mechanism achieves allocative efficiency.

The govt provides information through public education via national campaigns, and radio and TV broadcasting. In Singapore, the government organises national campaigns to inform public about the harmful effects of smoking cigarettes.

[EVALUATION]

This is a low-cost method as substantial change in desirable behaviour can potentially be generated from relatively simple, inexpensive policy interventions as compared to other solutions (e.g. regulation require enforcement which can be costly).

However, the success of achieving its intended consequence is not certain because the effectiveness of public education depends on the consumers' appreciation and receptivity. It is usually difficult to change or influence peoples' mind sets and habits within a short time span.

The government can use regulations correct market failure associated with ignorance.

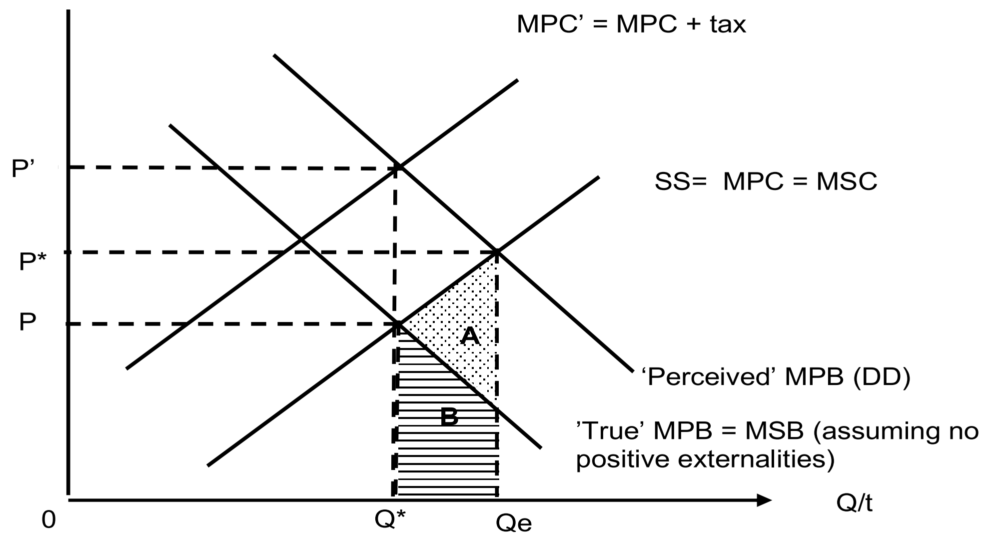
When the government perceives consumers as poor judges of their own welfare, the government could directly influence their consumption pattern by making it illegal to sell or consume the demerit good. This is backed by fines or other forms of punishments when the law is violated. For example, Singapore has regulated the sale of demerit goods including placing age restriction in the sale of cigarettes / prohibiting the sales of tobacco products and alcohol consumption by persons under 18 years of age.

[EVALUATION] The use of a total ban to discourage smoking or alcohol drinking is likely to worsen allocative efficiency since the total optimal level is not zero and the welfare loss created by market failure is smaller than the welfare loss created by a total ban especially if the extent of ignorance is not that extensive. Not all drinkers are ignorant of the ill-effects of alcoholic drinks and some would drink in moderation. However, when the government segments the market and applies bans selectively, e.g. on those below 18 years old, bans ought to bring about welfare gain because the extent of over-consumption by this age group is likely to be higher and the welfare loss for society bigger.

Governments can also use indirect taxes to correct market failure associated with ignorance

Assume that there is no positive externality in consumption MPB = MSB. Since the existence of imperfect information causes the "perceived" benefits to be higher than 'true" benefits in the free market, the government could impose a per unit output tax equal to the difference between "true" and "perceived" benefits at the socially optimal output, Q*. The per-unit output tax increases firms' marginal cost of production. Graphically, the MPC curve shifts vertically upwards to MPC' curve. Assuming that the government has perfect information, the tax results in a fall in output from the market equilibrium quantity, Q to the socially optimal quantity Q*, hence eliminating the deadweight loss of area A.

Costs / benefits ($/Q)



[EVALUATION] This measure is not too costly to implement. In fact, this measure enables the government to obtain tax revenue. Taxation on goods like tobacco and alcohol that are price inelastic in demand generates significant tax revenue for the government.

The effectiveness of using a production tax to discourage consumption of demerit goods is dependent on the price elasticity of demand and the government's knowledge of the PED such that it knows how much to tax. However, this information is not readily available. Thus the outcome of the use of this measure is less certain than the use of command measures.

ADDRESSING ASYMMETRIC INFORMATION THAT LED TO SUPPLIER INDUCED DEMAND

Governments can take over production to correct market failure associated with asymmetric information
If the government were to produce healthcare, the doctors will not have the incentive to order unnecessary treatments or medications since the government, being motivated by maximisation of society's welfare rather than total profits, can delink doctors' pay from the amount of revenue earned by doctor for the clinic / hospital.
[EVALUATION]
A key limitation of the nationalisation of health care is that of productive inefficiency due to the loss of profit motive. On the other hand, when health care is produced to private firms in competitive markets, the private health care producers will have the incentive to minimise cost to help prices competitive and attract new customers and retain old customers.

The problem of over-consumption can be solved by legislating that private health insurance firms build in co-payment in the insurance scheme.
Co-payment is the percentage of the insure loss that is paid by the insured for each and every healthcare service utilised by the insured. The effect of co-payment is to increase the price of health care services from zero to some positive value so as to lower quantity demanded, and hence the size and frequency of insurance claims by the healthcare providers. Doctors will have less incentive to prescribe unnecessary treatments since the patient will be more resistant to the doctor's advice given his lowered ability to pay.
[EVALUATION] A disadvantage of these scheme is that poor households may not be able to afford health care if they are required to co-pay. However, this limitation is not significant because it can be overcome by government providing targeted transfer payments to those who can't afford the co-payment.

Note: If adverse selection was used for part (a), then the measures considered for part (b) needs to be relevant to the problem

Conclusion
The choice of policy that a government adopts to deal with these causes of market failure depends on the severity of the problem in its country.
In countries, where majority of the population is educated, the level of ignorance about the demerits of smoking would be low, the majority of the population would be aware of the negative impacts of smoking and would not severely overestimate the “true” benefits of smoking cigarettes for themselves. Thus, regulation in the form of bans would not be necessary. However, However, with regards to e-cigarettes where there is high degree of ignorance about the serious harm to the smoker even among the educated in a developed country, the government would prefer to apply a ban in its consumption or production. Although this entails monitoring costs, the benefit of such an approach is likely to outweigh the costs.
For the problem of supplier induced demand due to asymmetric information, the use of regulation would be better than the taking over of production by the government. If the government took over production of health services, then government resources would be diverted away from other activities like provision of public goods for which there is no (hardly any) private sector alternative. The opportunity cost would be very high and likely to exceed the benefit of the intervention.

Marks Scheme

L1	Answer contains knowledge of the policies to address asymmetric information and demerit/merit goods Answer may have conceptual flaws	1-4
L2	Answer is underdeveloped. Answer either analyses policies to deal with Ignorance OR asymmetric information OR Answer addresses policies for both sources of market failure but, is underdeveloped.	5-7
L3	Answer provides a detailed analysis of policies for both ignorance (demerit/merit goods) and asymmetric information (Moral Hazard or Adverse Selection)	8-10
E1	Unsubstantiated stand	1
E2	Substantiates stand on policies for one source of market failure	2-3
E3	Substantiates stand on policies for both sources of market failure based on chosen context + source of problem	4-5

Question 2

The global airline industry, as measured by revenue, has continued to grow rapidly.

Discuss possible demand and supply factors and their relative importance in explaining the reported increase in revenue earned by the airline industry. [25]

Introduction

Total revenue received by producers is calculated by price multiplied by quantity sold. As equilibrium price and quantity is determined by demand and supply, changes in demand and supply factors will explain the reported increase in revenue earned by the airline industry. To consider the relative importance of these factors, the nature of air travel service and the market will be considered.

Body

<u>Demand factors</u>

Demand for flights has been on the increase.

1. As evident from positive economic growth in many countries, incomes have been on the rise. This leads to a rise in demand for air travel as ability of consumers to travel increases.
   As flights is a normal good (YED > 0), an increase in income will lead to an increase in demand for flights. Income elasticity of demand refers to the responsiveness of demand when income changes, ceteris paribus. Since flights to holiday destinations can be considered luxury goods that people can do away with in times of falling income, YED > 1. The increase in demand from DD_1 to DD_2 (Fig. 1) is thus more than proportionate to the increase in income, ceteris paribus.

   In particular, this increase in demand is likely to come from the emerging economies, where GDP growth has been stronger, implying a larger increase in income.

2. Falling prices of complements have also led to demand for air travel increasing.
   With the rise of Airbnb, accommodation prices have fallen. Since accommodations are complements to air travel, a fall in price of accommodations, leading to increased quantity demanded for accommodations, will lead to a rise in demand for air travel as people consume them together.

   Cross-price elasticity of demand refers to the responsiveness of demand when price of another good changes, ceteris paribus. Value of cross-price elasticity of demand for air travel with respect to price of accommodations is positive and likely large since air travel and accommodations are close complements, with both required by travellers when they go abroad. A fall in price of accommodations thus leads to a more than proportionate rise in DD from DD_1 to DD_2 (Fig. 1) for air travel, ceteris paribus.

