

National Junior College Economics Department

Preliminary Examination 2014 Answer Booklet

Senior High 2 H2 Economics

(Syllabus 9732)

Examiners' Report for 2014 H2 Economics Prelims

Case Study Question 1

- (a) (i) **Compare the year-on- year growth of online sales of total e-retail with that of e-retail excluding mobile from Q1 2012 to Q2 2014.** [2]

Similarity: Both experienced positive year on year growth of online sales throughout the period. [1m]

OR

The year-on-year growth for both total e-retail and total e-retail excluding mobile have declined. [1m]

Difference: Year-on-year growth of online sales of e-retail excluding mobile has declined greater than the year-on-year growth of online sales of total e-retail. [1m]

- (ii) **Account for the difference that you have observed.** [1]

Year-on-year growth of online sales of e-retail excluding mobile has declined greater than the year-on-year growth of online sales of total e-retail because of a change in the taste and preference of consumers. According to extract 1, online shoppers migrate from desktops and laptop computers to mobile devices such as smartphones and tablet devices which provide them with greater accessibility, convenience and confidence.[1m]

- (b) **With the aid of a diagram and reference to the data in Extract 1, explain what has happened to prices of online retail products.** [6]

Prices of online retail products are likely to fall due to an increase in supply of online retail products exceeding the increase in demand.

According to Extract 1, demand of online retail products increases due to the increase in taste and preference towards the consumption of online products and services, because of the increasing tight working schedule, changing lifestyle, convenience and flexibility of shopping and option of free home delivery. Supply of online retail products increases due to the increase in the number of sellers. According to Extract 1, the online fashion retailing industry is burgeoning and numerous sites have cropped up in the past few years. [3m]

As mentioned in Extract 1, consumers are most likely to gain from the increasingly competitive prices. This suggests that the extent of the increase in supply is likely to be greater than the increase in the demand of online retail products, which results in the fall in price. [1m]

With reference to figure 1, the increase in demand will lead to a rightward shift in demand curve from D0 to D1, and the increase in supply will lead to a rightward shift in supply curve from S0 to S1. [1m for diagram and reference to diagram]

At the existing equilibrium price P0, quantity supplied is greater than quantity demanded which results in a surplus of $Q_s - Q_d$. The existence of surplus will cause a downward pressure on the price and hence price falls from P0 to P1. [1m]

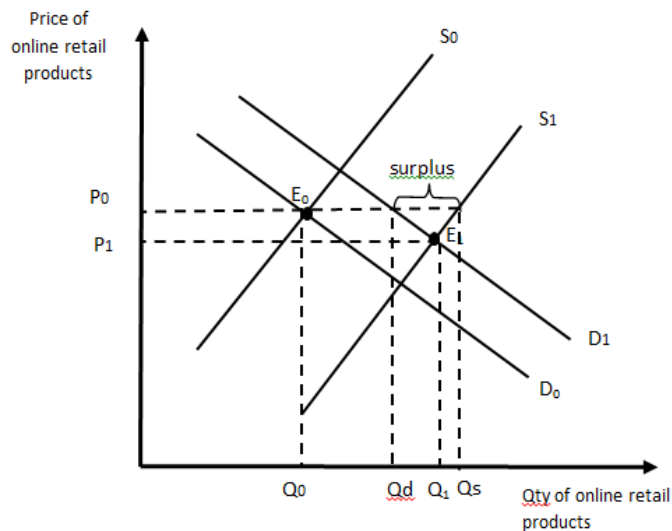


Figure 1: Online retail products market

(c) Explain the type of market structure in which the e-retail industry operates.

[3]

Oligopoly [1m]

Any 2 explanations below (must be supported with case materials):

The existence of a few dominant large ventures such as Amazon, Flipkart and Snapdeal in the e-retail industry. [1m]

The existence of mutual interdependence where the e-retail firms are interdependent and cannot act independently of each other, as mentioned in Extract 2, suggest that the e-retail industry is oligopolistic in nature. For example, considering the possibility of their close rivals reducing prices, the e-retail firms are adopting several models to ensure that merchants on their portal offer discounted prices. [1m]

High barriers to entry where dominant firms such as Amazon and Flipkart are able to produce at a large scale and reap substantial internal economies of scale to offer low prices in the market. Potential competitors, who are small and unable to reap substantial internal economies of scale, will not be able to offer such low prices and compete with these dominant firms. Hence, they are prohibited from entering the industry. [1m]

OR

Monopolistic competition [1m]

Any 2 explanations below (must be supported with case materials):

According to Extract 1, numerous sites crop up in the past few years. Hence there are relatively low barriers to entry and exit, as the set up cost in the e-retail industry is relatively low. [1m]

There is a large number of small firms, each with an insignificant market share. This is evident from extract 1, where numerous sites crop up in the past few years to claim their share of a very satisfying retail pie. [1m]

Differentiated products are produced in the market where portals sell a wide range of different products and enhance their services by providing free home delivery. [1m]

(d) Discuss whether rampant discounts given by online retailers are beneficial to society. **[8]**

Introduction

Rampant discounts can benefit the consumers in terms of increasing their consumer surplus. However according to Extract 3, rampant discounts adopted by some dominant firms in the online marketplaces are indeed leading to predatory pricing, which can be harmful to society.

Define predatory pricing: A pricing strategy where the product or service is set at a very low price (below its MC) intending to drive competitors out of the market, or create barriers to entry for potential new competitors; only to increase prices after it has regained its dominant position.

Thesis: Rampant discounts are beneficial to society

Impact on consumers:

- Rampant discounting brings about the lowering of prices and allows for the affordability of online purchases. This will result in an increase in consumer surplus. Consumer surplus is the difference between the total amount that consumers are willing and able to pay for a good or service and the total amount that they actually do pay.
- Rampant discounting can lead to predatory pricing which might drive competitors (e.g. traditional retailers and firms that do not give rampant discounts) out of the market due to the loss in profits. By driving competitors out of the online marketplaces, the dominant firms will be able to produce at a larger output and reap internal economies of scale. Such cost savings might be passed down to consumers in terms of lowered prices.
- Attempts by the dominant firm to charge sustained higher prices once the competitor has exited may be defeated if the competitor is likely to re-enter, or if other firms are likely to come into the market and replace the lost competitive constraint. This is likely to happen due to the relatively low barriers to entry and exit in the online marketplaces. And without higher prices in the future, the low prices currently being charged can only benefit consumers.

Impact on the dominant firms :

- Predatory pricing pays off if the dominant firms can then raise prices enough to recover the previous losses, making enough extra profit thereafter to justify the risks. In essence, the dominant firm undergoes short-term pain for long-term gain. This reduction or elimination of competition potentially allows the dominant firms subsequently to exercise increased market power and earn supernormal profit.
- By gaining a greater market share, the dominant firm will expand its output and is thus able to reap internal economies of scale. It can also afford to invest in R&D due to its higher profits and hence experience dynamic efficiency.

Impact on the competitors:

- Actual competitors are not likely to be foreclosed from the market as a result of a dominant firm's low prices unless those prices result in a significant shift in sales from the competitor to the dominant firm. If the dominant firm does not have sufficient available capacity to absorb the sales of its competitors, a predatory pricing strategy will not succeed.
- Foreclosure may also depend on the nature of competition. For example, if the price elasticity of demand is low or products are highly differentiated, a price cut might result in few sales shifting to the dominant firm, reducing the likelihood that rivals will exit the market. However, smaller shifts of sales may be sufficient in some markets to support a predatory pricing strategy.

Evaluation: However due to the availability of close substitutes in online marketplaces where consumers view the demand for online services to be relatively price elastic, a price cut by the dominant firm will cause a significant shift of sales to the dominant firm, driving competitors out of the market.

Impact on efficiency

- If inefficient firms that were unable to compete were forced out of the market and therefore firms left in the market were those that were more productively efficient, productive efficiency would improve.

- In order to remain in the market, if the competitors innovate to reduce costs and to provide better goods and services, dynamic efficiency would improve.

Anti-thesis: Rampant discounts might not be beneficial to society

Impact on consumers:

- Rampant discounting can lead to predatory pricing which might drive competitors out of the market due to the loss in profits. This will limit the choices that consumers can make in the online retail market.

Evaluation: If consumers have alternatives to the product sold by the dominant firms to which they could switch in the face of a later price increase, consumers are not likely to be harmed as a result of the allegedly predatory pricing scheme.

- Predatory pricing is considered to be anti-competitive, and therefore not in the best interest of consumers in a market. Consider in the online marketplaces where demand from customers is very sensitive to price (high price elasticity of demand). A potential new entrant to the market has an exciting new product which it believes customers will value and demand. The existing competitors in the market see the new entrant about to launch - and immediately begin to lower prices to retain their customers. If the new entrant cannot match the lower price (or provide a product which customers still believe represents value for money) then they may choose not to enter the market. Hence, consumers are denied a wider choice and they lose out, leading to a fall in consumer welfare. Price has therefore become a barrier to entry.

Impact on the dominant firms:

- In the short term predatory pricing through sharp discounting reduces profit margins, as would a price war, and will cause profits to fall. Yet businesses like Amazon, Flipkart and Snapdeal may engage in predatory pricing as a longer term strategy. However, the strategy may fail if competitors are stronger than expected, or are driven out but replaced by others. In either case, this forces the dominant firm to prolong or abandon the price reductions. The strategy may thus fail if the dominant firm cannot endure the short-term losses, either because of it requiring longer than expected or simply because it did not estimate the loss well.
- Predatory pricing can lead to monopolization conduct which results in allocative inefficiency and productive inefficiency in the society. With an increase in monopoly power, the dominant firm can now charge a higher price and restrict total output, thereby reducing welfare. This reduction in welfare is transferred to the producer through higher profits, but some of the loss is not reassigned to any other agent. This is known as the deadweight welfare loss or societal loss. The lack of competition would also lead to the dominant firm not producing on the LRAC and hence not able to attain productive efficiency, resulting in welfare not maximised.

Evaluation: By driving competitors out of the market, existing dominant firms are able to reap a greater market share and hence carry out innovation to improve on the quality of their goods and services which is essential in the online marketplaces which focus on high speed and frequency of the e-services provided.

Impact on competitors:

- Competitors who are not as financially stable or strong may suffer even greater loss of revenue or reduced profits. If the demand of their goods and services are deemed to be relatively cross elastic, a price cut by the dominant firm will cause a significant fall in competitors' sales revenue. Hence, they face the possibility of being driven out of the industry.

Impact on efficiency

- If predatory pricing was successful and therefore the dominant firms restricted output to charge high prices, the price minus marginal cost gap would be widened and hence there would be higher allocative inefficiency.
- If predatory pricing was successful and therefore resulting in significantly lower level competition, the dominant firms might become complacent thus lax on cost control

and hence suffer from x-inefficiencies. Overall, productive inefficiency might worsen.

Synthesis:

Whether or not rampant discounts are beneficial to society depend on the sustainability of the rampant discounting. If it is sustained over a relatively long period with firms having the intention to drive out competition and raise prices in the future, then we consider it to be predatory pricing. And whether or not rampant discounting is beneficial to society depends on the price elasticity of demand for online goods and services. Given that the differentiation of online goods and services is limited; its demand is likely to be relatively price elastic. Hence a price cut by the dominant firm is likely to drive competitors out of the market, leading to the dominant firm seizing monopolistic power which can be harmful in the online marketplaces, where consumers value competitive prices on top of qualitative services.

In many countries, predatory pricing is considered illegal and there are legal restrictions upon using this pricing strategy, which may be deemed anti-competitive. However a significant price discount over a short period of time may be offered as part of a sales promotion instead of so-called predatory pricing. It is only when the rampant discounting is sustained over a relatively long period so that it has the desired competitive effect, that we consider it to be predatory pricing.

Mark Scheme

L2	4-6 marks	<ul style="list-style-type: none"> • Good recognition of how rampant discount might lead to predatory pricing. • Balanced consideration of both positive and negative impacts of rampant discounting <u>and</u> predatory pricing. • Good scope of discussion by analysing the impacts on consumers, predatory firm and competitive firms, and allocative efficiency (social welfare). • Good rigour of elaboration. • Reference to case material in explanation.
L1	1-3 marks	<ul style="list-style-type: none"> • Lack of balance in consideration of the impacts of rampant discounting <u>and/or</u> predatory pricing. • Limited scope of discussion by analysing the impacts on consumers, predatory firm and competitive firms, and allocative efficiency (social welfare). • Weak rigour of elaboration • No or minimal reference to case material in explanation.
E2	2 marks	<ul style="list-style-type: none"> • Well-reasoned overall assessment of the impacts of rampant discounts on the society.
E1	1 mark	<ul style="list-style-type: none"> • Some attempt at assessing the impacts of rampant discounts on the society.

- (e) **As an economic advisor to the government, discuss the case for government intervention in the throwaway fashion industry by encouraging the creation of eco-friendly fashion.** [10]

Introduction

Define market failure: Market failure occurs when the market fails to allocate resources in its most optimal and efficient manner.

Thesis: Government intervenes due to the presence of negative externality from consumption in the throwaway fashion industry

- Identify that market failure is caused by the presence of negative externalities from the consumption of clothing.
- Establish that negative externality from consumption - occurs when external costs are imposed on society from the consumption of clothing by individuals, e.g. people blaming the rapid consumption for pollution according to Extract 4. Air pollution by factories may cause respiratory illnesses, water pollution from the dumping of toxic

industrial waste, mercury toxins produced result in an external cost (MEC) to society that is not internalized (3rd party effects).

- Consumers will over-consume since they do not accurately perceive how bad the consumption of clothing from non-biodegradable fabric, possibly due to imperfect information, resulting in allocative inefficiency.
- Identify and explain that in the case of throwaway fashion industry:
 - Private benefit (MPB): refers to the enjoyment, the satisfaction of consuming stylish and trendy clothing
 - Private cost (MPC): refers to the cost of paying for the clothing consumed
 - External Cost (MEC): refers to the cost imposed on third parties, i.e. the environmental cost of consuming clothing manufactured from non biodegradable fabric and non organic cotton, as well as pollution arising from the excessive disposal of clothes.
- Show there is a divergence between private costs and social costs.
- Diagram that is well explained to show how the market failed in optimal resource allocation with clear identification of $MPB = MPC$ and $MSB = MSC$.
- At the free market equilibrium, producers and consumers will only consider private costs and benefits and produce at $MPB = MPC$.
- With the existence of negative externality, $MSC > MPC$. Assuming that $MSB = MPB$ (no positive externality), the market will consume at the output Q where $MPB = MPC$, which is greater than the socially optimal output of R where $MSC = MSB$.
- The free market leads to an over consumption of clothing by RQ units, where the welfare loss to society is represented by area AE_1E_0 thereby resulting in allocative inefficiency.

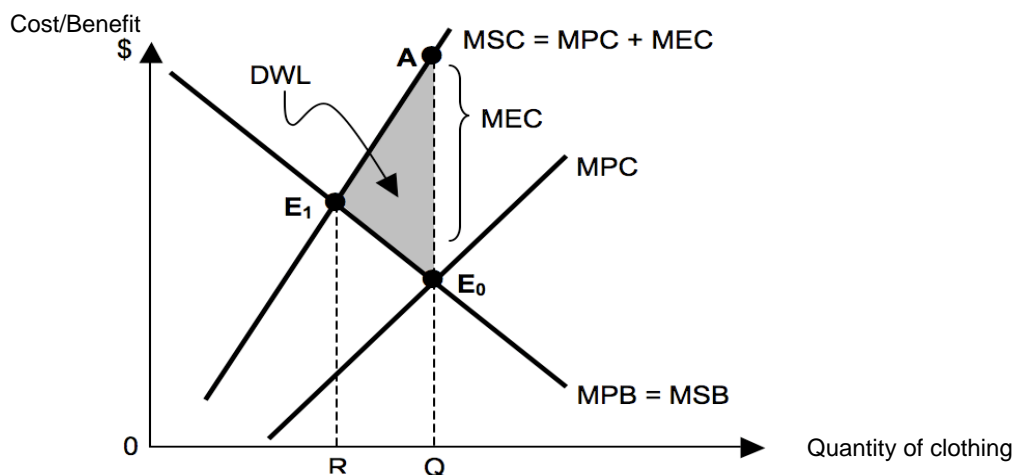


Figure 2: Negative Externality of consumption in the throwaway fashion industry

- Government intervention to encourage the creation of eco-friendly fashion can be in the form of subsidizing the firms in producing eco-friendly clothing, education and campaigns to inform the public of the importance of consuming eco-friendly fashion.
- Government intervention to encourage the creation of eco-friendly fashion by encouraging the use of eco-friendly materials such as organic cotton, recycled cotton, recycled polyester, hemp and Tencel will lead to consumers switching their consumption from non-biodegradable fabrics to these eco-friendly materials, assuming that they are close substitutes in consumption ($XED > 1$). This will help to reduce the amount of air

pollution and water pollution from the dumping of toxic industrial waste, hence reducing the amount of external costs, correcting the market failure.