Alternative DD factors:

3. Increase in global population leads to increased demand for flights as more people are willing and able to consume flights for business or leisure purposes.
4. In emerging economies, there has been a shift in population demographics towards a larger proportion of working age adults. This group of people tend to be more willing and able to travel overseas, leading to a rise in demand for air travel.
5. With increased globalisation, it is now easier for people to travel from one country to another e.g. in terms of obtaining visas. There is also increased need to travel for business reasons. This leads to an increase in demand for air travel.

Supply factors

Supply for flights has also been on the increase.

1. Increased competition in the air travel industry due to new entrants has increased supply of air travel.
   With the entry of new firms, e.g. new budget flight companies, more flights can be offered at every price level. There has also been an increase in flight offerings, e.g. new routes such as the Singapore-London offered by budget airline Norwegian. This leads to an increase in supply of flights from SS_1 to SS_2 (Fig. 1).

2. A decrease in marginal cost of production has increased supply for air travel.
   In recent years, fuel costs have been falling as oil prices fall. Since fuel is a factor input for airlines, lower fuel costs have led to airlines facing a lower marginal cost of production. This increases the willingness and ability of airline firms to supply air travel at every price level. Supply increases from SS_1 to SS_2 (Fig. 1).

   Alternatively, the lower marginal cost of production could be due to technology advancement. Newer aircraft tends to be more fuel-efficient. With less fuel required to fly the same routes, marginal cost of production will be reduced, leading to an increase in supply.

Combined impact

With a rise in both supply and demand, equilibrium will increase, but change in price is indeterminate.
If increase in demand is greater than the increase in supply, there would be a shortage of QQ' units at initial price level P_1. This leads to upwards pressure on prices. As prices increase, there is a movement along D_2 as quantity demanded falls from Q" to Q_2 and a movement along S_2 as quantity supplied increases from Q' to Q_2. This process stops when prices have risen till P_2 where quantity demanded once more equals quantity supplied.

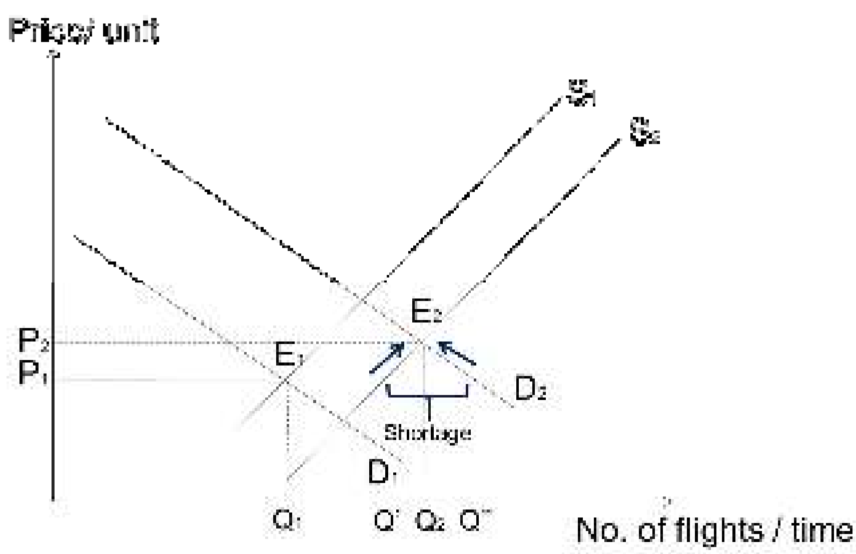


Fig. 1: The market for flights

Impact on TR

An increase in demand, ceteris paribus, leads to an increase in total revenue. Holding supply constant at S_1, an increase in demand will lead to an increase in both price and quantity. As a result, total revenue will unambiguously increase.

An increase in supply, ceteris paribus, leads to an indeterminate change in total revenue. Whether total revenue increases or decreases depends on price elasticity of demand for the good. Price elasticity of demand measures the responsiveness of quantity demanded to a change in price of the good itself, ceteris paribus. Holding demand constant at D_1 (Fig. 2), an increase in supply from S_1 to S_2 will lead to a fall in price and an increase in quantity. Demand for air travel is likely to be price inelastic ($|PED| < 1$) since close substitutes to flights for travelling between countries are lacking. This is especially so for long distance flights, since other modes of travel such as train may not be viable, or may take much longer than plane.

As such, the loss in total revenue due to a fall in price from P_1 to P_3 (Area A in Fig. 2) is more than the gain in total revenue from the less than proportionate increase in quantity demanded from Q_1 to Q_3 (Area B), ceteris paribus. Total revenue has thus fallen due to the increase in supply.

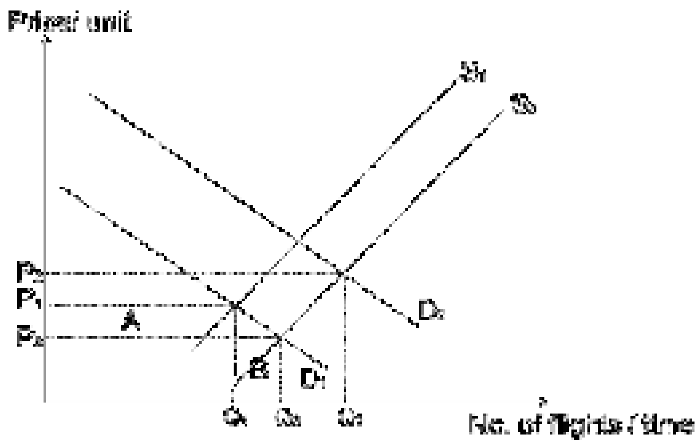


Fig. 2: Impact of increase in SS on TR

Taking into consideration increases in both demand and supply, whether total revenue increases or decreases thus depends on the relative extent of increase in demand and supply.

Conclusion

With demand being price elastic, to explain the reported increase in total revenue, the increase in demand must thus outweigh the increase in supply, i.e. demand factors are more important.

Increase in demand due to increase in income is likely the most important factor explaining this. This is because income has increased fairly rapidly in emerging economies, as implied by high GDP growth rates. Many developed economies such as the US has also been showing stronger economic growth in recent years. Thus, the increase in demand from the increase in income will be significant. Coupled with $YED > 1$, the increase in demand likely outweighs the increase in supply. This results in increase in both equilibrium price and quantity and hence explain the rise in TR of the airline industry.

However, the above analysis may not hold completely for different segments of the air travel market, i.e. short-haul flights versus long-haul flights. For short flights, e.g. short domestic flights, or between close countries, there are likely more close substitutes such as high speed rail, thus demand will be more price elastic (PED value closer to 1 or possibly >1). If $|PED|>1$, when supply increases, the fall in total revenue from a fall in price will be less than the increase in total revenue from the more than proportionate increase in quantity demanded, ceteris paribus. Total revenue will thus increase. Coupled with the increase in demand, revenue earned by firms providing short flights such as budget airlines will increase.

If the increase in total revenue in the airline industry has been mostly because of increased total revenue earned by budget airlines offering short distance flights, supply factors such as more such airlines entering the market could be the more important factor to explain the reported increase in total revenue instead.

Note: If |PED| > 1, whether supply or demand factors are more important will not affect the impact i.e. increase, on total revenue.

In the case of increase in supply > increase in demand, there would be a surplus at initial prices, resulting in an overall fall in prices and increase in equilibrium quantity instead.

Proposed marking scheme

	Knowledge, Application/Understanding and Analysis	
L3	Stronger consideration of the air travel context, with a higher level of rigour in analysis.	18 - 20
	For an answer that uses contextualised demand and supply analysis to explain the reported increase in total revenue. Combined impact of changes in demand and supply needs to be discussed.	15 - 17
L2	For an answer that either gives a descriptive explanation of demand and supply factors and how that leads to an increase in total revenue OR a detailed explanation of demand or supply factors and how that leads to an increase in total revenue.	12 - 14
	For an answer that mostly addresses the question, but explanation of how either demand or supply factors lead to an increase in total revenue is undeveloped or descriptive.	9 - 11
L1	For an answer that shows some relevance and knowledge of possible demand and supply factors – e.g. a largely unexplained list, or which make no reference to the reported increase in total revenue.	5 - 8
	For an answer that is mostly irrelevant. There could be listing of some demand and supply factors without explanation.	1 – 4

E3	For an answer that uses contextualised analysis to support an evaluative conclusion on the relative importance of demand and supply factors in explaining the reported increase in total revenue.	4 – 5
E2	For an answer which shows attempt to explain and support evaluative statement(s) made.	2 – 3
E1	For an answer that gives an unsupported evaluative statement(s) on the relative importance of demand and supply factors in explaining the reported increase in total revenue.	1

Question 3

In 2015, US food processing companies Heinz and Kraft Foods merged to form The Kraft Heinz Company, which is expected to be the fifth-largest food company in the world and third-largest in the US.

(a) Explain the likely reasons why these companies would want to merge. [10]

(b) Assess whether the Singapore government should approve the merger of firms. [15]

(a) Explain the likely reasons why these companies would want to merge. [10]

INTRO

A merger refers to when two firms agree to go forward as a single company rather than to remain separately owned and operated. The merger of Heinz and Kraft Foods is a case of horizontal integration, where firms in the same stage of production in the same industry combine. In this case, firms may decide to merge to pursue cost savings and/or increased market share, with the underlying motive of increasing profits.

BODY

Merger can lead to cost savings

The increased scale of production from M&A lead to greater scope for reaping internal EOS which refers to fall in AC arising from increased scale of production of a firm. Graphically, the firm now operates with a bigger plant with SRAC and SRMC curve represented by $SRAC_1$ and $SRMC_1$. When the SRMC is lowered, the profit-maximising firm now finds that MR exceeds MC and adjusts its output to where MR cuts $SRMC_1$. As AC is lowered, the firm is able to sell its products at a lower price (P to P') and is thus more price competitive, and can enjoy higher profits ([P-AC] x q to [P'-AC'] x q') with lower costs. (Give examples relevant to the processed food industry)

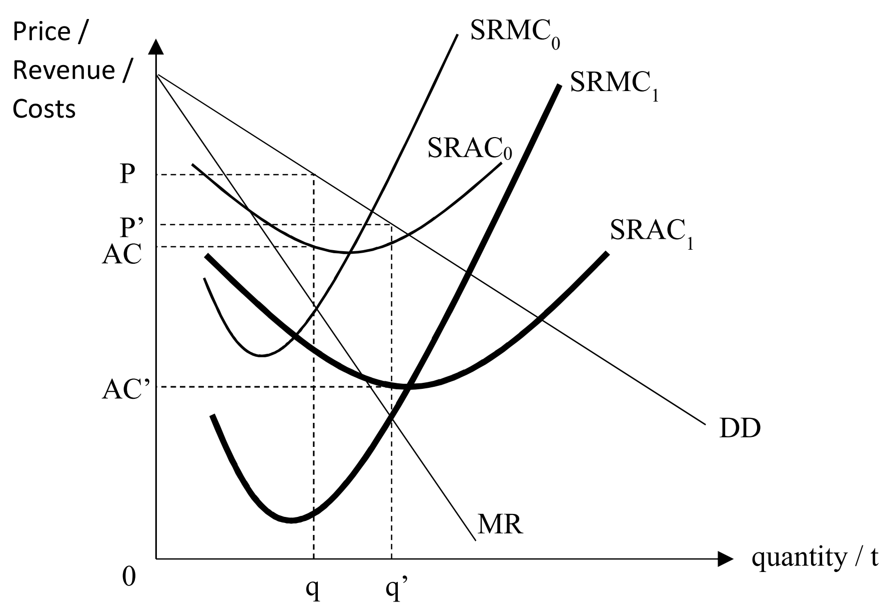


Fig. 1 – Effect of lower cost from EOS on firm's profits

Merger can lead to higher revenue earned by the firm

By merging, the expanded company is able to capture a larger share of the global market as the customer base from both firms are now combined, which leads to higher demand for the firm. Demand for the firm's products also becomes more price inelastic as consumers now have fewer substitutes to switch to. As demand increases from DD to DD', the firm will adjust its output to where MR'=MC. Price and output sold increases to P' and q' respectively, leading to higher TR which is price multiplied by quantity sold. Profits therefore increase, assuming the rise in TR is greater than the rise in TC.

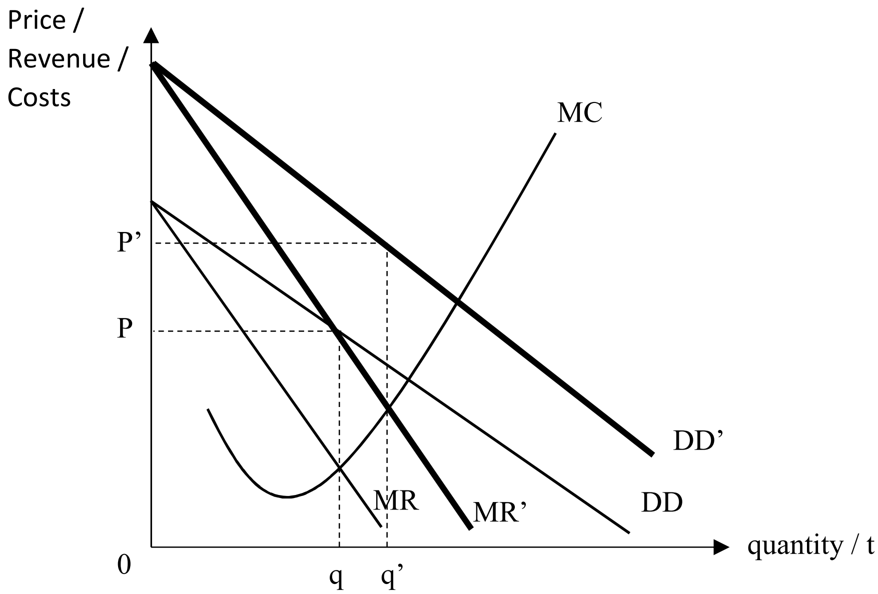


Fig. 2 – Effect of larger market share on firm's revenue

MARK SCHEME

L1	Some knowledge of EOS and/or increased market share.	1 – 4m
L2	Descriptive explanation of both reasons of cost savings from EOS and increased demand from larger market share. OR Analytical explanation of either cost savings from EOS or increased demand from larger market share.	5 – 7m
L3	Analytical explanation of both reasons of cost savings from EOS and increased demand from larger market share, with recognition of the underlying motive of increasing profits.	8 – 10m

(b) Assess whether the Singapore government should approve the merger of firms. [15]

INTRO

Whether the Singapore government should approve the merger of firms or not depends on the performance of the merged firm and the impact on society.

BODY

Thesis – The government should approve the merger

With a merger, prices can be lowered which can improve equity

When a firm expands through M&A, the increased scale of production enables it to use a bigger plant, resulting in technical EOS. For example, for a food processing firm, it can enjoy EOS from a bigger warehouse due to the principle of increased dimensions – storage space rises more than in proportion to construction costs. As a result, the firm may lower its price as shown from P to P' which makes the good more affordable for consumers, especially the poor. This would improve equity in distribution of goods as the low income households are better able to access the good.

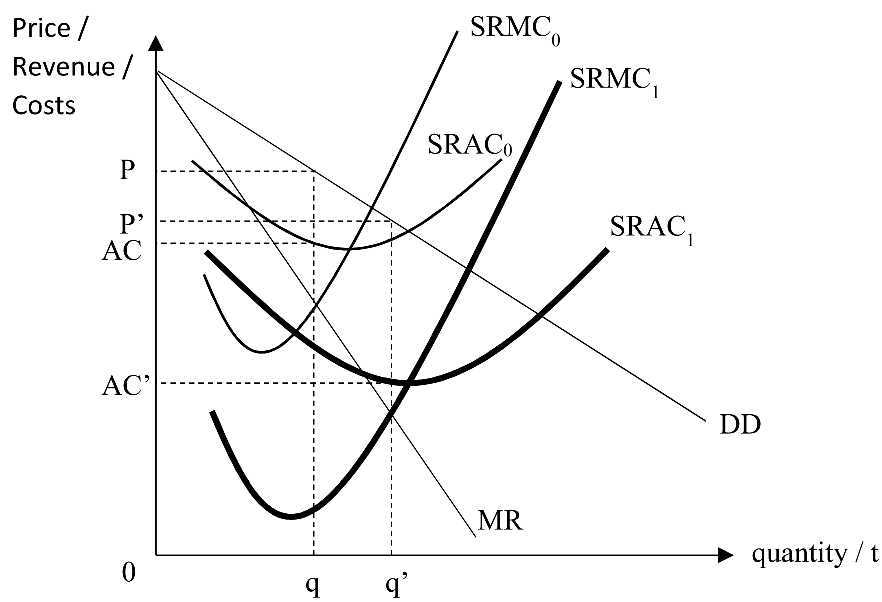


Fig. 3 – Effect of lower cost on firm's pricing and output

The merged firm may be more dynamically efficient

R&D tends to be costly and inherently risky with uncertain results. With lowered costs and increased profits earned, firms have greater ability to undertake investments in R&D. This results in process (or product) innovation, which enhances dynamic efficiency and improves society's welfare over time.

For example, if the government were to allow telecommunications companies to merge, the additional profits earned can be channelled into R&D projects to develop more cost-efficient technology in providing telco services. As such, AC and MC falls, leading to a lower price charged by the firm and larger output produced. As shown in Fig. 3, this is beneficial for society's welfare as consumers benefit from lower prices (P to P') and higher consumer surplus, and firms also benefit from increased profits earned from [(P-AC) x q] to [(P'-AC') x q'].

The merged firm may be better able to compete with foreign firms and therefore retain jobs in Singapore
With internal EOS reaped, the merged firm would be able to lower its prices. With the innovation undertaken by the merged firm, it may be able to lower its prices or offer higher quality products in future. Assuming that the good/service that the merged firm produces is internationally traded, these attributes would enhance the international competitiveness of merged firm's products, thus enabling the firm to out-compete foreign producers and grow, thus helping to retain jobs in Singapore and prevent unemployment.