Anti-thesis 1: Government should not intervene in the throwaway fashion industry as the free market has worked well

- Government intervention to encourage the creation of eco-friendly fashion in the throwaway fashion industry is inappropriate as current measures are sufficient i.e. the environmentalists have been effective in raising the public's consciousness on environmental protection in the fashion industry. This is evident from movement of big brands such as H&M who has made many efforts to create eco-friendly fashion. As such government intervention will lead to resources being used wastefully, which could be used for other areas such as government spending on infrastructure, subsidising the lower income groups to increase the country's welfare. Hence opportunity cost is incurred.

Anti-thesis 2: Government should not intervene in the throwaway fashion industry due to the existence of government failure

(Any limitations of the government policies used to intervene in the throwaway fashion industry)

- Government intervention could result in bureaucracy, time lags and inefficiency. Government intervention involves administrative costs. The more wide-reaching and detailed the intervention, the greater the number of people, material resources and processes that will be involved.
- For instance, subsidy given by the government to increase consumption of eco-friendly clothing could be overestimated, and results in the over consumption of eco-friendly clothing instead of consuming at the socially optimal level of output. Hence, this will still lead to the presence of deadweight loss in the society. Opportunity cost is incurred as the resources used to subsidize firms in the eco-friendly fashion industry could be used for other areas such as healthcare, educational and other sectors. Worse still, if the government is facing a budget deficit, the use of subsidy would further strain on government budget position.
- Regulation to increase the consumption of eco-friendly clothing can be imposed. The problem with all legislation/regulation is in enforcement. Constant checking is needed and this can translate into high costs for the government.

Anti-thesis 3: Government should not intervene by encouraging the creation of eco-friendly fashion as government could implement other measures to regulate the consumption and production of the non-eco-friendly fashion

- The government can levy a specific tax at the socially optimal level of output that approximates the value of external costs (MEC) generated per unit of output. Through this tax, the government attempts to make the offending firm(s) in the throwaway fashion industry internalise the external costs. The advantage of taxation includes giving incentives to firms to produce eco-friendly fashion instead. The tax acts as a source of revenue for the government to intervene in the throwaway fashion industry by subsidising the research and development required in the eco-friendly fashion.

Evaluation: there is a problem of assessing the exact monetary value of external costs at the socially optimal level of output (e.g. measuring the external costs generated by negative externalities), which in turn implies that the appropriate level of tax is difficult to determine. Too high a tax amount would lead to a less than optimal level of output, while too low a tax amount would still result in over-production. Furthermore the administrative costs of collecting the tax may be very high. Firms may also have the incentive to evade such taxes.

- The use of education, campaigns and advertisements could be implemented to allow the external cost from the consumption of fast fashion to be made known to the

individuals. It is hoped that, as a result, consumption for these goods would be discouraged due to a change in tastes & preference of consumers and producers. And instead, the consumption of eco-friendly fashion would increase given that these 2 types of clothing are close substitutes in consumption with $XED > 1$.

Evaluation: However, the benefits from these measures must outweigh the costs of implementing them. Furthermore, one must consider the duration needed for the effects of such measures to be felt, especially if the problem of external cost is a serious one that must be dealt with in the short run. The effect from these measures might only take place in the long run, given that time is need to change consumers' mindsets as well as their tastes and preferences.

Synthesis

Government intervention in the throwaway industry is necessary due to the presence of negative externality from consumption. Whether or not government intervention is appropriate to encourage the creation of eco-friendly fashion in the throwaway fashion industry depends on how successful the environmentalists have been in raising the public's consciousness on environmental protection in the fashion industry. As this is a relatively new initiative, government intervention to further publicise it may be necessary to raise public awareness and encourage more clothing firms to follow the footsteps of H&M. Nevertheless, government intervention would result in a strain in its resources and is only appropriate if government has excess resources to intervene in it. However, it is important to note that government intervention to encourage the creation of eco-friendly fashion alone is not enough to correct the market failure in the throwaway fashion industry. Rather effective policies should preferably be a combination of solutions. Alternative policy includes regulation on the consumption of non-eco-friendly fashion. Government can implement laws and rules to stop consumers from excessive consumption and disposal of non-biodegradable clothing.

Mark Scheme

L3	6-8 marks	<ul style="list-style-type: none"> Excellent explanation of negative externality of consumption as the source of market failure in the throwaway fashion industry. Excellent rigour of elaboration (e.g. inclusion of -ve externalities diagram) Excellent balance in elaboration of thesis and anti-thesis Depth of content and rigour of analysis are excellent. Excellent reference to case material in explanation.
L2	4-5 marks	<ul style="list-style-type: none"> Good explanation of negative externality of consumption as the source of market failure in the throwaway fashion industry. Good rigour of elaboration (e.g. inclusion of -ve externalities diagram) Good balance in elaboration of thesis and anti-thesis Some rigour of analysis. Some reference to case material in explanation.
L1	1-3 marks	<ul style="list-style-type: none"> Limited knowledge on the source of market failure in the throwaway fashion industry with either mere listing or limited explanation. Limited scope of discussion in thesis and/or anti-thesis. Answer may have focused on government policies to correct market failure instead of discussing whether there was a case for government intervention in the first place. Weak rigour of elaboration No or minimal reference to case material in explanation.
E2	2 marks	<ul style="list-style-type: none"> Well-reasoned overall assessment of whether government intervention to encourage the creation of eco-friendly fashion in the throwaway fashion industry is appropriate

E1	1 mark	<ul style="list-style-type: none">• Some attempt at assessing whether government intervention to encourage the creation of eco-friendly fashion in the throwaway fashion industry is appropriate
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Case Study Question 2

- (a) (i) **Define the balance of trade of a country.** [1]

The balance of trade is the value of a country's exports of goods and services (or export revenue) minus the value of its imports of goods and services (or import expenditure).

OR

The difference between a country's export revenue (value of exports) and import expenditure (value of imports).

Note: "BoT is the sum of visible trade and invisible trade balance" is not accepted, unless "visible and invisible trade balance" are also defined.

- (ii) **Compare the change in Japan's balance of trade with that of Spain between 2009 and 2012.** [2]

Japan's balance of trade position has worsened from a surplus to a deficit [1 mark], whereas Spain's balance of trade position has improved from a deficit to a surplus [1 mark] over the period 2009 to 2012.

OR

Japan's balance of trade has worsened while Spain's balance of trade has improved over the period 2009 to 2012. [1 mark]

Japan's balance of trade changed from a surplus to deficit, while Spain's balance of trade changed from deficit to surplus. [1 mark]

- (iii) **With reference to the information in Extract 6, explain one factor that could cause Japan's exports to fall.** [2]

Any of the points below:

- **The tsunami and earthquake** could have destroyed production facilities and infrastructure, resulting in a **fall in AS** and **rise in costs of production**. This makes Japan's exports **less competitive (or more expensive)**, resulting in a fall in quantity demanded of Japan's exports.
(Alternatively, there is a **fall in domestic supply** of goods and services, which reduces the quantity of goods available for exports ie Japanese producers need to reduce their exports in the short-run in order to meet the **shortage in the domestic market**.)
- The **appreciation (rise) of the yen** due to economic woes in other countries causing investors to shift their funds into the yen ("hot money" inflow) makes **Japanese exports more expensive in foreign currencies (or less competitive)**, resulting in a **fall in demand** for Japan's exports.
- **Uncertainty in Europe** caused Japan's exports to the EU to fall by 23% in the third quarter. This is because the uncertainty could have caused households and firms to be **cautious about spending** and to **save more** instead. The fall in spending **reduces their demand for imports**, hence reducing Japan's exports to the EU.
- **Eurozone's slide back in double-dip recession** means a **fall in their income** and hence purchasing power. This results in a **fall in consumption** and hence a **fall in their demand for imports**. This leads to a fall in Japan's exports to the EU.

- (b) **With reference to the data, explain how GDP growth might affect the government's budget balance.** [3]

Looking at the year-to-year changes for Japan, Spain and US, an increase in GDP growth generally corresponds with an improvement in the government budget balance (reduction in deficit as % of GDP) and vice versa. [1 mark]

Note for students' understanding (Not required in answer): For example, Japan's

increase in GDP growth from -5.5% in 2009 to 4.7% in 2010 corresponds with a fall in its government budget deficit from 7.6% to 6.7% of GDP, whereas the fall in Spain's GDP growth from 0.1% in 2011 to -1.6% in 2012 corresponds with an increase in the government budget deficit from 3.6% to 9.0% of GDP.

One possible reason is that an increase in GDP growth means that generally incomes are rising at a faster rate. This results in an increase in government tax revenue from income taxes. Also, the increase in income leads to higher consumption spending which increases government revenue from indirect taxes on goods and services.

AND

With the rising income, there is less need for social security and welfare aid. At the same time, and the increase in output leads to a fall in unemployment. Hence this causes a fall in government expenditure on unemployment benefits and social welfare.

- (c) **Explain 1 reason why the size of a country's multiplier could become larger.** [2]

The size of a country's multiplier is determined by its marginal propensity to save (mps), marginal propensity to tax (mpt) and marginal propensity to import (mpm).

$$K = 1/(mps + mpt + mpm)$$

The multiplier could become larger if there is a fall in mps, mpt or mpm.

Any one of the reasons below:

Mps – a fall in mps could be due to consumer expectations. For example, if consumers expect prices to increase in future, they may increase their purchase of goods and services before their prices increase. Alternatively, mps may fall if consumers are optimistic about the future and expect their incomes to rise. They will thus have a greater tendency to spend. Hence, households may save a smaller proportion of an increase in their income.

Mpt – a fall in mpt could be caused by a fall in tax rates. This could be due to the government's expansionary fiscal policy, reducing tax rates so as to increase consumption spending. The fall in tax rates means a fall in the amount of taxes withdrawn from a given change in income.

Mpm – a fall in mpm could be due to the government imposing import restrictions or a change in consumers' taste and preferences in favour of domestic products. This results in a fall in demand for imports and hence a fall in the proportion of any increase in income spent on imports.

- (d) **Using data from Table 2, account for the trend in Spain's central government debt.** [2]

Table 2 shows that Spain's central government debt as a percentage of GDP has increased from 2009 to 2012. [1 mark]

This is due to the government's budget balance being in deficit over the period. [1 mark]

(Explanation not required but included below for clarity)

The government budget deficit means that the government would need to borrow to finance its spending. Hence this leads to an increase in the government debt.

- (e) **It is mentioned in Extract 7 that Spain has the capacity to suck in and destroy all around it. Discuss how the economic conditions in Spain could impact other countries in the eurozone.** [8]

Introduction:

The statement "Spain has the capacity to suck in and destroy all around it" suggests that the economic conditions in Spain can have an adverse impact on other countries in the region. This is especially so because of the "interconnected nature of modern economies" as mentioned in Extract 4.

Body

- Loss of confidence → capital outflow and fall in C and I
- One major problem facing Spain is the financial crisis arising from bad bank loans which threaten the survival of some of its banks. According to Extract 4, "poorly

performing bank loans will need to be indemnified by the government or be allowed to fail". Either course of action will have impact on the eurozone. In order to bail out the affected banks, the Spanish government will need to borrow additional funds from the EU. This would increase the government debt which is already high at 67.6% of GDP. The concern whether the Spanish government could service its debt may trigger a loss of confidence in the eurozone as it could cause a financial crisis in the eurozone if Spain defaults on the debt it owes to the EU. On the other hand, if Spain allows its banks to fail, there will also be a financial crisis and loss of confidence in the region as the collapse of these banks could result in losses suffered by banks, people and governments of other countries in the region which had lent to or deposited money in the affected banks. The **loss of confidence** by investors will lead to **capital outflow from the eurozone**, causing a **worsening of the Capital and Financial Account** and hence the balance of payments in these countries. The loss of confidence could also result in a **fall in consumption and investment** spending (both domestic I and FDI), which leads to a fall in AD and hence **fall in national income and economic growth**.

Diagram to show fall in AD in eurozone (due to fall in C and I arising from loss of confidence) → fall in real output and economic growth → fall in dd for labour → **increase in cyclical unemployment**

- Recession in Spain → fall in demand for exports from eurozone
The **negative outlook** for Spain as well as government's **austerity measures** to cut spending will result in a fall in AD, causing a **recession in Spain**. This is shown by the negative GDP growth in 2012 in Table 2. Due to the falling income in Spain, there will be a **fall in consumption and hence demand for imports**. This reduces Spain's demand for exports from other countries in the eurozone. The **fall in exports in the eurozone countries** will cause a **worsening of their balance of trade** position, and hence their balance of payments, ceteris paribus. In addition, the **fall in (X-M)** causes a fall in AD and leads to a **fall in the economic growth** and **increase in unemployment**.

(Note: Arguments that the failure of banks could lead to a shortage of liquidity/ fall in SS of loanable funds/ credit crunch thus causing rise in i/r and fall in I and C can also be accepted, altho this assumes that the banks are allowed to fail.)

Mitigating factors due to Spain's economic conditions:

- However, the negative impact on the eurozone could be mitigated by the likely depreciation of the euro.
- Fall in exchange rate of euro → increase in international competitiveness
Due to the **capital outflow** and **decline in exports** in the eurozone as explained above, there will be less demand for the euro, causing the **exchange rate of the euro to fall**. The depreciation of the euro makes exports from eurozone countries cheaper in foreign currencies, thus making their exports more competitive in the rest of the world. This could help to boost exports (including tourism) in the eurozone countries, thus **increasing (X-M)** and hence AD, which will help to **increase economic growth** and **reduce cyclical unemployment**.

At the same time, the **depreciation of the euro** makes it **relatively cheaper for foreign investors to invest in the eurozone**. As the exchange rate of the euro declines, foreign investors may be attracted to invest in the eurozone again, leading to an **increase in capital inflow** and **improving the Capital and Financial Account** of the BOP. An **increase in FDI inflow** will also help to increase AD as well as productive capacity and hence LRAS. This results in an **increase in actual and potential growth**.

Synthesis and Conclusion

On the whole, it is more likely that the economic conditions of poor economic outlook, high government debt and banking crisis in Spain will have a detrimental impact on the eurozone. The interconnectedness of Spain to the eurozone countries means that the eurozone will also be affected by a loss of confidence which could trigger capital

outflow and fall in spending, causing their economic growth to decline as well. In addition, their close trade links also mean that exports of the eurozone countries to Spain will also decline, worsening their balance of trade and economic growth.

However, it is likely that the impact could be different for different countries in the eurozone depending on their links to Spain. Countries that export more to Spain or have lent to Spain or put their money in the affected banks in Spain will be more adversely affected. Those which have less linkages to Spain may in fact benefit as the possible depreciation of the euro will help to make their exports more competitive in the world market as well as make investments in their country more attractive.

(Evaluative comments that the impact depends on the state of the economy can also be accepted. Some may argue that countries already at full employment and experiencing DD-pull inflation may benefit from the decrease in I and $(X-M)$. But this is less likely in the context of the case as it is mentioned that the eurozone is sliding back into recession. This will earn at most 1 evaluation mark.)