<u>Anti-thesis – The government should not approve the merger</u>
The market becomes less competitive, and may result in worsening of allocative efficiency

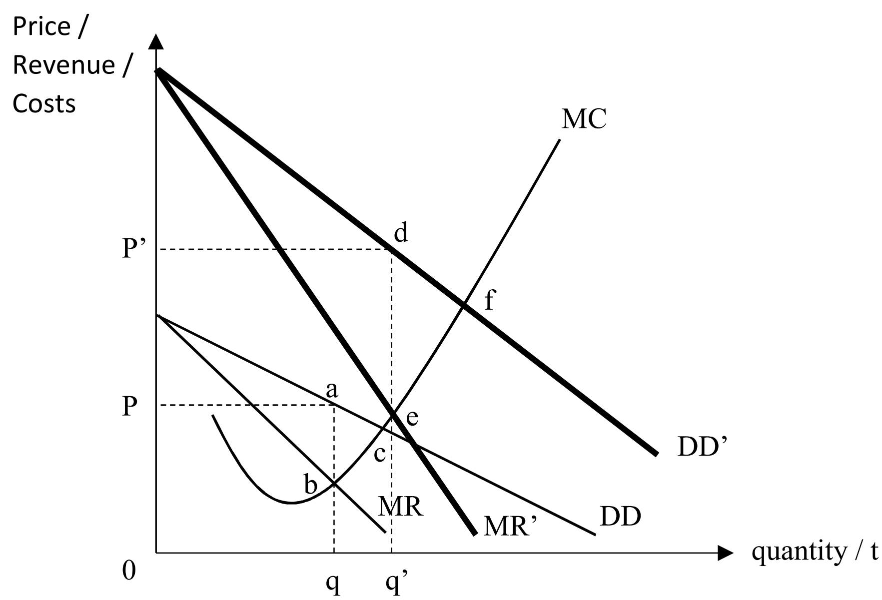


Fig. 4 – Welfare loss from increased market power

The merger result in increased market power for the merged firm, which now enjoys higher and more price inelastic demand for its products. Hence, there is greater welfare loss due to market power.
Before the merger, the welfare loss is represented by area abc. There was underproduction since for the units between the profit maximising output level (Q) and the allocative efficient level (where DD cuts MC), P>MC, => society values each of the units more than the MC of producing it yielding a net gain for society. By not producing those units, society lost the potential gain in welfare.After the merger, the welfare loss is represented by area def, which is bigger than area abc.

[A] With the merger, there may be greater inequity in income distribution

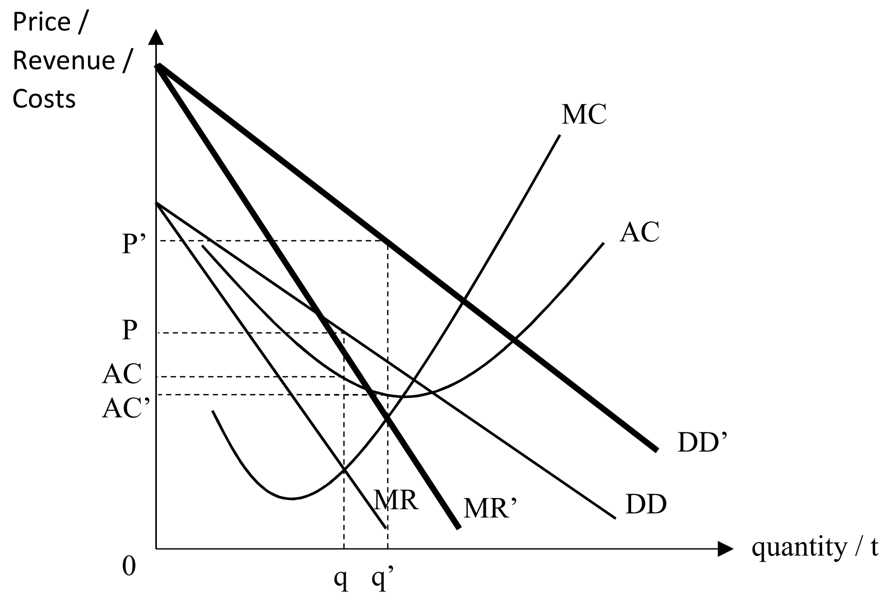


Fig. 5 – Increase in firm's profits with higher market share

As the expanded firm enjoys greater market share, it will face a higher demand as the firm captures a larger section of market demand. The firm will also have a more price inelastic demand as there are now fewer firms in the market after M&A, which means there are fewer substitutes available. As a result, consumers are now charged a higher price of P', while firms enjoy an increase in profits from [(P-AC) x q] to [(P'-AC') x q']. This worsens inequity between consumers and firms, and since shareholders of firms are more likely to be middle- or high-income households, inequity in income distribution between households worsens.

M&A may also lead to worsening of inequity as structural unemployment may result. With M&A, there would be streamlining of processes such that redundant workers are laid off. For example, instead of 2 firms having 1 marketing manager each, the merged firm now only needs 1 marketing manager. Hence, the workers that lose their jobs may find themselves structurally unemployed, thus worsening equity in income distribution between households.

Other possible points:

[A] M&A may lead to X-inefficiency
- M&A lead to decreased competition which can lead to complacency – i.e. the firm doesn't do its best to produce at least cost

[A] M&A may lead to less innovation
- Decreased competition lead to less incentive for R&D => no improvement in quality over time, limited increase in variety over time, limited reduction in marginal cost over time

CONCLUSION
Whether the Singapore government should approve the merger of firms depends on whether the benefits arising from reduction in AC outweigh the negative impact of higher market power. This would in turn depend on the nature of the production process, the nature of the good, the initial level of market concentration and whether the industry is a key sector for Singapore's economy.
The extent of benefits arising from reduction in AC depends on the scope for internal EOS that can be reaped from merger. If the production process is capital-intensive (e.g. semiconductor manufacturing) then

the scope for plant EOS is likely to be substantial, and the Singapore government should approve the merger. In contrast, for labour-intensive industries (e.g. restaurant chains), the scope for EOS may be smaller.

Furthermore, if the good is a necessity (e.g. food production), lower prices passed on by the firms (due to EOS reaped) would be significantly beneficial especially to low-income households, thereby improving equity in distribution of goods. In such cases, the Singapore government has a stronger case for approving mergers.

The initial level of market concentration would also be a factor for consideration by the government. If the market was already highly concentrated, then approving mergers would further increase the market power of the firms and so result in an increase in prices. For example, in the case of public transport rail operators in Singapore, given that there are currently only two players in the market, approving a merger of these two firms would not be desirable as it would create a monopoly in a market for a necessity.

However, if the good/service in concern is one that is internationally traded (e.g. electronics), then the merged company is still likely to face competitive pressures from foreign firms given the open nature of Singapore's economy. Furthermore, the merged firm may have stronger incentives to channel additional profits earned into R&D to enhance its international competitiveness. Thus the exploitation of market power may not be as much of a concern as opposed to a sector that is more domestically oriented (e.g. telecommunication services). In addition, if the merging firms are in a key sector of Singapore's economy which employs large workforce or is a sunrise industry (e.g. biotechnology), there is greater imperative for the government to approve the merger so that the merged firm may be more competitive against foreign firms.

MARK SCHEME

L1	Some knowledge of the impact of mergers on society.	1 – 4m
L2	Descriptive explanation of reasons for and against the government approving mergers. OR Analytical one-sided answer explaining reasons for or against the government approving mergers.	5 – 7m
L3	Analytical explanation of reasons for and against the government approving mergers.	8 – 10m
E1	Unsubstantiated judgement on whether the government should approve mergers.	1m
E2	Substantiated judgement on whether the government should approve mergers, based on 1 criterion.	2 – 3m
E3	Substantiated judgement on whether the Singapore government should approve mergers, based on 2 criterion which includes consideration of the Singapore context with relevant contrasting examples.	4 – 5m

Question 4

The USA is often cited as a country with both fiscal and balance of payment current account deficits. On the other hand, Singapore has long-term fiscal and balance of payment current account surpluses.

(a) Using the circular flow of income, explain how a government's decision to run a budget deficit could affect the current account balance of a country. [10]

(b) To what extent should the US and Singapore governments be concerned about current account imbalances in their countries? [15]

Introduction

A budget deficit happens when a government expenditure exceeds government revenue in a fiscal year. The BOP current account balance is calculated by summing the value of net exports of goods and services, net property income earned from abroad and net unilateral transfers. A government decision to run a budget deficit will cause changes in a country's national income which in turn affects the country's BOP current account balance.

Body

The circular flow of national income is the flow of payments from firms to households and from households to firms. In a 4-sector open economy, comprising firms, households, the foreign sector, the government, there are withdrawals out of the circular flow and injections into it. Firms pay households for the factor services because it is the households who own the land, labour, capital and entrepreneurship that are used in producing the country's total final output. Households use a major portion of their factor income to buy domestically produced consumer goods/services. Some of the factor income will be saved, some of it will be taxed, and part of it will be used to buy imports. These make up the withdrawals from the circular flow of income. A **withdrawal** from the circular flow is an income receipt that is not passed on through spending. Withdrawals will re-enter the circular flow as injections. An **injection** into the circular flow is an income receipt not caused by household spending. Injections include investment expenditure (**I**), government expenditure (G), and export expenditure (X). When total withdrawals equal total injections, national income will be in equilibrium. This is because only then will the planned expenditure in the economy be just sufficient to buy up all the final goods and services that firms have produced and this in turn generates national income when firms pay factor income to households. Hence there will be no tendency for firms to change their level of production.

When a government changes from running a budget balance to a budget deficit in a fiscal year, it is possibly as a deliberate move to achieve her macroeconomic goal of economic growth. The resulting rise in income will lead to a deterioration in the current account balance of the BOP. When the economy is in a recession, the government may employ expansionary fiscal policy by increasing its spending on building new roads. As G goes up, there will be a budget deficit as government expenditure exceeds government revenue from taxes if the budget was initially balanced. The rise in G leads to an increase in injection in the circular flow of income above. This causes planned total injections to exceed planned withdrawal which in turn cause aggregate demand to exceed the national output. This will cause a fall in the planned level of inventories of firms supplying road building materials. These firms will increase output (increase in actual growth) which translate to hiring more labour which is a derived demand from producing more product/output. Households then receives more income (payment for factors of production) and they will spend a portion of it on locally produced consumer goods and services; a portion will be saved, taxed by the government and spent on imports (foreign). When this happens, there will another round of increase in income which induces households to increase consumption of domestically produced goods/service and another round of withdrawals from the circular flow. The increase in output for the second round is smaller than the previous one as there are leakages in the form of import expenditure, taxes and savings (withdrawals going up) as shown in the diagram. Nevertheless, firms will again experience a fall in inventories, prompting them to increase production. The increase in production will cause another increase in income. The process repeats itself until a new equilibrium is achieved where once again injections equal withdrawals. With every round of national output increase, imports rise and thereby worsening the BOP current account balance.

If the current account in the BOP was previously in a balanced position, with an increase in import expenditure due to an increase in national output over several rounds, all else being equal, the current account will now deteriorate to a deficit. The size of the deficit on the current account will depend on the value of marginal propensity to import (mpm). This is because the mpm measures the increase in import expenditure for every $1 increase in income.

<u>Marks Scheme</u>

L3	For an answer that uses step-by-step analysis that explains how government deficit leads to current account deficit on BOP with the circular flow well-applied. The analysis should take into account the multiplier effect and the change in import expenditure withdrawn from the circular flow for each round of the multiplier.	8-10
L2	A descriptive explanation of how government deficit leads to current account deficit on BOP. The circular flow of income is applied to a limited extent to explain how the deficit arises.	5-7
L1	Knowledge of the circular flow and/or how government deficit leads to current account deficit on BOP. Statements mostly unexplained.	1-4

b)

Introduction
The US and Singapore economies persistently run current account deficits and surpluses respectively in their BOP. In examining whether these governments ought to be concerned about the current account imbalances in their countries, there is a need to examine the causes of the current account imbalances, the initial state of the economies and the nature of the economies. In this essay, the assumption is that the current account imbalance is due to trade imbalances.

Body

CURRENT ACCOUNT DEFICIT

THESIS – The US government should be concerned

<u>Argument 1</u>
A current account deficit **is a possible cause of the country's actual real GDP to be at a level that is lower than full employment output.**

1. US firms may be less competitive than foreign firms especially in low-end manufactured goods. This may be due to low quality of US goods. When this happens, consumers will import high quality goods as substitutes. The demand for imports is high and import expenditure is also high. At the same time, exports of these goods will also be weak as US products cannot compete with products from other countries. A combination of high import expenditure and low export revenue means net exports (X-M) is likely to be a negative value.
   If economy was initially in internal and external balance, a deterioration in the current account due to a trade deficit will lead to internal imbalance. In the diagram below, assume that the country AD was initially at AD_0 and equilibrium national income occurs at full-employment output level (Yf).

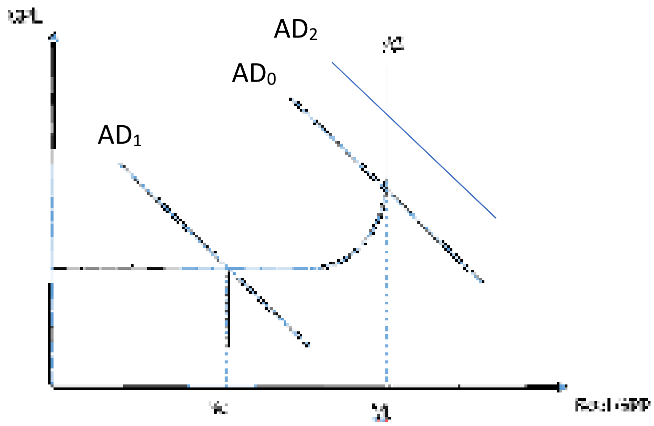


Fig 1

Aggregate demand (AD) comprises of planned consumption (C), Investment (I), government expenditure (G) and net exports (X-M). If (X-M) is now a negative value, AD drop to AD_1 which gives an equilibrium national output at Ye which is below the full employment output, yf.

If the deficit on the current account is persistent, the equilibrium national income/output may be consistently below the full employment output on a consistent basis. This also means that there will be persistent demand-deficient unemployment.

[Evaluation] The economic growth of the US is not as dependent on external demand due to its large domestic market. Net exports makes up a less significant proportion of AD as compared to domestic consumption. As such, the impact on actual growth and unemployment may not be as severe.

2. The opening up of a trade deficit leads to increase supply and decrease demand for the country's currency in the forex markets leading to downward pressure on the forex rate.
   For the US that is on a floating exchange rate system, there will be a depreciation of the foreign exchange rate. Households will then face rising price of its imports which may further contribute to lower material SOL. Firms will face rising unit costs due to higher prices of imported inputs. This will lead to a fall in AS as illustrated by a upward shift of the horizontal AS curve leading to cost push inflation
   [Evaluation] Due to the size and availability of natural resources in the US economy, it is not as dependent on imported inputs. This lessens the impact of the imported inflation.

Argument 2

Current account deficit **leads to lowering of future material standard of living**

A persistent current account deficit improves material standard of living of households and consumers in the short term. When import expenditure is higher than the factor payments received through export revenue, it means that households are enjoying a higher level of material living standards than that which is provided by their income. The trade deficit is likely to be financed by borrowing from the trade partners. However, at some point in the future, households need to return the loan. Henceforth, households as consumers would need to reduce future consumption of domestic goods due to the repayment of the loans. This leads to lowering of material standard of living in the future which the government has to be concerned about. Moreover, if the deficit is big and the country is not able to fulfil its external loan obligations, it can result in a debt crisis where lenders stop lending or agree to continue to lend but at very high interest rates due to the high risk of default by the borrower. This increases the country's external debt burden and further lower further living standards.

[Evaluation] While the deficit faced by the US is significant, the status of the dollar as the world's reserve currency as well as the continued phenomenon of dollarization amongst developing countries suggest that foreign countries will continue lending to the US to fund its external debt.

Argument 3
Current account deficit could lead to a financial crisis and hence adverse effects on the macroeconomy If the trade deficit is big and persistent, and financial investors lose confidence in the country's ability to repay its loans as explained above, they may take their financial investments elsewhere leading to a large capital outflow of hot money. This will put more downward pressure on a country's exchange rate. For a country like the US that is on a floating forex system, the exchange rate will depreciate. This can result in speculation of further falls in the USD resulting in more depreciation of the forex rate. The resulting loss of confidence in the stability of the country's exchange rate will discourage FDI and this will further add to the contraction of the economy.
[Evaluation] As explained above, the dollar is not at risk of significant depreciation as long as foreign countries continue lending to the US. Given the strength of the US economy, only a collapse of the dollar will have a significant effect on FDI.

ANTI-THESIS – The US government need not be concerned

Argument 1
If the current account deficit is caused by import of capital goods, the imbalance may reverse in the long term.The country may be running a trade deficit because it is importing a lot of capital goods. The yearly expenditure on imported capital goods may benefit the economy over the long term. The country's factories may be able to produce better quality goods in the future due to use of machinery. Import expenditure may fall over time as consumers substitute imports for locally produced US goods. Export revenue may also rise as exports have improved in quality. This will result in reversal of the current account BOP from deficit to a surplus.

Argument 2
For countries that operate on a floating forex system like the US, exchange rate changes will iron out the current imbalance in the longer term If there is a persistent current account deficit due to domestic goods being less competitive (and there is no mitigating inflow from the capital account), the supply of domestic currency will be higher than the demand in the forex market. This will eventually cause the forex rate to depreciate. When this happens, the imbalance will be resolved over the longer term (elaborate).

CURRENT ACCOUNT SURPLUS

THESIS – The Singapore government should be concerned

Argument 1
A current account surplus **could cause demand pull inflation.** If an economy was initially in internal and external balance, a current account surplus due to a trade surplus leads to internal imbalance. With reference to fig 1, assume that the country AD was initially at AD_0 and equilibrium national income occurs at full-employment output level (Yf). If (X-M) is now a positive value, AD rises to AD_2 which will lead to increases in the general price level since the economy was initially already at full-employment.