Mark Scheme

L3	5-6	Excellent discussion of how economic conditions in Spain can impact countries in the eurozone, well supported by analysis and reference to case materials. There is balance of negative effects and mitigating factors.
L2	3-4	Good discussion of how economic conditions in Spain can impact countries in the eurozone, which may not be well developed. May be one-sided ie only negative effects.
L1	1-2	The answer is largely irrelevant or may have some relevant points which are not well developed. There may be conceptual errors in the explanation or analysis.

E2	2	Excellent evaluation of the likely impact of Spain's economic conditions on the eurozone countries, identifying factors that could affect the impact.
E1	1	Some evaluation of the impact of Spain's economic conditions on the eurozone countries but may not be well explained.

- (f) **With reference to the countries mentioned in the data, discuss whether domestic factors or external factors have the greater impact on a government's choice of macroeconomic policies.** [10]

Introduction:

In general, the government of a country can adopt demand-management policies such as fiscal and monetary policies and/or supply-side policy to achieve its macroeconomic aims. The choice of which policy to adopt may, however, be determined by various factors, both domestic or external.

Thesis: Domestic factors have the greater impact on the choice of economic policies than external factors.

(Any 1 or 2 domestic factors as explained below. The policy choice should be explained)

- The **government's debt** can affect **the choice between fiscal and monetary policy**. For example, both UK and US have incurred a high government debt. US government debt is over 90% of GDP, and is reaching the government's debt limit. The government is therefore required to cut its spending and raise taxes to reduce its budget deficit. This limits the government's ability to adopt expansionary fiscal policy to achieve economic growth. Expansionary fiscal policy refers to the discretionary increase in government spending and/or cut in taxes to increase AD and hence the level of economic activity. This will tend to worsen the government budget balance and result in a budget deficit. As mentioned in Extract 1, fiscal expansion will result in "a

burgeoning public debt that would drive interest rates up” and discourage investment and consumption spending. Hence, the government will have to rely more on monetary policy to stimulate economic growth, which means that “monetary policy will continue to take most of the strain in the UK, as it will in the US and the eurozone”, as mentioned in Extract 1.

- The country's **current interest rate** and **financial market conditions** can affect the **choice of monetary policy**. Monetary policy (MP) refers to the discretionary control of money supply or interest rate to influence the level of AD. To tackle recession, the government may want to implement expansionary MP by lowering interest rate. This reduces the cost of borrowing and thus encourages more investment and consumption spending, leading to an increase in AD and hence economic growth. However, if the interest rate in the country is already very low, “there may be a limit to what further easing of monetary policy can do to stimulate activity”, as mentioned in Extract 1. For example, the extremely low interest rate could mean that the economy is at the liquidity trap, where demand for money is infinitely elastic. Any increase in money supply will simply be held as idle cash balances with no effect on interest rate and borrowing. Hence, monetary policy may not be effective, and the government **may have to choose to adopt fiscal policy or exchange rate policy instead**.
- The **state of the economy** can affect the government's **choice between demand management policies and supply-side policies**. Both the UK and US economies are experiencing weak growth, and are struggling to recover from the recession in 2009. For example, Extract 2 mentions that the US “fiscal cliff would threaten the recovery of the US economy”. Hence their governments have chosen to adopt expansionary monetary policy to stimulate economic activity. As mentioned in Extract 1, “monetary policy will continue to take most of the strain in the UK, as it will in the US and the eurozone”. Likewise, the deflation and weak growth experienced by Japan means that expansionary fiscal and monetary policies are needed to stimulate demand in the economy. However, if the economy is near or at full employment (ie Classical range of the AS curve), then expansionary fiscal policy would be less appropriate as it would lead to DD-pull inflation, and the government would need to adopt supply-side policies instead.
- The size of the multiplier can also affect the choice of macroeconomic policies. The multiplier principle is that the national income will increase by a multiple of the initial autonomous change in AE. A larger multiplier will mean a larger increase in national income and vice versa. According to Extract 4, the IMF believes the multiplier effect to be larger than expected. This means that contractionary fiscal policy such as cutting government spending and raising taxes will lead to a larger than expected decline in national income, possibly resulting in more serious recession. Hence a larger multiplier could cause the government to decide not to implement contractionary fiscal policy. Conversely, a smaller multiplier could make expansionary AD management policies less effective, and cause governments to choose SS-side policies instead of AD management policies to stimulate economic growth.

Anti-thesis: External factors have the greater impact on the choice of economic policies than domestic factors

(Any 1 or 2 external factors as explained below. The policy choice should be explained)

- **Trade and political relations with other countries** affect a country's economic performance and hence the government's choice of economic policies to address the problem. For example, Japan's political dispute with China over the sovereignty of islands in the East China Sea resulted in a boycott of Japanese products in China, hence causing a slump in Japan's exports. This would lead to the government having to implement **expansionary AD policies** such as interest rate cut (monetary policy) or increase in government spending (fiscal policy) to stimulate domestic demand to counter the fall in exports, and increase economic growth. Alternatively, the Japanese government may choose to adopt **trade policy** such as signing more Free Trade Agreements with other countries to diversify its markets in response to the boycott by China.

- **Rising exchange rate** can influence the choice of economic policies. As explained in Extract 2, the economic woes in other countries caused foreign investors to put their funds into the yen. This has resulted in an appreciation of the yen which causes a rise in the price of Japan's exports in foreign currencies and makes investing in Japan more expensive. This causes a fall in demand for Japan's exports and hence a fall in export revenue. At the same time, imports become cheaper in yen, resulting in an increase in quantity demanded of imports. The rising yen would thus cause a fall in $(X-M)$, assuming Marshall-Lerner condition ($PED_X + PED_M > 1$) holds. At the same time, the stronger yen makes it more expensive for foreign investors to invest in Japan, and this could cause a fall in FDI inflow into Japan. The fall in $(X-M)$ and fall in FDI leads to a fall in AD which causes a fall in economic growth and increase in unemployment. Hence the government would need to adopt **expansionary demand-management policies** such as fiscal and monetary policies to **tackle the fall in AD** or **SS-side policies** to improve export competitiveness to counter the effect of the yen's appreciation. Examples of SS-side policies include promoting skills training, R&D and innovation through subsidies and infrastructure development.
- **Uncertainty and weak economic growth in other countries** can affect the type of policies adopted by a government. For example, the uncertainty and weak growth in Europe means that people and firms are more cautious about spending. If there is an actual fall in income as the eurozone slides into a double-dip recession, consumption spending will decrease. This leads to a fall in demand for imports in EU and hence a fall in Japan's exports to the EU, which plunged 23% as mentioned in Extract 3. The magnitude of the fall in imports in the EU depends on the marginal propensity to import (mpm). The higher the mpm, the greater will be the fall in imports as income falls in the EU, hence resulting in a greater fall in Japan's exports. This can cause the government to adopt **expansionary AD policies, exchange rate depreciation or sign FTAs** with other countries to diversify its export markets.
- **Economic or financial crisis in a neighbouring country** can also have an impact on a country and hence affect its choice of economic policies. For example, the financial crisis in Spain arising from the need to bail out certain banks could cause a loss of investor confidence in the eurozone countries. This could trigger an outflow of capital from the eurozone as well as fall in consumption and investment spending due to negative expectations. Governments in the eurozone would then have to adopt **expansionary AD policies** (such as fiscal and monetary policies) to stimulate their economies.
- A country's **economic integration with other economies** can affect the policy options available to the government. For example, as a member of the eurozone, Spain uses the euro as a common currency together with the other eurozone members. This means that Spain has **no control over its exchange rate and money supply**, as the exchange rate and the supply of the euro would be controlled by the European Central Bank. The ECB also sets the interest rate for the eurozone as a whole. Spain therefore has no control over its monetary policy. Hence, the Spanish government would have to **choose fiscal policy** to manage its country's aggregate demand.

Synthesis and Conclusion:

From the above discussion, it can be seen that a government's choice of macroeconomic policies can be influenced by both domestic and external factors. It may not be possible to say with certainty whether external or domestic factors have the greater impact on policy choice, as the extent of the impact of these factors is likely to differ for different countries due to the different nature of their economies.

In general, whether domestic factors or external factors have the greater impact on a government's choice of macroeconomic policies could depend on:

(Any 2 evaluation points for maximum evaluation marks)

- Size and openness of the economy – For a large country like the US with a large domestic market and less reliance on imports, domestic factors could play a bigger

role in influencing the choice of macroeconomic policies. For a small and open economy like Singapore which is highly dependent on trade and foreign investments, external factors are likely to have the greater impact on the choice of policies.

- Degree of integration or connectedness with other countries – If a country is more closely integrated with other countries eg. the eurozone, its choice of macroeconomic policies will be subjected to the policies of the economic grouping, and hence external factors will have a greater impact on its policy choice.
- Level of government debt – A country with a large government debt may not be able to implement expansionary fiscal policy, and will have to choose other demand management policies. Hence its policy choice is more affected by the domestic factor of high government debt.
- Priority of the government – A country may be experiencing both domestic and external macroeconomic problems such as high unemployment, severe balance of trade deficit and rising costs of imports causing cost-push inflation. It may face a conflict in its macroeconomic aims in choosing certain macroeconomic policies. Eg. adopting exchange rate appreciation may help to reduce prices of imports and tackle cost-push inflation, but could worsen the trade deficit and unemployment. In this case, whether the external or domestic factors have a greater impact on the government's macroeconomic decision could depend on the government's priority with respect to which macroeconomic aim they want to address.

However, it could also be argued that both domestic and external factors are interrelated and affect each other. For example, a high government debt may be considered a domestic factor, but it could cause a loss of confidence in the economy and result in capital outflow which becomes an external factor. A global recession which is an external factor could lead to a fall in exports of a country, causing its exporting industries to decline and resulting in high unemployment, which becomes a domestic factor. Hence it may not be possible to say whether domestic or external factors have the greater impact on the choice of macroeconomic policies.

Mark Scheme

L3	6-8 marks	Excellent discussion of the impact of both domestic and external factors on the choice of macroeconomic policies that is well developed with good rigour of analysis, supported by references to the case materials.
L2	4-5 marks	Impact of either domestic OR external factors on policy choice is well developed with rigour of analysis Or there is discussion of impact of BOTH domestic and external factors on the choice of policies, but may lack rigour in analysis. Lack of reference to case materials.
L1	1-3 marks	Largely irrelevant with some relevant points that are not clearly explained. Major conceptual errors may be found.

E2	2 marks	Excellent evaluation with good conclusion of the relative impact of domestic factors and external factors on the choice of policies that is supported by analysis.
E1	1 mark	Some evaluation of the relative impact of domestic factors and external factors on the choice of policies

Essay Question 1

China is the world's largest manufacturing power, producing a large part of the world's televisions, smartphones, steel pipes and many other products. However the era of cheap China products may be drawing to a close as costs such as wages and rents are soaring.

- (a) Explain what determines whether consumers or producers of different types of [10] manufactured products in China are likely to bear the greater burden of this increase in costs.
 (b) Discuss how soaring costs in China might affect the total revenue earned by producers of [15] manufactured products worldwide.

Suggested Answer:**(a)****Introduction**

- Increase in costs such as wages and rents will affect supply of producers
- Some of the costs will be passed on to consumers in the form of higher prices
- Whether consumers or producers bear the greater burden of this increase in costs would depend on the relative price elasticity of demand and supply
- PED measures the responsiveness of quantity demanded to a change in price
- PES measures the responsiveness of quantity supplied to a change in price

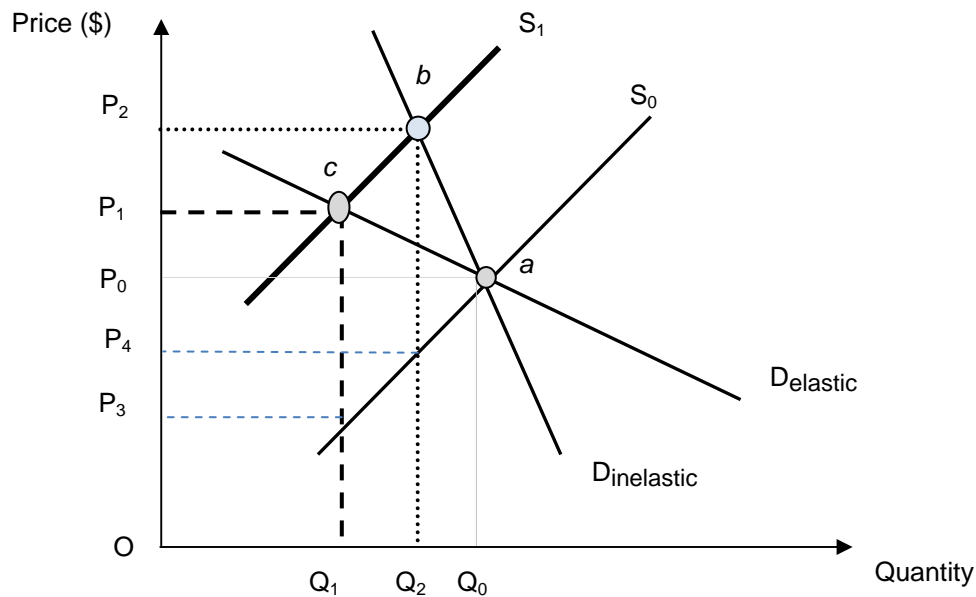
Scenario 1: Where $PED > PES$ or where PED is high

- If the producer is manufacturing products with many close substitutes, the demand for his product is likely to be highly price elastic. For example, a producer of smartphones will likely find that there are many other producers making smartphones which are very close substitutes.
- Similarly if the producer is manufacturing products which make up a large proportion of consumers' incomes, the demand for his product is likely to be highly price elastic. For example, a producer of cars may find that expenditure on cars takes up a considerably large proportion of a consumer's income.
- PES may be lower than PED as the supply of manufactured products like smartphones and cars may take time. These products require spare parts from many suppliers and it may take a while for firms to respond to increases in demand as they may need time to increase their orders from various suppliers and assemble their products.
- When the prices of such goods increase, the quantity demanded of such goods falls more than proportionately. Hence the producers will have to bear a larger burden of any cost increases as they will not be able to pass much of the cost increases to consumers.
- Assuming that S_0 shifts to S_1 due to the increase in wages and rents, with Demand as the demand curve, the price increases from P_0 to P_1 .
- The increase in costs is illustrated by the distance P_1P_3 .
- Thus producers bear a greater burden of the cost increase, illustrated by P_0P_3 .

Scenario 2: Where $PED < PES$ or where PED is low

- On the other hand, if the producer is manufacturing products which make up a small proportion of consumers' incomes, the demand for his product is likely to be highly price inelastic. For example, a producer of stationery like pens and erasers will likely find that expenditure on these items takes up a very small proportion of a consumer's income.
- PES may be higher than PED as the supply of stationery may be relatively price elastic. Stationery can be easily stored in warehouses at low costs since they are not perishable items and are generally non-bulky items. Hence there will usually be excess stock which can be drawn upon when demand increases. Thus, supply is responsive to changes in prices.
- When the prices of such goods increase, the quantity demanded of such goods falls less than proportionately. Hence the producers will be able to pass on a greater part of this cost increase.
- Assuming that S_0 shifts to S_1 due to the increase in wages and rents, with Demand as the demand curve, the price increases from P_0 to P_2 .
- The increase in costs is illustrated by the distance P_2P_4 .
- Thus producers bear a smaller burden of the cost increase, illustrated by P_0P_4 .

Note: The above analysis can also be done with the assumption that PED is constant and with the consideration of differing values of PES.



Conclusion

- The higher the PED relative to PES, the greater the burden of the increase in costs is borne by the consumers.
- For the same given increase in costs, when the demand is relatively more price elastic, consumers bear P_0P_1 of the cost increase only but producers bear P_0P_3 .
- When the demand is relatively more price inelastic, consumers bear P_0P_2 of the cost increase but producers bear P_0P_4 only.

Mark Scheme

Level	Descriptors
Level 3 (9-10)	<ul style="list-style-type: none"> • Answer shows excellent knowledge about PED and/or PES, including factors affecting PED and/or PES • Answer must recognise that it is the RELATIVE PED and PES which determines who bears the greater burden of increases in cost. • Good use of examples which are contextualised • Excellent rigour of analysis which includes <ul style="list-style-type: none"> - an excellent use of diagram to explain who bears the greater burden of the cost increase - at least 2 different scenarios where producers bear the larger burden in one and consumers bear the larger burden in the other • There are no errors in explanation
(7-8)	<ul style="list-style-type: none"> • Answer shows good knowledge about PED and/or PES, including factors affecting PED and/or PES • Good rigour of analysis which includes <ul style="list-style-type: none"> - a well-explained diagram to explain who bears the greater burden of the cost increase • There are no major errors in explanation
Level 2 (5-6)	<ul style="list-style-type: none"> • Answer shows some knowledge about PED and/or PES, including factors affecting PED and/or PES • Some rigour of analysis which may include <ul style="list-style-type: none"> - a diagram to explain the price changes when there is a fall in supply

Level 1 (1-4)	<ul style="list-style-type: none"> • Answer is mostly irrelevant. • Answer may not consider PED/PES • Answer may have multiple concept errors.
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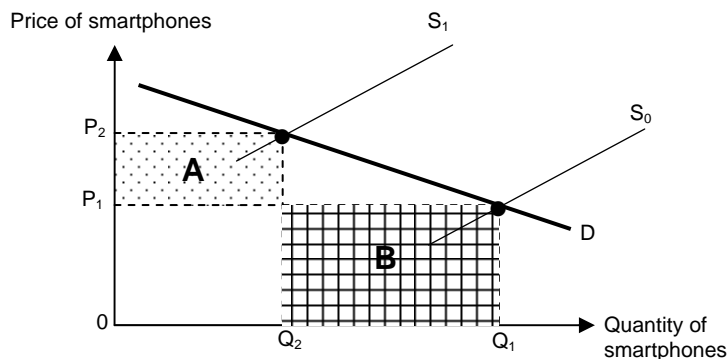
Suggested Answer:**(b)****Introduction**

The soaring costs in China will affect not just the total revenue earned by producers of manufactured products in China, they would also affect the total revenue earned by producers in other parts of the world. This is because other producers in the world may produce related goods (either substitutes or complements to China's manufactured products), or depend on producers in China for intermediate manufactured products for their production of other goods.

Main Body 1 (Producers in China, $PED > 1$)

As mentioned in (a), producers in China face different demand curves, depending on the type of manufactured products they produce.

- For producers of manufactured goods such as smartphones which have a price elastic demand, with the increase in price, there will be a more than proportionate fall in quantity demanded.
- In Figure 1, as S_0 shifts to S_1 , the price increases from P_1 to P_2 .
- The fall in quantity demanded from Q_1 to Q_2 is more than proportionate to this price increase.
- The gain in revenue from the price increase (Area A) is smaller than the fall in revenue from the fall in quantity demanded (Area B).
- This results in a fall in TR.

Figure 1**Main Body 2 (Producers in China, $PED < 1$)**

- For producers of manufactured goods such as stationery which have a price inelastic demand, with the increase in price, there will be a less than proportionate fall in quantity demanded.
- In Figure 2, when S_0 shifts to S_1 , the price increases from P_1 to P_2 .
- The fall in quantity demanded from Q_1 to Q_2 is less than proportionate to the rise in price.
- The gain in revenue from the increase in price (Area A) is more than the fall in revenue from the fall in quantity demanded (Area B).
- This results in a rise in TR.

Figure 2

There are many producers in other parts of the world who may also produce similar manufactured products.

- For example, India may also manufacture smartphones which can be considered as close substitutes to smartphones made in China
- This means that the cross elasticity of demand (XED) of smartphones produced in India, with respect to smartphones produced in China, is positive and large.
- XED measures the degree of responsiveness of the quantity demanded of smartphones produced in India, with respect to a change in price of smartphones made in China.
- In Figure 3, when S_0 shifts to S_1 in the market for Chinese smartphones due to increase in costs, the price of Chinese smartphones increases from P_0 to P_1 .
- Since Indian smartphones are a substitute to Chinese smartphones, the demand for Indian smartphones increases from D_0 to D_1 in Figure 4.
- This results in an increase in TR for Indian producers from $OP_0 \times OQ_0$ to $OP_1 \times OQ_1$ in Figure 4.

Figure 3

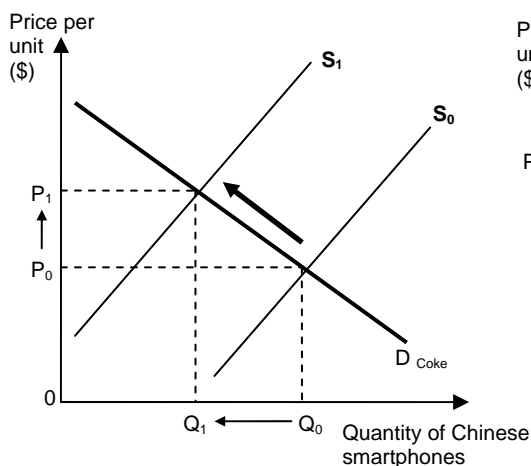
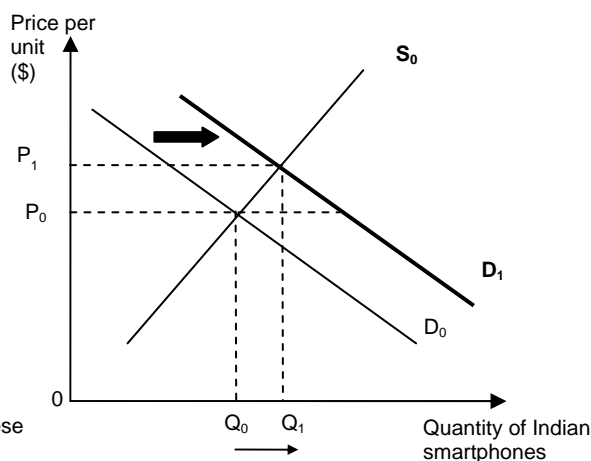


Figure 4



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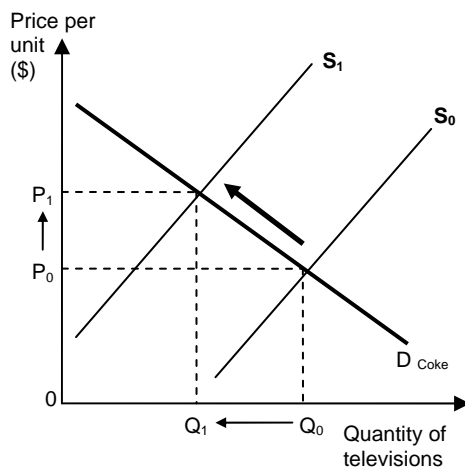
There are producers in other parts of the world who may also produce complementary manufactured products.

- For example, South Korea may produce many DVDs and DVD players which are complements to the televisions made in China.
- This means that the cross elasticity of demand (XED) of DVDs produced in Korea, with respect to televisions produced in China, is negative.
- In Figure 5, when S_0 shifts to S_1 due to the increase in costs in China, the price of televisions made in China increases from P_0 to P_1 .
- Since Korean DVDs are a complementary good, the demand for these DVDs falls from D_0 to D_1 in

Figure 6.

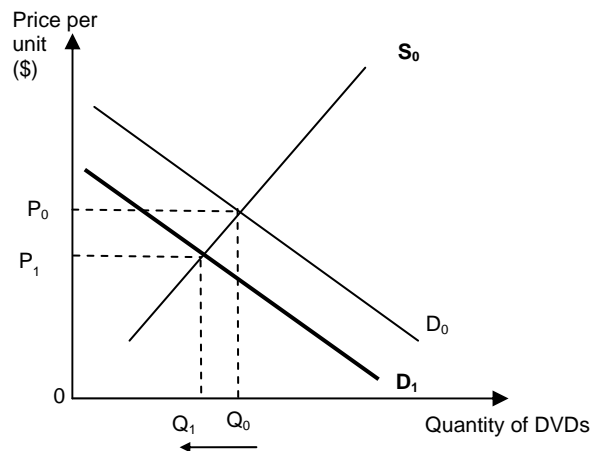
- This results in a fall in TR for Korean producers, from $P_0 \times Q_0$ to $P_1 \times Q_1$ in Figure 6.

Figure 5



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Figure 6



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Main Body 5 (Producers in other countries who depend on China's intermediate goods)

Because China is the world's largest manufacturing power, there are many producers in other parts of the world who depend on China's manufactured parts to produce their manufactured products.

- For example, countries like Singapore and US may import steel pipes in order to make sewage pipes, cars, ships, electrical appliances etc.
- Thus if the prices of steel pipes goes up, the cost of production for producers in Singapore and US would similarly increase.
- Whether or not their TR would increase or decrease would again, depend on the PED of the final manufactured goods they produces.
- In addition, depending on whether they were producing substitutes or complements to China's manufactured products, their demand would increase or decrease.
- Hence, the overall change in TR would depend on the relative shifts of demand and supply. If the supply shifted more than demand, than PED would help in determining the overall effect on TR. If demand increase more than the fall in supply, the TR should increase.

Conclusion

- The increase in costs in China would have a direct impact on the TR of Chinese producers. Whether the TR increases or decreases depends on the PED of their manufactured goods.
- However, given the interconnectedness of the world we live in, the increase in costs in China would also affect producers worldwide.
- Whether other producers' TR increases or decreases would depend on whether their products were substitutes or complements to China's manufactured products. If they were substitutes, their TR might increase as Chinese products lose competitiveness. However, the extent of this effect might still depend on whether Chinese products still remain much cheaper than these substitutes. If so, Chinese products may still remain competitive and the TR of other producers may not increase as much.
- Also, the cost increases in China will likely to be passed onto the rest of the world since many producers worldwide import Chinese manufactured parts in their production of other manufactured goods. The extent of how much the costs are passed on would depend on the relative PED/PES values which were discussed in (a).
- Thus, although the causes of the cost increase appear to be domestic in nature (i.e. wages and rents in China), it is likely that worldwide producers will also face an increase in costs of production, resulting in an increase in prices and their TR will be affected.

Mark Scheme

Level	Descriptors
Level 3 9-11	<ul style="list-style-type: none"> Answer shows excellent knowledge of the effect of soaring costs on the TR of producers in China AND outside of China Answer shows excellent knowledge of PED AND XED Excellent development and rigour in economic analysis throughout which includes: <ul style="list-style-type: none"> Well explained diagrams to show the change in Chinese producers' TR when $PED < 1$ AND $PED > 1$ AND Well explained diagrams to show the change in TR of other producers outside of China when $XED > 0$ AND $XED < 0$ Answer shows consideration of the dependence of other producers on Chinese producers for intermediate manufactured products and hence a recognition that the extent of shifts in demand and supply would affect the TR too Good use of real world examples.
Level 2 7-8	<ul style="list-style-type: none"> Answer shows good knowledge of the effect of soaring costs on the TR of producers in China AND/OR outside of China Answer shows good knowledge of PED AND XED Good development and rigour in economic analysis which includes: <ul style="list-style-type: none"> Somewhat explained diagrams to show the change in Chinese producers' TR when $PED < 1$ and $PED > 1$ AND/OR Somewhat explained diagrams to show the change in TR of other producers outside of China when $XED > 0$ AND/OR $XED < 0$
6	<ul style="list-style-type: none"> Answer shows fair knowledge of the effect of soaring costs on the TR of producers in China AND/OR outside of China Answer shows good knowledge of PED AND/OR XED Some development and rigour in economic analysis which <u>may</u> include: <ul style="list-style-type: none"> Diagrams to show the change in Chinese producers' TR when $PED < 1$ and $PED > 1$ AND/OR Diagrams to show the change in TR of other producers outside of China when $XED > 0$ AND/OR $XED < 0$
Level 1 4 - 5	<ul style="list-style-type: none"> Answer shows some knowledge of the effect of soaring costs on the TR of producers in China and/or outside of China Little development and rigour in economic analysis. Answer may be a mere listing of points. Answer may not have considered elasticity concepts.
1 - 3	<ul style="list-style-type: none"> Answer is mostly irrelevant. Only a few valid points incidentally in an irrelevant context.
Evaluation	
E1 (3-4)	For a well-reasoned judgment on how soaring costs affects the TR of producers in China and outside of China which includes clear use of criteria/factors to explain why effects may differ
E2 (1-2)	For a mainly unexplained judgment on how soaring costs affects the TR of producers in China and outside of China

Essay Question 2

Whatsapp is a mobile messaging app that allows for exchange of messages without having to pay for SMS. In the light of increasing use of mobile apps, Singtel has kept prices on mobile service plans rigid and instead reduced data bundles on their mobile service plans from 12GB to between 2GB and 4GB.

Starhub and M1 have also announced similar plans to discontinue their 12GB bundles.

(a) Explain which market structure best describes the market for mobile apps and the market for mobile service plans. [10]

(b) Discuss the view that barriers to entry are most significant in determining whether firms in the same market structure as that of the telecommunications industry in Singapore make similar decisions to their competitors in price and product offerings. [15]

(a)

Suggested answer

Introduction:

- State that the market features that define a market structure include number and size of firms, nature of product, presence of barriers to entry and imperfect information.
- Define a mobile app to be a computer program designed to run on smartphones, tablet computers and other mobile devices. State that the market for mobile apps is best described as a monopolistic competitive market.
- The market for mobile service plans is best described as an oligopoly.

Body:

Candidates are to elaborate with the support of appropriate contextual examples on how the market features best describe each market.

1. Explain that the market for mobile apps is best described as a monopolistic competitive market.
 - Number and size of firms: There are a large number of producers of mobile apps, and these producers tend to be small in size. For example, the famous Flappy Bird (a 2013 mobile game) was developed by Vietnam-based developer Dong Nguyen and published by GEARS Studios, a small, independent game developer also based in Vietnam. Game developer firms are typically small in size, having a small number of employees and each occupies a small share of the market of mobile apps. During Apple's 2012 Worldwide Developers Conference, Apple CEO Tim Cook announced that the App Store has 650,000 available apps to download, indicating the large number of producers in the market of mobile apps.
 - Nature of product: There are various categories of mobile apps, including game mobile apps, photo-editing mobile apps, messaging mobile apps and so on. For each category of mobile apps, there are many similar products that are close substitutes for each other. For example, there are various messaging mobile apps including WeChat, WhatsApp, Line and so on. There are also numerous game mobile apps that are close substitutes of each other. Even when mobile apps serve similar purposes, such as WhatsApp and Line which provide a platform for consumers to communicate, there are slight differences. For example, Line provides various "stickers" that allows consumers to insert in when communicating with their friends. Thus, there is a high level of product differentiation in the market for mobile apps.
 - Presence of Barriers to Entry: There are minimal or no barriers to entry into the market for mobile apps. There are many software developers that produce and launch mobile apps on the various app distribution platforms including Apple's App store and Google Play. Even a consumer with software writing skills is able to launch a mobile app. As such, the average number of apps launched per day by consumers climbed from 7.2 in 2010 to 7.9 in 2012, demonstrating the ease of entry into the market for mobile apps (source: www.flurry.com).
 - Imperfect information: There is presence of imperfect information in the market for mobile apps. Consumers are not fully aware of all available products in the mobile app market and producers are also not fully aware of how their competitor's products are developed. They are also not fully aware of the price (if any) of their competitor's product and when it will be made available on the various distribution platforms.
 - Since the market for mobile apps is characterised by a large number of small firms, differentiated product, minimal or no barriers to entry and presence of imperfect information, it is best described as a monopolistic competitive market.