1. When there is a persistent surplus on the current account, all else being equal, there will be upward pressure in the foreign exchange rate. This is because the demand for SGD by foreigners to buy Singapore exports exceeds the supply of SGD by locals to purchase imports.
   For a country like Singapore that is operating on a managed float system, it the exchange rate rises above the band as a result of the trade surplus, the central bank will intervene. It will sell the domestic currency and buy foreign currency. While the central bank will be accumulating foreign reserves, the selling of the domestic currency leads to increase in the domestic money supply. This leads to expansion of the AD and hence inflation if the economy is near/at full employment.

Argument 2

A current account surplus leads to adverse feedback effect on exports in the future and may also invite retaliation harming the growth performance of the economy over time. One country's trade surplus is another country's trade deficit. This causes contraction of the latter's AD. As such, the latter's national income contracts via the downward multiplier effect. The contraction in the trade partners' income will induce them to cut back on imports. Thus the country with the trade surplus will eventually suffer falling exports which will lead to contraction in AD and hence national income. The effect will be worsened if the trade partner engages in retaliation measures like protectionism.

[Evaluation] The size of Singapore's economy means that the impact on its trade partners trade balance is unlikely to be that significant rendering the threat of retaliation low.

Argument 3

Persistent surplus in the current account **limits increase in material living standards**. When export earnings exceed import expenditure, ceteris paribus, it suggests that the country becomes a net lender (to other countries). This will lead to inflow of factor income from abroad in the future but in the meantime, the households are forgoing current consumption. This means that even though the national income may have risen because of the trade surplus, (assuming there is excess capacity in the economy), living standards are not rising as fast or at all.

ANTI-THESIS – The Singapore government need not be concerned

Argument 1

A current account surplus that leads to an overall BOP surplus results in accumulation of higher foreign reserves (for a country on a managed float system) which means that the central bank can intervene in the forex market indefinitely to manage the exchange rate if necessary. As explained earlier, a surplus in the current account leads to excess demand for the country's currency in the forex market. If the Monetary Authority of Singapore (MAS), the central bank of Singapore, wants to maintain a gradual appreciation of the SGD to ensure price stability (which is their typical policy stance), the MAS has to supply SGD into the foreign exchange market to prevent SGD from rising too quickly. When the MAS sells SGD, foreign currency is purchased in exchange for SGD. This will increase the reserves of foreign currency in Singapore. Unlike a situation where the central bank is intervening to prevent a depreciation, maintaining an undervalued exchange rate can theoretically go on indefinitely since foreign reserves are accumulated rather than lost. Thus this alleviates any concerns of an overly strong currency.

Argument 2

Exchange rate changes can iron out the current imbalance in the longer term. In a floating exchange rate system, a current account surplus should lead to an appreciation of the forex rate. When this happens, the country's exports become more expensive in foreign currency. Demand for exports fall. Export revenue fall. On the other hand, imports become cheaper in local currency. When demand for imports is price elastic, quantity demanded will rise more than proportionately. Import expenditure rises. Thus, the imbalance will be resolved over the longer term if the central bank desires it.

CONCLUSION

The US government should be concerned with current account imbalance whilst the Singapore government may not need to worry.

The US economy is operating at below full employment output. A persistent current account deficit does not help the US economy close the output gap and reduce demand deficient unemployment. Over the long term, these deficits need to be financed which will adversely impact the material SOL of US households. These are all adverse effects which are in fact not balanced out with the US importing a substantial amount of capital goods. I.e., USA's current account deficit is due more to import of consumer goods rather than capital goods. Furthermore, the USD does not depreciate much as the deficit in the current account is being financed by inflow of funds from foreigners in the capital account. This means the deficit is likely to persist. The US, unlike other countries does not need to worry about a persistent trade deficit causing a debt crisis or a crisis of confidence in the stability of the USD because the US is a major trade partner of many countries and whose central banks are keen to acquire US financial assets and hold USD as a reserve currency. However, with the rise of the yuan as a competing reserve currency, the US can't afford to remain complacent for long. Thus, over the short term and longer term, the US government should be concerned.

On the other hand, the Singapore government has less to be concerned about a persistent surplus on the current account. As a very small economy, its trade surplus would not be very damaging for its trade partners and thus should not invite retaliation. Furthermore, MAS will be able to accumulate foreign reserves when the central bank sells SGD to mitigate appreciation of the SGD caused by the trade surplus. This is a positive as the higher the reserves the more Singapore is perceived to be a strong and stable economy which is well-managed. This helps to attract and retain FDI which is a source of both actual and potential growth. In particular, the potential growth helps to contain demand pull inflation pressure caused by the persistent trade surplus in the current account.

<u>Marks Scheme</u>

L3	For an answer that uses appropriate analysis to discuss a range of scenarios and how they impact both the Singapore and US governments in negative ways due to the current account imbalance they face.	8-10
L2	For an answer that gives a descriptive or incomplete scenario about how current account imbalances impact both the Singapore and US governments in negative ways. Or an answer which is analytical but just manages to focus on either Singapore or the US. Or a well-developed answer which does not account sufficiently for context (eg Singapore experiencing a deficit).	5-7
L1	For an answer that shows knowledge of scenarios (likely with conceptual errors).	1-4
E3	For a conclusion that arrives at a comparative and well-reasoned judgement about whether the US and Singapore government should be concerned.	4-5
E2	For a conclusion that arrives at some attempt in judgement about whether the US and Singapore government should be concerned. Evaluation tends to be made up of individual points.	2-3
E1	A conclusion where the judgement is unexplained.	1

Question 5

“Despite substantive efforts to re-ignite recovery, global economic growth remains low and unemployment persistently high.”

The Global Competitiveness Report 2015-2016; World Economic Forum

Discuss how governments ought to decide on the choice of macroeconomic policies to bring about sustained economic growth in their countries. [25]

Introduction:

Sustained economic growth refers to increasing an economy’s actual national output over time without accelerating inflation rates. In general, governments can use a range of demand and supply side policies and trade policies to stimulate sustained growth. However, in deciding on the choice of macroeconomic policies, governments often have to consider whether the policies address the causes of the growth problem, the nature and state of the economy, the unintended consequences of the policies adopted and the financial sustainability of these policies.

Body:

In deciding on the choice of macroeconomic policies, governments ought to consider whether the policies address the causes of the growth problem

A sustained growth means that there is increase in the potential of the economy (potential growth) to produce more through continuous increase in amount of scarce resources and/or improvement in total factor productivity (i.e. increases in potential output (Yf) shown by vertical or outward shift of AS) and these increases in potential output are realised with increases in aggregate demand (shift of AD to the right) i.e actual growth. Hence a country’s weak growth may be weak AD & / or weak AS.

Weak or slow rise in AD is due to slow increase in any of the components: planned consumption, investment, government spending and net exports. These components are in turn affected by factors like cost and availability of credit, business confidence and expectations of future prices, foreigners’ income and government policies. For e.g., given the stimulus, business outlook may be poor and households and investors will tend to hold back on consumption and investment. This discourages households’ spending on big-ticket items. At the same time, volume of investment falls as projects are perceived to be less profitable. Overall, AD will rise slowly.

If the cause of the sustained growth problem is due to weak AD, then demand management policies can be adopted. For eg, expansionary fiscal and monetary policies can be used if the economy is going through a downturn. The use of fiscal tools like increased government spending and fall in direct taxes can stimulate C, I and G. Central banks can also use monetary tools like lowering of interest rates or raising money supply to increase C and I. Alternatively, through the use of an exchange rate policy, central banks can weaken the forex to improve the price competitiveness of exports so that export revenue will rise and import spending fall (assuming demand is price elastic), leading to rise in (X – M). The overall boost in AD will result in unplanned fall in inventories which in turn cause firms to increase output by hiring more workers. The rise in output and employment will lead to a rise in income which induces increases in domestic consumption via the multiplier effect that will further lead to increase in AD and rise in GDP by a multiple. Hence demand side policies are needed as they can quickly address the short run consequences and target the source of the problem i.e. slow AD during an economic downturn.

Weak or slow rise in a country’s vertical AS or potential growth can be due to its limited quantity and quality of factors of production. For eg. in the case of a less developed country, the lack of availability of fund and technology will limit her factor productivity. Due to lack of technological advancement, factor productivity can stagnate or fall over time. This will thus reduce the potential growth. A country with limited amount of land and raw materials, like SG, will have further constraint in its potential growth. Hence vertical AS shifts slowly outwards and the country will have limited growth.

In both instances, the use of supply side market-oriented measures will better address the problem. If it is due to low factor productivity, governments' intervention through R & D and education spending will result in improved productivity and hence horizontal AS falling (assuming rise in factor cost is slower than the improved productivity) and outward shift of vertical AS. This in turn result in actual and potential growth. However, the impact of such policies on production can only be seen after a long period of time. Therefore the use of such measures to address an economic downturn may take too long and hence does not address the source of the problem that is more short term in nature.