2. Explain that the market for mobile service plans in Singapore is best described as an oligopoly.
- Number and size of firms: There are only a few operators providing mobile telecommunication services in Singapore. These include SingTel Mobile, Starhub and M1, each having at least 2 million subscribers. Thus, each firm accounts for a dominant share in the market of mobile service plans in Singapore.
 - Nature of Product: The mobile plans sold by the 3 mobile service providers are similar. For example, all mobile service providers sell postpaid mobile service plans that include a bundled package of mobile calls, SMS and data usage. However, each mobile service plan is slightly differentiated and differs across the 3 mobile service providers. For example, M1 provides unlimited free calls to 3 M1 numbers on its mobile service plans while SingTel offers the Mobile Multi-Line discount of up to 30% where consumers are able to nominate their family member's SingTel mobile lines to obtain the discount.
 - Barriers to Entry: There are significant barriers to entry, including legal barriers and contrived barriers. Legal barrier is present in the market for mobile service plans as a mobile service provider has to obtain a license from Infocomm Development Authority of Singapore ('IDA'). Thus, potential entrants have to meet the requirements set by IDA as well as pay for the licence fee in order to enter the market in Singapore. There is also presence of contrived barriers to entry where incumbent mobile service providers attempt to keep their market share by having extensive advertising budget to upkeep their branding.
 - Imperfect information: There is presence of imperfect information in the market for mobile service plans. Each competitor in the Singapore market for mobile plans are not fully aware of each other's costs structure and the promotional plans. Consumers are also not fully aware the availability of all mobile service plans and promotional plans by the mobile service providers. For example, during the launch of iPhone 5s, consumers are not fully aware of the stock availability of the phone model by each mobile service provider.
 - Since the market for mobile service plans is characterised by a few dominant mobile service operators, differentiated product, presence of barriers to entry and imperfect information, it is best described as an oligopoly.

Conclusion:

- Given the defining market features as explained with examples, the market for mobile apps is best described as a monopolistic competitive market and the market for mobile service plans is best described as an oligopoly.

Mark Scheme

Level	Descriptors
Level 3 (9-10)	<ul style="list-style-type: none"> • Answer shows <u>excellent</u> knowledge about the market features of monopolistic competition <u>and</u> oligopoly. • There is excellent rigour in elaboration of the market features (e.g. explain size of firms by linking clearly to market share or number of employees, recognition of different types of barriers to entry etc.) • Balanced analysis on both markets of mobile apps and mobile service plans. • Excellent real-world examples included.
(7-8)	<ul style="list-style-type: none"> • Answer shows <u>good</u> knowledge about the market features of monopolistic competition <u>and</u> oligopoly. • There is good rigour in elaboration of the market features. • Balanced analysis on both markets of mobile apps and mobile service plans. • Some examples included.
Level 2 (5-6)	<ul style="list-style-type: none"> • Answer shows <u>fair</u> knowledge about the market features of monopolistic competition <u>and/or</u> oligopoly. • There is fair rigour in elaboration of the market features. • Answer may be one-sided, either focusing on the market of mobile apps or mobile service plans. Or answer includes knowledge of both markets of mobile apps and

	mobile service plans but explanation is not well developed. <ul style="list-style-type: none"> Minimal or no examples included.
Level 1 (1-4)	<ul style="list-style-type: none"> Answer is mostly irrelevant. There may be a few incidentally valid points which do not clearly address the question. Answer shows some knowledge of market features, but conceptual errors are evident in analysis.

(b)**Suggested answer**

- State that the existence of high barriers to entry is one of the market features that describe an oligopoly market, which is the market structure of telecommunications companies in Singapore.
- State that given the characteristic mutually interdependent behaviour of oligopolistic firms, there is no single economic theory to explain their market behaviour i.e. price and product offerings. There are thus various possible market behaviours of oligopolistic firms.
- State that similar decisions made by oligopolistic firms to their competitors are characteristic of mutually interdependent behaviour. An example of such similar behaviour would be the decision to keep prices rigid and reduce the data bundle of telecommunication companies in Singapore.
- There are however other similar decisions (i.e. mutually interdependent behaviour) that may also occur in an oligopoly, such as price leadership, price wars.
- As such, other market features, as well as other demand and supply factors, may be more important in explaining the similar behaviour of oligopolistic firms to their competitors.
- Oligopolistic firms may also not always make similar decisions. For example, oligopolistic firms may make dissimilar decisions on product offerings by carrying product differentiation in terms of packaging, design etc.

Body:

- Thesis - *Explain that the presence of barriers to entry will lead firms to make similar decisions on price.*
 - As explained in part (a), barriers to entry are present in the market for mobile service plans and this helps to establish the market as an oligopoly. The presence of barriers to entry also implies that the number of firms in the market will remain small. For example, the restrictive requirements to apply for a telecommunications operator license put in place by IDA would prevent entry of new firms and thus incumbent operators are able to maintain their dominant market share.
 - As such, it is expected that firms in markets with barriers to entry are likely to be characterised by oligopolistic market behaviour i.e. mutually interdependent behaviour. Mutual independence means that each firm is affected by its rivals' decisions. Likewise, its decisions will affect its rivals.
 - Price rigidity is an example of mutually interdependent firms' behaviour. This is characteristic of a firm's behaviour in the market for mobile service plans. Even though costs facing mobile service providers have changed over the years, their prices have not. This behaviour can be explained by a kinked demand curve facing an oligopolistic firm.
 - When one firm lowers its price, all other firms are likely to match this price fall rather than risk losing a share of the market. Thus the demand curve facing the firm if it lowers the price is very price-inelastic.
 - On the other hand, when one firm raises its price and no one follows, its sales will fall rapidly. Thus the demand curve facing the firm if it raises its price is very price-elastic. Other firms will not follow suit, because by keeping their prices constant, they can capture a larger market share.
 - Because of the above twin assumptions on pricing behaviour, any price change will result in fall in total revenue for the firm and holding all else constant, the profit for the oligopolistic firm will fall, which deviates from the profit-maximising objective of the firm. As a result, the firm has a kinked demand curve, a demand curve with two distinct segments – one that is very price-elastic and one that is very price-inelastic.

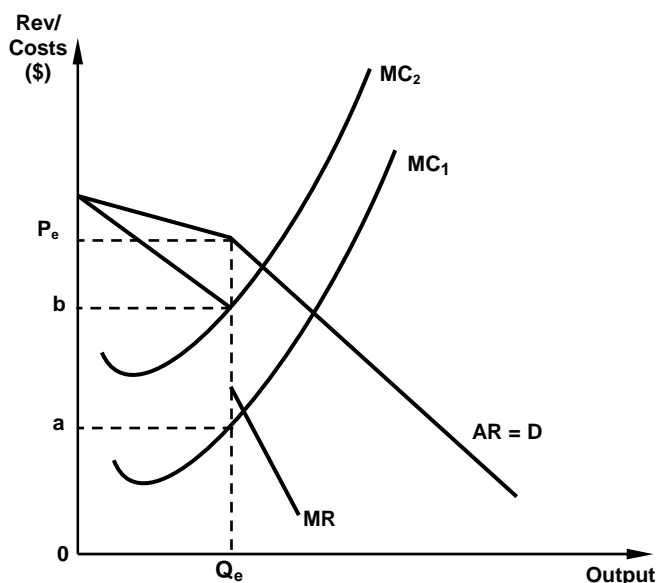


Figure 1 Equilibrium Position of a Non-collusive Oligopolistic Firm

- Figure 1 shows the kinked demand curve DD of an oligopolist. The demand curve is kinked at the current price P_e , demand being significantly more price elastic above the current price than below. The effect of this is to create a situation of price rigidity at P_e . Figure 1 also depicts the unusual-looking MR curve for the firm. It has a discontinuous section. At Q_e , there is an entire range of MR values from point a to b . In other words, there is a vertical section of the MR curve between these 2 points.
 -
 - The price and output of the oligopolistic firm are thus not sensitive to changes in production cost. As profits are maximised when $MC = MR$, the MC curve can be anywhere between MC_1 and MC_2 (i.e. between points a and b), and the profit-maximising price and output will be P_e and Q_e . This gives the oligopolistic firm a great deal of price rigidity.
 - As such, the presence of barriers to entry that resulted in mutual interdependence of firms in markets has led to price rigidity.
 - Due to the rigid prices and rising costs due to high data usage, mobile service providers thus made similar decisions to reduce data bundles instead.
 - In addition, it should be noted that even if incumbent firms were to reduce data bundles, there would not be any concerns of loss of consumers as new entrants will not be able to enter the markets due to presence of barriers to entry.
2. Anti-thesis 1 – Explain that the presence of barriers to entry may lead firms to make dissimilar decisions on product offerings.
- If price rigidity results as explained in thesis, then oligopolistic firms will thus compete in terms of product offerings, by having product differentiation instead.
 - Firms may thus have dissimilar decisions by having differentiated products in terms of packaging, design of product and so on. For example, mobile phone producers such as Apple and Samsung compete in an oligopolistic market and make dissimilar decisions on product offerings. For example, Apple has not increased the width of the screen of its iPhone product and instead has focused on upgrading its iOS and enhancing on the user-interface. Samsung has however, continuously increased the screen size of its smartphones.
- (Note: It is also possible to argue that the decision to engage in product differentiation is a “similar decision” and thus this could be an acceptable argument in the Thesis also. But student should be explicit and clear in their essay on whether the firms’ decisions are considered to be similar or dissimilar.)
3. Anti-thesis 2 – State that barrier to entry may not be the most important in determining whether oligopolistic firms make similar decisions on price and product offerings. Explain how other

reasons (i.e. other market features, industry's demand and supply factors) may be more important in influencing similar (or dissimilar) decisions on price and product offerings.

- State that there are other forms of similar decisions on prices, such as price leadership and price wars that oligopolistic firms may undertake. Other market features and industry demand and supply factors may thus be more important in influencing the likelihood of such similar pricing behaviour instead.
- Size of firm – Mobile plan providers have fairly similar market share, thus explaining the price rigidity. In contrast, if there is a presence of a market share leader, then price leadership may be a more likely pricing behaviour. This is the case in the taxi market where ComfortDelGro is a dominant market share leader. Following the dominant price leadership model, when ComfortDelGro increases its fares, other taxi companies in Singapore would follow suit. This is because taxi companies with a smaller market share would not dare to under-cut ComfortDelGro as it can and may retaliate with predatory pricing given that it has lower average costs as it has greater ability to reap internal EOS given its significant market share. Thus, smaller taxi companies will follow the market leader's increase in prices.
- Nature of product – If products are more similar or even homogenous, then mutually interdependent firms may more likely compete on prices instead. In such a case, then similar pricing decision in terms of price wars may be more likely. For example, in the case of petrol stations in Singapore, given that the product offering of petrol is almost homogeneous, there have been instances of price wars. Alternatively, if products are similar or homogeneous, this may encourage the formation of a cartel. Usually, the fewer the number of producers and the lower the transaction costs of negotiations, the more likely such a collusive outcome may result instead. An example of a cartel would be OPEC (i.e. Organisation of the Petroleum Exporting Countries) where OPEC nations collude and have similar pricing decisions.
- Other factors may be more important in influencing the similar decisions of firms on price and product offerings; demand and supply factors that impact the profitability of an industry will result in similar decisions of firms in their price and product offerings.
- Firms' decisions depend on the similarity in cost structures. Due to the similarity of cost structures, price rigidity is more likely. With similar cost structures, no one firm can sustain lower prices and capture a larger market share as other firms will follow, as stated in one of the twin assumptions under the kinked demand curve theory. However, if firms had different cost structures where for example, a firm had a greater ability to reap internal economies of scale due to perhaps availability of spare capacity, then such a firm would have the incentive to lower prices. Thus, price wars would be more likely instead.
- It depends on the changes in demand of the industry. For example, in the case of telecommunications industry in Singapore, firms made similar decisions to reduce data bundles perhaps to mitigate fall in demand for sms and voice-calls. The increase in implicit price of data services with the reduction in the data bundle will lead to an increase in demand for voice-calls and sms-es. Given that data service is a close substitute for sms and voice-calls, the cross elasticity of demand is positive and larger than 1. As such, the decision to reduce the data bundles may result in a significant diversion of consumers towards increasing consumption of mobile service plans with higher minutes of voice-calls and higher number of sms-es.
- It depends on the changes in the supply factors of the industry. For example, in the case of telecommunications industry in Singapore, there has been increase in costs due to heavy use of data by consumers. Due to the increasing popularity and use of mobile apps, there is a significant increase in demand for data usage as these are highly complementary and thus have a high negative cross-elasticity of demand value. This increase in data use has led to higher costs for mobile service operators. Thus, to reduce costs, mobile service operators have reduced the data bundles on the mobile service plans.

(Note: Students may also argue that other factors are more significant in affecting dissimilar decisions on price and product offering. Students however should be explicit in their explanation that these decisions are dissimilar and ensure that economic concepts/theories support their explanations.)

Conclusion/ Evaluation:

- There is no single theory to explain oligopolistic firm's behaviour. As such, barriers to entry is unlikely to be the only reason in the similar decisions on price and product offerings.
- While oligopolistic firms may be expected to have similar pricing decisions, the relative importance

of market features in explaining the similar decision depends on which type of pricing behaviour i.e. price rigidity, price leadership or price wars.

- While market features are important in explaining similarity in pricing decisions, other factors e.g. industry demand and supply factors are perhaps more important in explaining similarity in product offerings. For example, the most significant reason for the similar decision of telecommunication companies to reduce the data bundle could be due to costs instead. Given the highly complementary nature of data service and mobile apps, the rapid expansion of data usage has resulted in increasing costs for mobile service providers, thus triggering the decision to reduce data bundles.
- In fact, oligopolistic firms may likely compete in terms of product offerings and offer differentiated products in terms of packaging or branding instead.

Mark Scheme

Level	Descriptors
L3 (9 – 11)	<ul style="list-style-type: none"> • Answer shows excellent knowledge of how barriers to entry influence the likelihood of mutually interdependent behaviour (e.g. link barriers to entry to number and size of firms) in both price and product offerings. • Balanced discussion is included. • Excellent explanation of price rigidity in the context of an oligopolistic market (e.g. Kinked demand curve theory). • Excellent application of relevant diagram (e.g. Kinked demand curve diagram) • Good elaboration of at least <u>2</u> anti-thesis points: <ul style="list-style-type: none"> ✓ either other market characteristics <u>and/or</u> ✓ demand/supply factor • Excellent contextualisation.
L2 (7 – 8)	<ul style="list-style-type: none"> • Answer shows good knowledge of how barriers to entry influences the likelihood of mutually interdependent behaviour in both price and/or product offerings. • Balanced discussion is included. • Good explanation of price rigidity in the context of an oligopolistic market (e.g. Kinked demand curve theory). • Good application of relevant diagram (e.g. Kinked demand curve diagram) • Good elaboration of at least <u>1</u> anti-thesis point: <ul style="list-style-type: none"> ✓ either other market characteristics <u>or</u> ✓ demand/supply factor • Good contextualisation.
L2 (6)	<ul style="list-style-type: none"> • Answer shows good knowledge of how barriers to entry influence the likelihood of mutually interdependent behaviour in both price and/or product offerings.. • Discussion may be one-sided or both sides are included but not well explained. • Some explanation of price rigidity in the context of an oligopolistic market (e.g. Kinked demand curve theory). • Minimal or no contextualisation.
L1 (1 – 5)	<ul style="list-style-type: none"> • Answer is mostly irrelevant. • Elaboration is mainly descriptive and lists points without much further elaboration. • Severe conceptual errors evident. • Only few valid points made incidentally with little economic analysis.
Evaluation	
E2 (3 – 4)	Judgment based on economic analysis.
E1 (1 – 2)	Mainly unexplained judgments.

Essay Question 3

Assess the economic case for government intervention in the market for public transport and discuss the most appropriate policies that the Singapore government could adopt to intervene in this market. [25]

Suggested Answer

- Candidates are required to explain the possible causes of market failure in the free market for

public transport and explain possible policies to correct the market failure in the context of Singapore together with comments on the appropriateness of the policies discussed to reach a reasoned judgement on the most appropriate policies for Singapore public transport market.