In deciding on the choice of macroeconomic policies to bring about sustained economic growth, governments ought to consider the nature of the economy
For an economy with large pool of natural resources and domestic market, its sustained growth is more due on domestic factors since it is able to sell to its own domestic market or obtain domestic capital to fund future expansion and investments. Eg: large economies like the USA / Australia have abundant natural resources and have relatively large domestic sectors or consumption to drive growth and act as buffer to insulate the economy from external shocks. Hence it is likely to adopt fiscal or monetary policy due to the large proportion of domestic C, I and G relative to X if the weak growth is due to lack of AD. In US, domestic C accounts for more than 60% of the GDP which indicates a large multiplier effect (relatively high MPC) and hence greater effectiveness in stimulating GDP. The use of monetary policy has also been used by US in 2010; 'quantitative easing' was adopted to address the slowdown in the economy. It is less likely to use exchange rate centred monetary policy given that it has a floating exchange rate system. While large economies can also use trade policies to tap on global market to increase export revenue, it is less important to them due to the relatively smaller X+M / AD.

In contrast, for an economy without natural resources and has a small domestic market, its sustained growth is dependent on its reliance on foreign markets for sale of its products and foreign funds and capital for development of its economy and to create jobs. Eg: for small, resource-poor and open countries like SG, it would be more vulnerable to external shocks and this would lead to severe impact on the country's growth. Hence, it is likely to use exchange rate centred monetary policy to manage the competitiveness of its exports and to tackle imported cost-push inflation as the latter will have adverse impact on its exports and hence actual growth. Such economies will also adopt a pro-globalisation approach to tap on the foreign markets. Eg: formation of FTAs with different countries to cushion the impact from both demand and supply shocks and also to tap on the export markets. These countries are unlikely to use interest rate centred monetary policy as the impact will be relatively weak since they are interest rate takers. Furthermore, in the case of SG, as it is operating under managed float system, it will lose control of her domestic money supply and interest rate. While fiscal policy can be used by these economies, the impact will be weak due to the weak multiplier effect (high MPM and MPS in the case of SG). In SG, the use of fiscal policy is used more for stabilisation purpose (for eg in a recession) rather than to bring about actual growth which is more significantly affected by exports and FDI. Instead, it is more commonly used to deliver supply side initiatives to promote long-term potential growth. For example, the use of lower corporate and personal income taxes to encourage FDI, direct government spending on specific infrastructure to attract R&D, spending on training to improve labour productivity. These will both lower horizontal AS and shift vertical AS outwards and hence achieving both actual and potential growth.

While supply side policies can be used for all types of economies to boost potential growth and improve international competitiveness of a country, they are more crucial to small and open economies in achieving sustained growth because of the resource constraints they face and the need to continually create external demand through competitiveness of exports (both price and non-price competitiveness). For eg, there is widespread implementation of supply-side policies with respect to land, labour, capital and entrepreneurship in SG. It is also used to stimulate R&D and innovation efforts to improve on the quality and attractiveness of its exports.

In deciding on the choice of macroeconomic policies to bring about sustained economic growth, governments ought to consider the state of the economy. In times of sluggish growth, business outlook may be poor and investors tend to hold back on investment, causing C and I to be low. It tends to be more difficult to influence consumers' and investors' decision to consume or invest during such times. Instead, it may be easier for governments to stimulate growth through fiscal policy like increasing G through spending on infrastructure rather than the use of interest rate centred monetary policy. Hence, government investment spending tends to be the more important driver of growth in times of a recession.

However, when the economy is growing too quickly and inflationary pressures are looming, investment spending may be relatively more important to ensure sustained economic growth. Investment spending by firms will result in capital accumulation in the long run, increasing the productive capacity of an economy and therefore potential output increases leading to a non-inflationary economic growth which is more sustainable. Hence in such instance, government could adopt supply side policies to create a pro-business environment.

In deciding on the choice of macroeconomic policies to bring about sustained economic growth, governments ought to consider the unintended consequences of the policies
A government will look at the existing mix of macroeconomic problems present in the country to determine the type of policies it should undertake. When a country's current account is in deficit, a government's attempt to improve economic growth may result in worsening the deficit. The use of expansionary demand management tools will result in a rise in income and hence actual growth. However, import expenditure will also rise and hence worsen current account. Similarly, a country's adoption of free trade policy to promote growth may bring about structural unemployment. This is because as the country move up its value chain or develop new comparative advantage, there may be a mismatch of skills and hence the workers are laid off due to redundancy and are unable to gain employment in other industries due to occupational immobility. In such instances, the use of supply side policies like provision of funding for reskilling can complement the trade policies.

On the other hand, if an economy is suffering from demand deficient unemployment and weak growth, using demand management tools to stimulate the weak growth and increase AD will also tackle the demand deficient unemployment through the multiplier process.

In deciding on the choice of macroeconomic policies to bring about economic growth, governments ought to consider its financial affordability.
If a government wants to use expansionary fiscal policy to stimulate growth, it has to ensure that it has sufficient budget reserve to implement the policy. If it is already suffering from high fiscal deficit, then the use of fiscal policy will further worsen its debt. In such a situation, it will have to consider the use of monetary policy. Similarly, a less developed country with limited budget will find it hard to use interventionist supply-side policy that requires government spending on investment to stimulate growth. Instead, it will have to consider a pro-globalisation approach where it opens up for FDI flows and rely on foreigners to bring growth to its country.

Suppose the use of expansionary fiscal policy is found to be more suitable and the government decides to go ahead with its borrowing. In such a situation, it will have to carefully consider the type of spending it wants to engage in to avoid further debt problem. While both spending on government consumption and capital goods will stimulate AD, the impact on its debt will be different. Spending on consumption goods like military or having extravagant events have little long-run benefits while spending on infrastructural projects will increase its productive capacity and stimulate future growth. Such debt is considered as productive debt as the future debt problem will be reduced once the economy grows and the country's tax base increases.

Even if a country has budget surplus, it will also factor in the fiscal affordability in deciding on its choice of macroeconomic policies. E.g. the SG government may have surpluses from past fiscal years to plough into increased spending in the current period to stimulate growth but such surpluses are not infinite. The government may eventually have to raise tax revenue to fund its intervention or go into debt. However, the raising of income tax can result in a decrease in work effort which will lower the country's potential growth rate. This factor of fiscal affordability is of high relevance especially to economies which have a fast ageing population like SG. Ceteris paribus, an ageing population leads to contraction of a country's production capacity. It also leads to a contraction of the government's tax revenue base. Hence the problem of funding its growth policies will rise over time. This will subsequently limit the government's effort to promote growth.

In general, governments will consider the size of a country's fiscal deficit as a % of GDP. A budget deficit is less of a problem as long as the size of the budget deficit is not huge and the government has the means to repay.

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Conclusion

The governments will first have to choose policies that address the root of the growth problem. However, there may be a range of policies that can address this problem. Thus they will then need to look at the nature of the economy to narrow down the choice of the policy. The state of the economy may not be a factor for consideration if there are no inherent conflicts between the achievement of growth and the other macroeconomic goals.

In general, if the source of the problem is due to weak actual growth (i.e. the economy is operating below the Yf), then use of demand management tools will be able to address the lack of AD. However, which of these tools to use will depend on nature of the economy. A big and domestically driven economy is likely to use fiscal and interest rate-centred monetary policies to stimulate AD via domestic C and I. On the other hand, a small and resource-poor economy that is trade dependent is likely to use exchange-rate monetary policy and supply side policies to improve its price and non-price competitiveness of its export. While a country like SG also makes use of fiscal policy during bleak economic outlook, however, its purpose is more to reduce the magnitude of the fluctuations of its AD rather than to stimulate the AD since the use of this policy is less effective. Where the use of a policy to tackle growth issue conflicts with other macroeconomic problems present in the country, the government will have to weigh and consider the severity and the persistence of the mix of the problems and then decide on its priorities and hence policy to undertake.

However, if an economy is already at full employment and potential growth is lacking or there is structural rigidities within the economy, then governments will need to use supply-side policies. Which of these policies to use will again be dependent on the nature of the economy. Eg: If the country is endowed with huge amount of land and resources that are untapped, then it is likely to use policies to use these resources for its potential growth. On the other hand, if the country has already reached its physical limit in the use of its land and labour (e.g. in the case of SG), then policies to improve on the quality can be adopted.

Marks Scheme

L1	Response is mostly irrelevant but shows some knowledge of sustained growth or possible policies. Able to provide some causes / reasons / types of economic growth and policies that can be adopted with limited/flawed explanations.	1 – 4 5 – 8
L2	For an answer that provides a descriptive explanation for the different reasons causing weak growth and the policies that are implemented to deal with it. Multi-faceted response to the question but the explanation is largely descriptive. Consideration of factors that governments ought to consider in the choice of its policies (with some hints of alternative policy)	9 – 11 12 - 14
L3	Well-developed analysis of the considerations taken by governments on its choice of the various policies to promote sustained growth with an attempt to discuss the justification behind the choices. Analytical and detailed discussion of the considerations taken by the governments in the choice of its policies in differing context	15 - 17 18 - 20
E1	Unsupported evaluative statement about the consideration for the policy choice	1
E2	Some attempt to evaluate the different factors underpinning a government's choice of policy but the factors considered tend to be narrow	2 - 3
E3	Clear evaluation / weighing of the different factors underpinning different governments' choice of policy in dealing with sustained growth in differing contexts	4 - 5

Question 6

(a) **Explain the determinants of Singapore's pattern of trade. [10]**
(b) **Discuss the impact of free trade on Singapore households in their roles as consumers and workers. [15]**

(a) Explain the determinants of Singapore's pattern of trade. [10]

INTRO
Pattern of trade refers to the composition and volume of a country's exports and imports, as well as the destination of its exports and the source of its imports.