(NB: Answers that considered the market failure in the PRIVATE transport market and then justified that government intervention in PUBLIC transport market was necessary to help correct the market failure would be accepted as alternative answer. However, candidates are advised to employ a more direct approach to answer the question.)

Introduction

- Define market failure i.e. market failure exists when the free market fails to allocate resources in an optimum and efficient manner.
- Identify the causes of market failure in the market for public transports e.g. merit good, market dominance and income inequality.
- Suggest appropriate market based and non-market based policies to correct the market failure in the context of Singapore public transport market.

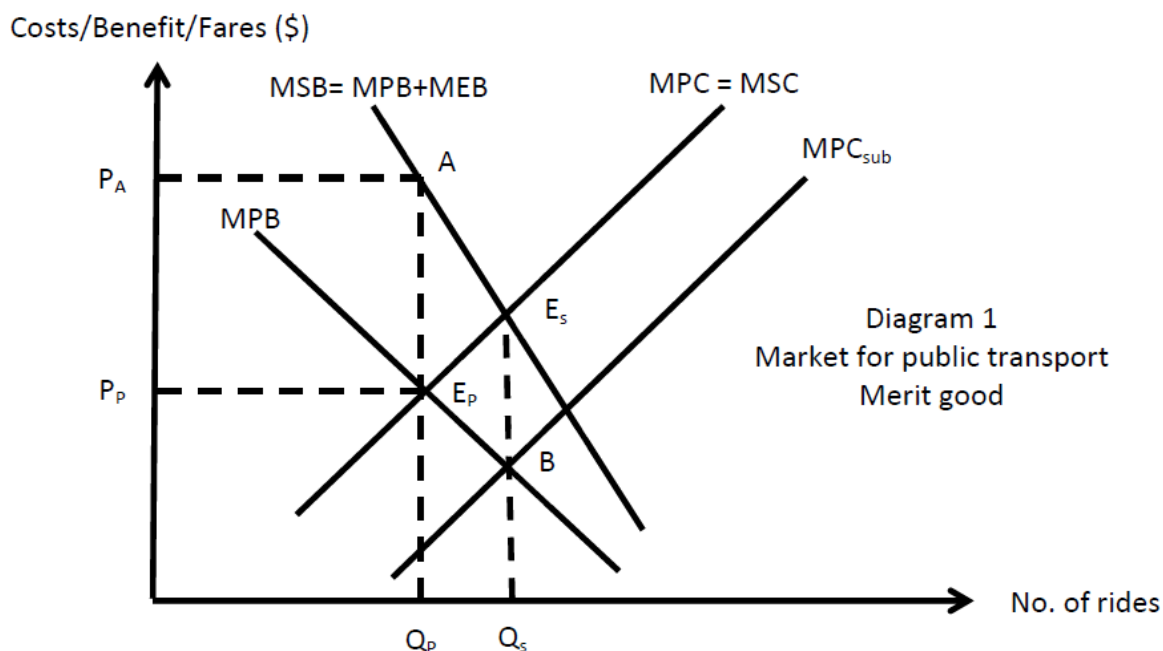
(A) Explain the potential causes of market failure in the market for public transport

(i) Public transport as a **merit good**.

Explain why public transport is a merit good.

- State that public transport can be considered a merit good.
- Define merit goods i.e. merit goods are goods and services that usually generate positive externalities when consumed and thus the government deemed it as socially desirable but feel that individuals will under consume without any form of government intervention, possibly because of information failure, where individuals lack information of the full benefits of consumption.
- Define positive externalities e.g. occurs when some benefits associated with the production/consumption of a good 'spills over' onto third parties, that is, to parties other than the immediate seller or buyer, for which no compensation was paid.
- Provide examples of private benefits (e.g. to reach destination), private costs (e.g. fares paid) and external benefits (e.g. reduce road congestion especially in Central Business Districts which lead to increased efficiency and reduce pollution which lead a more pleasant environment) arising from the use of public transport.
- External benefits may not be internalised by private commuters and bus/trains operators because they only account for their private costs and benefits (i.e. self-interest) or may not be fully internalised possibly because of information failure about the full benefits of using public transport; thus resulting in underutilisation of public transport.

Using a merit good diagram, explain how the free market fails to allocate resources in an optimal and efficient manner in the public transport market.



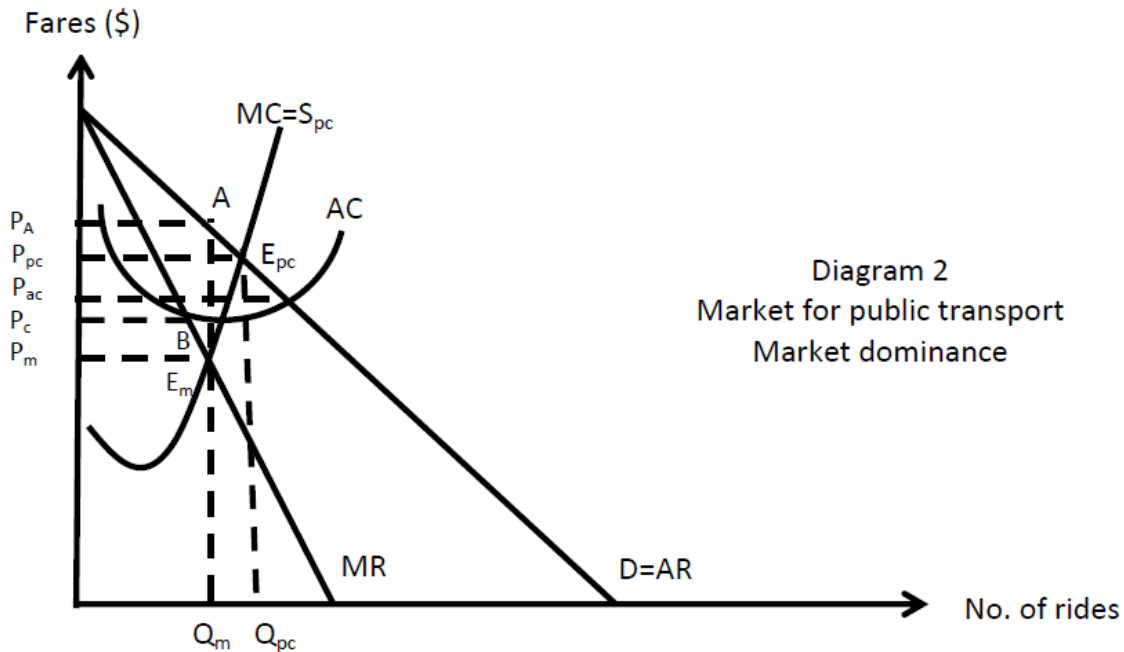
- Existence of the positive externalities causes a divergence between MPB and MSB by the amount of MEB at Q_p .
- Assume $MEC=0$ thus $MPC=MSC$.
- Free market equilibrium point where $MPB=MPC$ at E_p with equilibrium quantity Q_p while social optimal point where $MSB=MSC$ at E_s with social optimal quantity Q_s .
- Underutilisation of public transport illustrated by distance Q_pQ_s .
- At Q_p , society values additional usage of public transport at P_A which is higher than what the society values the alternative good/service the resources could otherwise produce (P_p) suggesting that additional usage of public transport can increase social welfare.
- Deadweight loss of area E_pAE_s because total social benefits forgone of area $Q_pAE_sQ_s$ is larger than total social cost savings of area $Q_pE_pE_sQ_s$.

(ii) Existence of **market dominance**.

Explain the existence of market dominance in the market for public transport. (NB: Answers that considers the public transport market as a natural monopoly are equally acceptable.)

- Define barriers to entry.
- High barriers to entry resulting in few dominant bus/train operators each having large market shares suggesting the lack of close substitutes hence the demand for public transport is relatively price inelastic.
- Provide examples of both natural (e.g. high costs of purchases buses and trains) and artificial barriers to entry (e.g. licensing) and examples of dominance bus/train operators (e.g. SBS Transit and SMRT Corporation in the case of Singapore) in the public transport market.

Using a monopoly diagram, explain how the free market fails to allocate resources in an optimal and efficient manner in the public transport market.



- Profit maximising where $MR=MC$ at Q_m while social optimal where $S_{pc}=D$ at Q_{pc} .
- Under production of public transport illustrated by distance $Q_m Q_{pc}$ and hence less than optimal amount of resources allocated to the market for public transport.
- At Q_m , society values additional usage of public transport at P_A which is higher than what the society values the alternative good/service the resources could otherwise produce (P_m) suggesting that additional unit of public transport can increase social welfare.
- Deadweight loss of area $E_{pc}AE_m$ because total social benefits forgone of area $Q_mAE_{pc}Q_{pc}$ is larger than total social cost savings of area $Q_mE_mE_{pc}Q_{pc}$.

Explain that due to lack of competition, public transport operators may not achieve productive and dynamic efficiencies.

(iii) Existence of **Income inequality**.

Explain the unequal distribution of income in the market for public transport.

- Given the market power, dominant bus/train operators restrict output (Q_m) to charge high prices at P_A to maximise profit illustrated by supernormal profit area P_AABP_c (Diagram 2).
- The profits are not widely distributed because the ownership of the bus/train operators is largely in the hands of upper income groups thus the owners tend to benefit at the expense of the rest of the society.
- The high price could also deprive the lower income commuters from enjoying the benefit from using the basic necessity due to their inability to pay.

(B) Discuss the policies that the SINGAPORE government COULD adopt to correct the market failure and evaluate their appropriateness.

(i) Subsidies or funding for infrastructures

- Indirect per unit subsidies resulting in cost of production reduction of amount equal to marginal external cost at Q_s (distance E_sB) to internalise the externalities (Diagram 1). For example, the free MRT ride scheme which encourages commuters to travel early so as to spread out the passenger load and ease over-crowding. Efficiency is improved as commuters are distributed more evenly.
- Illustrated by the parallel shift of the MPC curve to MPC_{sub} .
- Social optimal no. of rides achieved at Q_s thus no deadweight loss. (Note that the use of direct subsidies is also acceptable)

- Also, funds could be given for the development of public transport infrastructure (e.g. rail lines and bus interchanges). This could address the equity issue by making public transport more affordable for the lower income households.
- Bus/train operators in Singapore (e.g. SBS Transit and SMRT Corporation) have to only bear the operating and maintenance costs as well as investments in service improvements. With more funds available to finance maintenance and service improvement thus better services, consumers' willingness to take public transport might increase and thus reducing the underutilisation, hence reduce the inefficiency.
- **Limitation:** The demand for public transport is price inelastic in Singapore as travelling by private cars are not considered good alternatives to buses and trains so even if the fares of public transport fall, the quantity demanded is unlikely to increase much because private car owners find it hard to give up the convenience and comfort of their cars. To achieve Q_s , large amount of subsidies are required because the cost saving past through from the public transport operators to the commuters would be small thus the effects on increasing ridership to Q_s would be limited.
- **Limitation:** Government failure could arise because government may not know the full costs and benefits thus it is difficult to establish a monetary value of the external benefits. If government severely over subsidise, it may result in a larger deadweight loss and hence worsen the inefficiency. As such, indirect subsidies may not be a good way to correct the market failure.
- **Evaluation:** Both funding of costly infrastructure and indirect subsidies involve high opportunity costs (e.g. forgoing the building of a school or a hospital involving the same amount of funds), but funding of infrastructure would be more appropriate because the public transport operators have to ensure that their services are relevant and also have the incentive to operate efficiently so that the revenue generated can cover the operating and maintenance costs to be viable in the long term. In addition, the full funding of infrastructure would also greatly reduce the high initial capital outlay thus lower the barriers of entry to allow potential operators to enter the market.

(ii) Deregulation

- Objective is to introduce competition to address the problem of market dominance so as to improve efficiency and raise service standards while keeping costs competitive e.g shortening of the operating licenses validity from 30-40 years to 15-19 years.
- With an increasing number of operators, the market share of each operator would be smaller and hence the demand for each operator would fall. Due to the increased number of substitutes, the demand would also be more price elastic. Overall, price would fall and usage would be higher thus reduce the under-consumption hence reduce the DWL.
- Also, because of increased competition, operators would want to increase the demand for their services and make it more price inelastic via providing better services (e.g. arriving on time) and would also want to keep their cost low to earn higher profit. As such, the operators would be more willing to reduce x-inefficiencies and to engage in R&D to enjoy dynamic efficiency. The cost savings if pass to commuters in terms of lower prices would increase the usage of public transport and would also make public transport more affordable thus reducing market failure due to the under-consumption and inequity.
- For example, SBS Transit and SMRT Cooperation each runs different MRT lines and a network of bus routes in different regions so that via the benchmark competition, it would be harder for an operator to claim that it could not reduce costs thus there is a need to charge high fares.
- **Limitation:** The public transport market may have some elements of a natural monopoly because of the high initial capital outlay to cover the cost of infrastructure. Economies of scale are likely to be significant that average costs can only be minimised if there is only a sole operator.
- **Evaluation:** The “most appropriate policies” would thus have to involve deregulation to introduce competition together with subsidies to fund entirely the costs of infrastructure development. Moreover, the “most appropriate policies” would also require the Singapore government to move towards introducing contestability e.g. allow operators to bid to operate a package of bus routes for a fixed period of time and operators who do not perform up to mark risk losing their licences thus provides a stronger incentive to be efficient and cost-effective.

(iii) Fare regulation

- Objective is to ensure public transport remains affordable to address the problems of equity and market dominance while maintaining the long-term financial viability of the public transport system.
- For example, Public Transport Council (PTC) in Singapore ensures that fare increases are justified on the basis that they allow public transport operators to cope with the increase in cost of production and but yet provide them with a reasonable return, so that operators have an incentive to innovate to gain dynamic efficiency.
- Implementation of MC pricing at P_{pc} (Diagram 2) would reduce fares from P_A to P_{PC} and allows operators to still make supernormal profit. However, at P_{pc} equity might be an issue and some very low income commuters may still not be able to afford the use of public transport.
- **Limitation:** The balance between commuter's interest and viability of the public transport system is difficult to achieve especially with the existence of imperfect information e.g. the intangible aspect of commuter interest is at best subjectively measured.
- **Evaluation:** The "most appropriate policies" would thus have to involve MC pricing to ensure operators have the incentive to innovate together with additional subsidies for lower income commuters (see below on WTCS). Also, with the benchmarking against public operators in other countries such as Hong Kong, PTC can better ensure that public transport operators in Singapore remain cost-efficient and competitive.

(v) Information providing

- Campaigns to promote use of public transport via providing information on the accessibility and convenience of taking public transport e.g. the Park and Ride scheme or "Go Green with SMRT". This would shift MPB nearer to MSB and thus reduce the underutilisation (i.e. closing the gap between Q_s and Q_p).
- Increase the number of commuters using public transport as their taste and preferences change towards using public transport, hence there is a higher demand and thus the under-consumption is reduced.

(vi) Workfare Transport Concession Scheme (WTCS)

- Objective is to ensure fares are affordable to address equity problem e.g. providing low wage commuters with monthly gross income of less than \$1900 a 15% discount off adult fares.
- **Limitation:** The scheme cost the government about \$50 million a year thus similar to subsidies, WTCS involves high opportunity cost.

Evaluative conclusion

In Singapore, a mix of government funding of infrastructure and regulation to support private provision of public transport services in a contestable market would be the "most appropriate policies" given the merit good nature of public transport and existence of market dominance in Singapore public transport market. To reduce market failure arising from the existence of income inequality, the "most appropriate policies" to ensure affordability for the low income commuters would be the use of MC pricing together with WTCS.