BODY
Singapore's pattern of trade depends on what is the good/service it has a comparative advantage in producing, which in turn depends on her factor endowment
Countries may pursue mutually beneficial trade based on the theory of comparative advantage, where each country would specialise in producing the good in which it has a comparative advantage. A country has a comparative advantage in the production of a good/service when it is able to produce the good/service at a lower opportunity cost than another country. The comparative advantage of a country is in turn based on its factor endowment. Singapore's trade pattern in terms of the goods that are exported and imported has been reflective of our factor endowment. Due to its small land size, Singapore imports goods that are land-intensive in production, such as food. In its early years post-independence, Singapore possessed a relative abundance of low-skilled labour, thus the country produced and exported labour-intensive lower value added goods such as textiles and toys. As Singapore's workforce became more highly education, its factor endowment shifted to a relative abundance of high-skilled labour. Correspondingly, the country focused on producing and exporting high value added products such as financial services.

Singapore's pattern of trade depends on transport costs
While the theory of CA predicts that countries would mostly export and import from countries where CA differs the most, this may not always be the case. Geographical distance and hence transport costs would also affect which countries Singapore would export to and import from. For example, while Singapore imports food from China which has a comparative advantage due to its abundance of land, Singapore also imports food such as eggs from Malaysia. This is because with the addition of transport costs, it may be more economically beneficial to import from a neighbouring country than a country that has even lower opportunity cost in production but is further away.

Singapore's pattern of trade depends on trade barriers
The existence of trade barriers would also affect which countries Singapore would export to. If another country has placed trade restrictions such as tariffs on Singapore's exports, it may result in Singapore not exporting / exporting less to that country, thus distorting the trade pattern.

Singapore's pattern of trade depends on demand-side reasons
While the theory of CA provides a supply-side reason for trade, the relative demand for goods would also affect the trade pattern. Even if Singapore has the same PPC as another country (and thus identical patterns of opportunity cost in production), Singapore may still export the good if the demand for the good in the other country is higher than in Singapore.

In addition, Singapore may import differentiated products due to its consumers' demand for variety of the same product. For example, Singapore's consumers may prefer to consume a variety of wine from Europe, Australia and the USA. Thus, the import of differentiated products is determined by consumers' tastes, even if there are differences in the cost of production across the countries.
or

In addition, Singapore may import and export the same products due to its consumers' demand for variety. For example, Singapore exports university education to foreign students. At the same time, Singaporean students also pursue university education in foreign countries even though tuition fees may be higher in foreign countries. This may be attributed to consumers' tastes and preferences, where some Singaporean students prefer to consume education at foreign universities.

MARK SCHEME

L1	Some knowledge of the reasons for trade.	1 – 4m
L2	Descriptive explanation of the determinants of trade pattern, which is applied to the Singapore context OR Developed explanation of the determinants of trade pattern, but not applied to the Singapore context.	5 – 7m
L3	Developed explanation of the determinants of trade pattern, which is applied to the Singapore context.	8 – 10m

b) Discuss the impact of free trade on Singapore households in their roles as consumers and workers. [15]

INTRO
Free trade is where countries can freely exchange goods and services without any trade barriers.
Households play the roles of consumers and workers.

BODY
<u>Positive Impact</u>

Consumers benefit from lower prices and increased level of consumption with trade
Based on the theory of CA, imports from other countries that have a lower opportunity cost of production could mean that imports are cheaper than domestic goods and services. Consumers therefore stand to enjoy higher consumer welfare, as they are able to consume more products are lower prices. [Illustrate using DD/SS analysis that show gain in consumer surplus as a result of importing from a country with comparative advantage]

[Eval] However, given Singapore's reliance on imported inputs, free trade also implies that Singapore would be susceptible to supply-side shocks. For example, if there is an outbreak of bird flu in Malaysia, it would decrease the supply of chickens being imported into Singapore, which would mean that consumers face higher prices.

Consumers tend to face lower prices and improved quality / variety of goods as firms are exposed to greater competition
With free trade, Singaporean firms are exposed to competition from foreign imports. This would incentivize firms to invest in process innovation so as to reduce unit cost of production and improve the price competitiveness of their products. If firms pass these lower unit costs on to consumers via lower prices, consumers will benefit by having greater ability to consume with a given money income.

Firms may also conduct more research into developing better quality products, e.g. electronic equipment with more functions, so as to better differentiate themselves from foreign substitutes. This again benefits consumers, who will have better quality products of a larger variety to consume. Furthermore, being open to imported goods would in itself increase the variety of goods available for consumers to choose from.

Consumers tend to face lower prices with trade due to firms reaping EOS

As export-oriented firms in Singapore sell to overseas markets, output produced by each firm will increase. This allows firms to enjoy internal economies of scale, where a larger scale of production leads to lower unit cost. If Singapore were not open to free trade, this gain in economies of scale would not have been possible if Singaporean firms only sold to the small domestic market.

For example, food manufacturers can automate part of their production process to increase output. However, some of the machines required only comes in a fixed large size, thus firms will only find it feasible to install these machines with a large quantity of output produced. With trade, exporting firms requiring a larger output may install these machines, which can significantly increase output with a smaller increase in cost. This leads to a fall in unit costs, which firms may pass on to consumers via lower prices, thus benefitting them. Foreign firms may enjoy internal economies of scale too, allowing households consuming imports to also benefit from lower prices.

However, as export-oriented firms face higher demand with greater access to foreign markets, the lower prices passed on from firms reaping EOS may be offset by the upward pressure on prices due to increased demand from external markets.

Free trade is beneficial to workers in the export-oriented industries

With free trade, export-oriented firms would have larger external markets to sell to and experience an increase in demand. Consequently, there would be an increase in the derived demand for workers in these export-oriented sectors, resulting in higher wages and more employment opportunities for these workers. Based on the theory of CA, workers in the industry in which the country has a lower opportunity cost in production would stand to gain.

However, selling to external markets also exposes these sectors to demand-side shocks, such as when our trading partners experience recessions. During recessions, as foreign consumers' incomes fall their demand for Singapore's exports would decrease (assuming Singapore exports normal goods), which would lead to workers in these export-oriented industries losing their jobs.

<u>Negative Impact</u>

Free trade may lead to structural unemployment for workers in the import-substituted industries

Without trade barriers, domestic firms may be less competitive than foreign firms in certain markets. These industries thus become substituted by imports, resulting in a fall in demand for domestic firms in these sunset industries. This results in a fall in derived demand for workers in these industries, causing them to lose their jobs. Due to occupational immobility where workers lack the necessary skills to take up a job in another growing sector (e.g. exporting industries with CA), these workers may find themselves structurally unemployed.

As the Singapore economy moves up the value chain in production, it is likely to be the low-income workers (who are low-skilled) that would be most affected by structural unemployment in import-substituted industries. Over time, as other countries like China and India also move up the value chain, it would mean that the higher-skilled workers in Singapore would face the threat of structural unemployment. Thus, which workers may be susceptible to structural unemployment is determined by how Singapore's comparative advantage changes over time (i.e. dynamic comparative advantage).

CONCLUSION

Overall, households in Singapore are likely to benefit from free trade. Their material standard of living is likely to improve as they are able to consume more goods at lower prices, enjoy a greater variety of goods and earn higher incomes as the Singapore economy grows with free trade.

Given the small domestic market in Singapore, there are significant gains for households in job creation in export-oriented sectors and lower prices from EOS and international competition between firms. Being open to free trade allows Singapore to overcome the constraints of a small domestic economy, thus making trade a significant driver of economic growth and improvement in consumer welfare.

Although households may suffer the effects of supply-side and demand-side shocks, these shocks are short-term in nature. Nonetheless, consumers would still be better off over the long term as prices are lower by importing from other countries that have a comparative advantage in producing these goods. Workers would also largely enjoy higher incomes and job creation from economic growth driven by free trade over the long term. Furthermore, the impact of such shocks are mitigated by the fact that Singapore has multiple import sources and export destinations, thus shocks stemming from a particular country may not be as much of a concern.

As for structural unemployment arising in import-substituted industries, the Singapore government has in place appropriate policies such as SkillsFuture to help workers transit to employment in other growing sectors. These policies provide subsidies and grants for courses that workers can take up to learn new skills. Thus, the impact of structural unemployment may be transitory in nature as workers are supported in their retraining to find new employment.

MARK SCHEME

L1	Some knowledge of the impact of free trade.	1 – 4m
L2	Descriptive explanation of impact on both consumers and workers OR Analytical one-sided explanation of impact on either consumers or workers, or only covers either positive or negative impacts on households.	5 – 7m
L3	Analytical explanation of impact on both consumers and workers, covering both positive and negative impacts on households.	8 – 10m
E1	Unsubstantiated judgement on the impact on Singapore households OR Some attempt at recognition of the extent of impact on households	1m
E2	Recognition of the extent of impact on households AND/OR Substantiated judgement on the impact on households, based on 1 criterion which considers the Singapore context.	2 – 3m
E3	Substantiated judgement on the impact on Singapore households, based on 2 criterion which considers the Singapore context.	4 – 5m