Mark Scheme

Levels	Marks	Descriptors
High L3	18 - 21	<ul style="list-style-type: none"> • For an answer that shows <ul style="list-style-type: none"> ➤ EXCELLENT knowledge of the economic case for government intervention in the market for public transport <ul style="list-style-type: none"> - e.g. merit good and market dominance as causes of market failure must be well explained together with an explanation of income inequality as a cause of market failure AND ➤ EXCELLENT knowledge of the policies that Singapore government could adopt to intervene in Singapore public transport market

		<ul style="list-style-type: none"> - e.g. subsidies (market based) and deregulation (non-market based) must be well explained together with an explanation of one other policy to ensure affordability • VERY GOOD recognition of Singapore context is required. • All policies explained must be related to the identified causes of market failure.
Low L3	15 - 17	<ul style="list-style-type: none"> • For an answer that shows <ul style="list-style-type: none"> ➢ VERY GOOD knowledge of the economic case for government intervention in the market for public transport <ul style="list-style-type: none"> - e.g. merit good and market dominance as causes of market failure must be well explained AND ➢ VERY GOOD knowledge of the policies that Singapore government could adopt to intervene in Singapore public transport market <ul style="list-style-type: none"> - e.g. subsidies (market based) and deregulation/fare regulation (non-market based) must be well explained • GOOD recognition of Singapore context is required. • Out of the 2 or more policies discussed, at least one of the policies explained must be related to the identified causes of market failure.
High L2	12 - 14	<ul style="list-style-type: none"> • For an answer that shows <ul style="list-style-type: none"> ➢ GOOD knowledge of the economic case for government intervention in the market for public transport <ul style="list-style-type: none"> - e.g. at least 2 causes of market failure with EITHER merit good OR market dominance well explained AND ➢ GOOD knowledge of the policies that Singapore government could adopt to intervene in Singapore public transport market <ul style="list-style-type: none"> - e.g. at least 2 policies must be well explained and one of the well explained policies must be subsidies OR deregulation OR fare regulation • SOME recognition of Singapore context is required. • Policies explained may be weakly related to the identified causes of market failure.
Low L2	10 - 11	<ul style="list-style-type: none"> • For an answer that shows <ul style="list-style-type: none"> ➢ SOME knowledge of the economic case for government intervention in the market for public transport e.g. 1 cause well explained or 2 insufficiently explained causes AND ➢ SOME knowledge of the policies that Singapore government could adopt to intervene in Singapore public transport market e.g. 1 policy well explained or 2 insufficiently explained policies • May have LITTLE recognition of Singapore context. OR ➢ EXCELLENT knowledge of the economic case for government intervention in the market for public transport but little or no policies discussed OR ➢ EXCELLENT knowledge of the policies that Singapore government could adopt to intervene in Singapore public transport market but little or no analysis of the economic case for government intervention
High L1	6 - 9	<ul style="list-style-type: none"> • For an answer that shows <ul style="list-style-type: none"> ➢ AT LEAST SOME knowledge of the economic case for government intervention in the market for public transport AND/OR ➢ AT LEAST SOME knowledge of the policies a government could adopt to intervene in the public transport market • There may be some conceptual errors in the explanation, showing lack

		of understanding of the economic concepts. • Theoretical explanation which may COMPLETELY LACK application.
Low L1	1 - 5	• For an answer that is MOSTLY IRRELEVANT. • Contains only a few valid points made incidentally in an IRRELEVANT CONTEXT.

Evaluation

Levels	Marks	Descriptors
E2	3 - 4	• For a WELL-REASONED judgement, with clear criteria, on the most appropriateness policies Singapore government could adopt to intervene in Singapore public transport market.
E1	1 - 2	• For a MAINLY UNEXPLAINED judgement on the most appropriateness policies Singapore government could adopt to intervene in Singapore public transport market.

Essay Question 4

"Different economies are prone to different causes of recession and unemployment. Hence different policies are required to tackle these problems". Discuss. [25]

Suggested Answer:

Using the unique features of different economies, candidates are required to explain the main causes of recession and unemployment in different economies. Candidates are then required to suggest and explain appropriate policies to tackle the problems depending on the main causes identified. Reasoned judgement on the differences in effectiveness of different policies in tackling the different problems in different economies due to the different causes is required.

Introduction

- Define recession (i.e. fall in real national income/output) and unemployment.
- State that recession could largely result from a fall in AD due to a fall in demand from external sector and/or domestic sector, or a fall in SRAS due to cost-push/imported inflation.
 - Recession due to fall in LRAS is uncommon unless the economies encounter supply shocks such as massive earthquakes that destroyed the productive capacity of the economy.
- State that unemployment could largely be of structural, cyclical and/or real wage in nature.
 - Frictional and seasonal unemployment are too trivial to be considered problems that warrant important policy solution.

1. Explain that recession in a small and open economy like Singapore is largely caused by recession (fall in AD) and inflation (fall in SRAS) of her major trading partners/supply shocks and her unemployment is largely structural in nature.

- Main causes of recession in Singapore
 - Explain how recession in major trading partners of Singapore would cause a significant fall in Singapore AD and hence a fall in Singapore real national income via a worsening of BOT due to Singapore openness to exports, noting that Singapore is heavily dependent on export for growth (i.e. Singapore export earnings is about 250% of her GDP while Singapore domestic consumption expenditure is only about 40% of her GDP due to the smallness of her domestic market). Graphical illustrations of the fall in AD and real national income are required.
 - Explain how inflation in major trading partners of Singapore and/or a supply shock (e.g. world prices of crude oil increase) would cause a significant fall in Singapore SRAS and hence a fall in Singapore real national income via cost-push/imported inflation due to Singapore openness to imports, noting that Singapore is heavily dependent on imports for production and consumption (i.e. Singapore import expenditure is about 200% of her GDP). Graphical illustration of the fall in SRAS and real national income is required.

- Main causes of unemployment in Singapore
 - Explain how a structural change via a shift in comparative advantage in the production of manufactured goods from Singapore to, for example, China due to China opening of doors to trade and becoming a 'world factory' for manufacturing goods would cause structural unemployment in Singapore, noting Singapore openness to trade. Brief explanation of differences in comparative advantage of different countries in production is required.

2. Explain that recession in a large and less open economy like US is largely caused by domestic factors and her unemployment is largely demand deficit and real-wage in nature.

- Main causes of recession in US
 - Explain how a fall in, for example, consumers and investors' confidence in US economy perhaps due to a poor outlook for the economy as a result of US budget deficit problem would cause a significant fall in US AD and hence a significant fall in US real national income via a fall in C+I, noting that US is heavily dependent on her domestic sector for growth (i.e. US consumption expenditure is about 70% of her GDP due to the largeness of her domestic market while despite being an open economy, import expenditure is only about 32% of her GDP and export earnings is only about 40% of her GDP). Graphical illustration of the fall in AD and real national income is required.
 - State that given the large multiplier size in the US, the significant fall in US AD due to the fall in C+I would lead to a significantly larger fall in US real national income. Brief explanation of why US multiplier is large is required.
- Main causes of unemployment in US
 - State that given the significant fall in US AD which resulted in an even more significant fall in US real national income, there will be a significant increase in demand-deficit unemployment in US as firms cut down on production significantly thus leading to significant fall in employment.
 - Explain that real wage unemployment is also a main concern in US because of the existence of strong trade unions that lobby for higher wages frequently to protect the interests of their members i.e. with wage rate kept above market equilibrium wage rate, quantity supplied of workers is largely than quantity demanded for workers leading to real wage unemployment.

3. Discuss that in Singapore, a complementary mix of exchange rate policy and supply side policies would be more effective in tackling the identified main causes of recession and unemployment.

- Exchange rate policy in Singapore
 - Explain that on one hand, a depreciation of SGD given that Marshall-Lerner condition holds can help Singapore tackle the recession but on the other hand, it can also contribute to the recession by lowering SRAS via increasing cost-push/imported inflation.
 - Explain how a depreciation of SGD would lead to an improvement of Singapore BOT given that Marshall-Lerner condition (i.e. $|PED_X + PED_M| > 1$) holds in Singapore. For example, despite Singapore gradual appreciation approach in managing SGD, Monetary Authority of Singapore adopts a zero-appreciation approach or depreciation of SGD (by lowering the trading band) slightly to boost net exports during the 2008 global financial crisis. Brief explanation of why Marshall-Lerner holds in Singapore is required.
 - Explain that however, a depreciation of SGD can cause an increase in price of raw material in terms of SGD and thus a significant increase in cost of production hence a significant decrease in SRAS therefore worsen the recession.
 - **Evaluation:** State that the effect on real national income due to the significant increase in AD as a result of the increase in (X-M) would however be limited by the small size of Singapore multiplier. Brief explanation of why Singapore multiplier is small is required.
 - State that given the trade-offs and limitations, supply side policies are also needed to effectively tackle recession in Singapore.
- Supply side policies in Singapore
 - Explain how the use of supply side policies can help tackle the identified main causes of recession in Singapore e.g. to reduce the negative effect on export competitiveness due to the

increase in cost of production as a result of the depreciation of SGD.

- State that Singapore focuses on quality-competitiveness of export instead of low price and thus depends on the use of strict standards and advanced technology to boost the quality competitiveness of Singapore exports.
- State that Singapore government provides funds for research and development in areas of quality improvement and cost reduction e.g. large amount of funds provided for the research and development of Singapore high quality water purification technology and tax reduction for investment in cost efficient machineries and equipment.
 - **Evaluation:** Supply side policies take time for effects to be felt thus there is a need to complement with exchange rate policies which can deliver timely effects to deal with current problems in Singapore, make possible by Singapore use of managed float exchange rate system.
 - Explain how the use of supply side policies can help tackle identified main causes of unemployment in Singapore.
- Explain and exemplify the use of cost reduction policies to tackle unemployment in Singapore e.g. Jobs Credit Scheme was used to save jobs by subsidising wages during the 2008 recession and rental rebates and utilities rebates were also provided.
- Explain and exemplify the use of training and upgrading of skills as a supply side policy to tackle structural unemployment in Singapore.
 - **Evaluation:** State that supply side policies are highly costly thus incur high opportunity costs. Nevertheless, supply side policies associated with skills improvement would also contribute to increasing LRAS and SRAS thus contribute to growth in real national income and reduction in unemployment. In the long run, the government may be able to collect higher tax revenue which could offset the cost of the supply side policies.

4. Discuss that in US, a complementary mix of monetary and fiscal policies would be more effective in tackling the identified main causes of recession and unemployment, noting US budget deficit.

- Monetary policy in US
 - Explain how the use of monetary policy via lowering of interest rate (i.e. indirect mechanism) can increase C+I in US.
 - Briefly explain that because C and I in US are highly responsive to changes in interest rates, lowering interest rate would have a significant impact on increasing US real national income. Explanation of why C and I in US are highly responsive to changes in interest rate is required.
 - Explain how the use of monetary policy via quantitative easing (i.e. direct mechanism) can help increase C+I.
 - State that because US has a well-developed financial market with wide variety of financial assets, quantitative easing would be effective in US.
 - State that because US has a large multiplier, the increase in AD would cause a significantly more than proportionate increase in nominal national income thus tackling the recession.
 - **Evaluation:** State that the effectiveness of the monetary policies would largely depend on the level of confidence consumers and investors have in the US economy. If the confidence level is low, the use of monetary policy would have limited effects e.g. investors would not invest in the country even if interest rate is low due to high level of uncertainty especially when US is having a twin deficit – budget and BOP deficits.
- Fiscal policy in US
 - Explain how the use of fiscal policy via increasing G and decreasing taxes can help increase C+I in US.
 - State that similarly because of US large multiplier, fiscal policy would be effective.
 - **Evaluation:** However, given US budget deficit problems, the use of fiscal policy might lower confidence in the US economy thus might worsen recession in US. Nonetheless, the confidence in US economy might increase with the use of expansionary fiscal policy in US to deal with the recession if the mix of the fiscal policy is appropriate. For example, US should increase government expenditure on increasing US productive capacity instead of increasing spending on inefficient public procurement. The focus of US fiscal policy

should also be on decreasing tax especially cooperate taxes instead of increasing expenditure because of the positive effects of tax reduction on US potential growth via investment. Boosting the confidence of consumers and investors would contribute to increasing the effectiveness of US monetary policy. US would thus need to seek a balance between managing its budget deficit and the use of its expansionary fiscal policy.

Evaluative conclusion

- State that different economies have different causes of recession and unemployment because of the differences in the nature of their economies and thus different policies would be required to effectively tackle their problems.
 - For example, real wage unemployment due to strong trade union demanding for higher than market equilibrium wage rate is not a concern in Singapore as compared to US because of the strong commitment to the tripartite partnership among Singapore government, the workers and Singapore National Trade Union Congress (SNTUC).
 - For example, the use of interest rate policy in Singapore would largely not be effective as the use of interest rate policy in US to deal with recession and unemployment as explained by the policy trilemma and also because consumption and investment in Singapore are not responsive to changes in interest rate. In addition, C and I make up a relatively small percentage of Singapore AD and multiplier in Singapore is small thus changes in C+I would have an insignificant effect on the Singapore economy.
- However, similar policies can also be used for different causes of recession and unemployment in different economies e.g. broad based education would provide workers with different skills required to work in different sectors thus lower the problem of structural unemployment and it would also make them more productive thus manage firms cost of production hence lower increase in SRAS while providing the more productive workers higher income that can lead to higher consumption hence increase AD. Also because the cost of production is managed and workers are more productive, comparative advantage can be established and maintained.

Mark Scheme

Levels	Marks	Descriptors
High L3	18 - 21	<ul style="list-style-type: none"> • For an answer that shows <ul style="list-style-type: none"> ➢ EXCELLENT knowledge of the different causes of recession and unemployment for at least 2 different economies AND ➢ EXCELLENT knowledge of the different policies a government could adopt to tackle the recession and unemployment in at least 2 different economies • All policies explained must be related to the identified causes of recession and unemployment.
Low L3	15 - 17	<ul style="list-style-type: none"> • For an answer that shows <ul style="list-style-type: none"> ➢ VERY GOOD knowledge of the different causes of recession and unemployment for at least 2 different economies AND ➢ VERY GOOD knowledge of the different policies a government could adopt to tackle the recession and unemployment in at least 2 different economies • Policies explained must be related to the identified causes of recession and unemployment.
High L2	12 - 14	<ul style="list-style-type: none"> • For an answer that shows <ul style="list-style-type: none"> ➢ GOOD knowledge of the causes of recession and unemployment AND ➢ GOOD knowledge of the policies a government could adopt to tackle the recession and unemployment • SOME analysis of differences between economies is required. • Policies explained may be weakly related to the identified

		causes of recession and/or unemployment.
Low L2	10 - 11	<ul style="list-style-type: none"> For an answer that shows <ul style="list-style-type: none"> SOME knowledge of the causes of recession and/or unemployment AND <ul style="list-style-type: none"> SOME knowledge of the policies a government could adopt to tackle a recession and/or unemployment May have LITTLE analysis of the differences between economies Policies explained are not related to the identified causes of recession and/or unemployment OR <ul style="list-style-type: none"> EXCELLENT knowledge of different causes of recession and unemployment in different economies OR <ul style="list-style-type: none"> EXCELLENT knowledge of the policies that a government could adopt to tackle the recession and unemployment
High L1	6 - 9	<ul style="list-style-type: none"> For an answer that shows <ul style="list-style-type: none"> SOME / GOOD / VERY GOOD knowledge of the causes of recession and/or unemployment OR <ul style="list-style-type: none"> SOME / GOOD / VERY GOOD knowledge of the policies a government could adopt to tackle a recession and/or unemployment There may be some conceptual errors in the explanation, showing lack of understanding of the economic concepts.
Low L1	1 - 5	<ul style="list-style-type: none"> For an answer that is MOSTLY IRRELEVANT. Contains only a few valid points made incidentally in an IRRELEVANT CONTEXT.

Evaluation

Levels	Marks	Descriptors
E2	3 - 4	<ul style="list-style-type: none"> For a WELL-REASONED judgement, with clear criteria, on the appropriateness/effectiveness of policies a government could adopt to tackle recession and/or unemployment.
E1	1 - 2	<ul style="list-style-type: none"> For a MAINLY UNEXPLAINED judgement on the appropriateness/effectiveness of policies a government could adopt to tackle recession and/or unemployment.

Essay Question 5

- | | | |
|-----|--|------|
| (a) | Explain the possible conflicts in the achievement of macroeconomic aims when using demand-management policies. | [10] |
| (b) | In the light of these conflicts, discuss whether governments should rely solely on supply-side policies to achieve its macroeconomic aims. | [15] |

(a)
Suggested Answer:

Introduction

- When using demand management policies, there may be conflicts in the achievement of macroeconomic aims which arise.#
- The most common conflict is the conflict between achieving full employment and price stability.#
- There are also other conflicts such as those between achieving internal and external stability.#

Main Body 1 – Conflict between achieving full employment and price stability

- Demand management policies such as expansionary FP and MP are often used to achieve full employment.
- For example, when there is an increase in G as governments spend on building infrastructure to boost economic activity, there is an increase in AD and hence an increase in real NY.
- As more resources are employed, the economy operates closer to full employment.
- However the economy will also face demand pull inflation as demand rises and bids up costs of factors of production.
- Many fast developing countries like China with fast-rising AD and increasingly less spare capacity will likely face this conflict.
- [Include a well-explained AD-AS diagram to illustrate the increase in GPL as the economy moves towards achieving full employment]

Note: Alternatively, can explain that using contractionary FP and MP to reduce inflation conflicts with economic growth and employment.

Main Body 2 – Conflict between achieving economic growth and healthy BOP

- As expansionary demand management policies are used to achieve economic growth, the BOP may worsen.
- For example, if interest rates are lowered to reduce costs of borrowing, households will borrow more to spend on consumer durables and firms may also invest more as expected net profitability increases.
- This leads to an increase in AD and real national income.
- However, the demand for imports and hence import expenditure increases too. This is because many consumer durables may be imported and firms may also import raw materials and machineries for their investments.
- Assuming that export revenue does not rise as quickly, the balance of trade worsens.
- Ceteris paribus, the current account and hence BOP worsens.
- Thus countries like Singapore with high mpm will be more likely to suffer from this conflict. This is because the increase in import expenditure is larger when national income increases.#

Note: Alternatively, can explain that using contractionary DD-management policies to correct BoT deficit can conflict with economic growth and employment
OR

- If a country wants to achieve economic growth, it may choose to use expansionary MP to increase AD.#
- When interest rates are lowered, the cost of borrowing is lowered. This causes households to borrow more to purchase consumer durables such as televisions and refrigerators. This causes C to increase. Firms will also find that expected profitability of investment increases as costs of borrowing falls, given that economic conditions remain the same and returns on investments do not change. Thus I increases. Since C and I are components of AD, AD will increase, resulting in an increase in real national output and hence actual economic growth.#
- However, in an open economy, the lower interest rates would likely result in capital outflow. If there is massive capital outflow as funds move to countries which offer higher interest rates, the capital and financial account will worsen. This leads to a worsening BOP.#
- Hence, the desire to achieve actual growth via expansionary MP can conflict with the desire to achieve a healthy BOP.#

Main Body 3 – Conflict between achieving healthy BOP and price stability

- If a country is facing a deficit in its current account and BOP, it may make use of demand management policies to improve the current account.
- For example, an expenditure switching policy of currency depreciation would help decrease the price of exports in terms of foreign currency and increase the price of imports in terms of domestic currency.

- As export competitiveness increases, the demand for exports and hence export revenue increases. At the same time as imports become more expensive, consumers switch to purchasing domestic goods instead.
- Assuming that Marshall Lerner condition holds i.e. $IPED_x + PED_{ml} > 1$, BOT improves. Since $X-M$ increases, AD increases and general price levels increase too.
- However, if the economy is import-reliant, the depreciation of the currency could lead to imported inflation as the prices of imported raw materials increase. This causes the SRAS to fall and the general price level to increase. Thus a healthy BOP is achieved at the expense of price stability.
- An example of this would be Singapore, where imported inflation is likely to happen if the currency depreciates. This explains why Singapore is reluctant to depreciate its currency even when BOT is worsening.

Note: Alternatively, can explain that using exchange rate appreciation to control demand-pull inflation can conflict with BOP and economic growth

Note: Any other well-explained possible conflict which arises from the use of demand management policies will be accepted.

Conclusion

Thus, there is a need to consider the use of supply side policies in some cases to minimise these trade-offs. Alternatively, a suitable mix of policies may be considered to mitigate the unintended consequences which may arise.

Mark Scheme

Level	Descriptors
Level 3 (9-10)	<ul style="list-style-type: none"> • Answer shows excellent knowledge of at least 3 different conflicts in the achievement of macroeconomic aims when using demand-management policies. • Excellent rigour of analysis which includes excellent use of diagrams where appropriate • There are no errors in explanation • Good use of real world examples.
(7-8)	<ul style="list-style-type: none"> • Answer shows excellent knowledge of at least 2 different conflicts OR good knowledge of 3 conflicts in the achievement of macroeconomic aims when using demand-management policies. • Good rigour of analysis which may include good use of diagrams where appropriate • There are no major errors in explanation
Level 2 (5-6)	<ul style="list-style-type: none"> • Answer shows good knowledge of at least 1 conflict in the achievement of macroeconomic aims when using demand-management policies or some knowledge of 2 conflicts but may not be well developed. • Some rigour of analysis which may include a diagram
Level 1 (1-4)	<ul style="list-style-type: none"> • Answer is mostly irrelevant. • Answer may list conflicts without much economic analysis • Answer may have multiple concept errors.

(b)

Suggested Answer:

Introduction

- In the light of these conflicts, supply-side policies which focus on shifting the SRAS and LRAS can be used to avoid these conflicts instead.
- However, supply-side policies also have limitations and may also result in other conflicts.
- Hence, it may not necessarily be true that governments should rely solely on them.

Thesis: Governments should rely solely on supply-side policies.

Thesis 1: Supply-side policies should be used to avoid conflict between achieving full employment and price stability.

- Since expansionary demand management policies will always lead to inflationary pressures, especially as the economy approaches full employment, supply-side policies should be used instead.

- If governments focus on increasing productivity of the economy, for example through subsidizing R&D efforts and retraining programmes, the LRAS of the economy will increase.
- This allows the economy to achieve both actual and potential growth, while keeping general price levels low.
- There is thus no conflict between increasing real output and employment and price stability.
- [Include a well-explained AD-AS diagram to illustrate the rightward shift of LRAS, resulting in an increase in Y , Y_f and lowering of GPL]

Evaluation:

- However, as LRAS shifts to the right, the increase in full employment level means that there is still a gap between real output and full employment level.
- To achieve full employment level, the economy must necessarily tolerate some inflation.
- However, as long as the economy is still facing actual growth and more new jobs are created, this may not be a serious cause for concern.
- The potential growth which keeps in pace with actual growth ensures sustainable economic growth which is a key macroeconomic aim of most economies.

Thesis 2: Supply-side policies should be used to avoid conflict between achieving healthy BOP and price stability.

- Since currency depreciation to keep exports competitive may result in imported inflation, supply-side policies should be used to maintain export competitiveness instead.
- For example, the government may choose to encourage firms to invest in R&D, through the use of tax rebates, in order to use more efficient production techniques. This can cause costs of production to fall and prices of exports can remain competitive.
- For example, the US government has anti-monopoly laws to encourage more competition. This may give firms more incentive to improve the quality of their products and exports can also be more competitive if their quality is superior to products made in other countries.
- These would help boost the demand for exports and increase export revenue. The demand for imports might fall if local consumers prefer buying domestic goods. Import expenditure may fall too.
- This causes the current account and hence the BOP to improve.
- At the same time, because of the increase in R&D across industries, the productive capacity of the economy may increase and LRAS may increase.
- This helps to keep general price levels low. Hence there is no conflict between achieving a healthy BOP and price stability.

Evaluation:

- When $(X-M)$ increases, AD would increase and if the economy is approaching full employment level, there would be inflationary pressures.
- Thus the extent to which price stability can be achieved depends on the pace of the increase in LRAS. If the LRAS is increasing at the same pace as AD, price stability can be maintained. If AD rises much faster, the conflict with price stability would still arise.

Thesis 3: Supply-side policies should be used to avoid conflict between achieving healthy BOP and economic growth

- When expansionary demand management policies to help achieve economic growth, there will be an increase in import expenditure, resulting in a worsening current account and hence BOP.
- However if supply-side policies are used to attract FDI to promote economic growth instead, the capital and financial account is likely to improve.
- For example, the government might lower corporate tax rates or offer foreign firms incentives such as tax rebates in order to attract them. They may also reduce the red-tape to make application processes for new foreign businesses more efficient.
- If there is a net inflow of FDI, the capital and financial account will improve and this may offset the worsening current account. Hence BOP may improve.

Evaluation:

- However, in the LR, the current account may worsen even more as profits from foreign firms are sent back to their home country.

Antithesis 1: Supply-side policies have their limitations and hence governments should not rely solely on them.

- While it is true that supply-side policies can help to some extent to avoid some of the conflicts in

achieving macroeconomic aims, they also have their shortcomings.

- For example, supply-side policies like encouraging firms to invest in R&D can not only be costly, they may take a long time before any effects are seen, and even then, the success of these policies is very uncertain.
- Subsidising R&D can cause a strain on the government budget, depending on how substantial the subsidies are. Since R&D efforts tend to be costly, firms would probably only be incentivized to invest in R&D if the subsidies are significant. This is in contrast with demand management policies like MP where the government need not tap on budget reserves.
- Furthermore, there is no guarantee that R&D efforts would lead to increase efficiency. The effects of research can be uncertain and often takes many years before a breakthrough brought about by technology or discovery of new methods can be seen.
- Hence, it may be wise to also make use of some demand-management policies which may have more certain and immediate effects. This is especially so if the economy is facing a recession and needs to get out of it quickly.
- [Include a well-explained AD-AS diagram to illustrate how shifts in LRAS will do little to increase real NY especially if economy is at the Keynesian range.]
- If there is severe demand-pull inflation, the government may need to take quick action to reduce AD in order to reduce general price levels. Using supply-side policies to shift the LRAS may take too long, especially if the policies are targeted at increasing productivity through technology, training and R&D. If AD is in the Classical range and there is DD-pull inflation, shifting SRAS downward eg. by subsidizing costs may not help either, since there is no more spare capacity to increase output even if costs are reduced. The inflation will thus not be alleviated. Thus it would not be wise to solely rely on supply-side policies.
- Both demand management and supply-side policies can be used together. While expansionary FP or MP can be used to stimulate AD and growth, supply-side policies can be used to ensure that LRAS can continue to increase so that when the economy recovers from the recession, the general price levels may still be kept relatively low.
- [Include a well-explained AD-AS diagram to illustrate how both the shifts in AD and LRAS will help to further increase Y. At the same time, as Y_f increases, the rise in GPL is mitigated.]

Antithesis 2: When using supply-side policies, there may also be conflicts in the achievement of macroeconomic aims which arise and hence governments should not rely solely on them.

- When supply-side policies such as investment in more R&D and technology are used, there are also other conflicts which may arise. Hence it may not be wise to solely depend on supply-side policies as they also bring about unintended consequences.
- For example, in Singapore, with the government's push to increase productivity through encouraging more firms to use technology (e.g. through PIC scheme), not all workers will be able to adapt. Some workers without the relevant skills may find themselves out of a job. Also, with the rise in the use of technology, some workers may be replaced by machines. If these workers do not have other skills which are relevant to the changing needs of employers, they will face structural unemployment.
- Hence, pursuing actual and potential growth quickly via supply-side policies may result in a conflict with achieving low unemployment.#
- However, this does not mean that supply-side policies should not be used. Instead, there can be other policies put in place to mitigate these unintended consequences. For example, governments can put in place retraining programmes and provide subsidies to firms to encourage them to upgrade the skills of their employees.

Synthesis: In the light of these conflicts, whether or not governments should rely solely on supply-side policies depends on

- The macroeconomic aims the government is trying to pursue
If the government wants to achieve sustainable economic growth, it would be wise not to depend only on supply-side policies. This is because supply side policies tend to help achieve potential growth but can be slow in achieving actual growth. If both demand management and supply-side policies are used, actual and potential growth can be achieved together. This helps ensure sustainable economic growth.

Some conflicts between macro-economic aims can be avoided when using supply-side policies as discussed above. Hence, supply-side policies alone may be adopted where appropriate. However, it is important to note that supply-side policies may also result in other problems and hence in

those instances, relying solely on supply-side policies may not be appropriate.

- The prevailing economic conditions

If the economy is facing cost-push inflation, the government may want to rely solely on supply-side policies to increase SRAS in order to reduce general price levels. Using demand management policies in such a situation may be inappropriate because while general price levels may fall with contractionary FP/MP, there will be a conflict with growth as real output falls.

If the economy is facing a severe recession, the economy is likely to be operating rather far away from the full employment level. This means that expansionary demand management policies are unlikely to cause a conflict with price stability. Thus, the best measure may be to use expansionary FP/MP which has quicker and more certain effects than supply-side policies.

- The nature of the economy

If the economy has a small k , the effectiveness of demand-management policies may be limited. For example, in Singapore, due to high mpm and mps , the k is small, any increase in G would lead to a small increase in real NY . Thus the government tends to focus on the use of supply-side policies. However, this does not mean that the Singapore government relies solely on the use of supply-side policies. A mix of both demand management and supply-side policies are considered too.

Mark Scheme

Level	Descriptors
Level 3 10-11	<ul style="list-style-type: none"> • Answer shows excellent knowledge of: • how supply-side policies avoid at least 2 conflicts mentioned in (a) • how supply-side policies also have limitations (including consideration of appropriateness of shifting SRAS/LRAS depending on economic conditions) • how supply-side policies may also result in conflicts between macroaims # • Excellent development and rigour in economic analysis throughout which includes well explained AD-AS diagrams • Good recognition of the term “solely is needed • Good use of real world examples
9	<ul style="list-style-type: none"> • Answer shows excellent knowledge of at least 2 of these areas: <ul style="list-style-type: none"> - how supply-side policies avoid at least 1 of the conflicts mentioned in (a) - how supply-side policies also have limitations - how supply-side policies may also result in conflicts between macroaims # • Excellent development and rigour in economic analysis throughout which includes well explained AD-AS diagrams • Some recognition of the term “solely is needed
Level 2 7-8	<ul style="list-style-type: none"> • Answer shows good knowledge of at least 2 of these areas: <ul style="list-style-type: none"> - how supply-side policies avoid the at least 1 of the conflicts mentioned in (a) - how supply-side policies also have limitations - how supply-side policies may also result in conflicts between macroaims • Good development and rigour in economic analysis throughout which includes well explained AD-AS diagrams
6	<ul style="list-style-type: none"> • Answer shows fair knowledge of at least 1 of these areas: <ul style="list-style-type: none"> - how supply-side policies avoid at least 1 of the conflicts mentioned in (a) - how supply-side policies also have limitations - how supply-side policies may also result in conflicts between macroaims • Some development and rigour in economic analysis throughout which includes well explained AD-AS diagrams
Level 1 4 - 5	<ul style="list-style-type: none"> • Answer shows some knowledge of the pros and cons of supply-side policies • Little development and rigour in economic analysis. • Answer may be a mere listing of points.
1 - 3	<ul style="list-style-type: none"> • Answer is mostly irrelevant. • Only a few valid points made incidentally in an irrelevant context.

Evaluation	
E1 (3-4)	For a well-reasoned judgment on whether governments should rely solely on supply-side policies which includes the use of clear criteria to consider
E2 (1-2)	For a mainly unexplained judgment on whether governments should rely solely on supply-side policies

Essay Question 6

Already three years in the making, the Trans-Pacific Partnership (TPP) has been billed a "21st-century" trade agreement that goes beyond tariff reduction and tackles a wide range of barriers to trade and investment.

Source: The Straits Times, 8 October 2013

Discuss the likely effects of signing free trade agreements on Singapore's economic performance and Singaporeans' standard of living. [25]

Suggested Answer:

Introduction

Briefly explain the importance of free trade agreements (FTAs) to Singapore: FTAs serving as superhighways that connect Singapore to major economies and new markets.

Provide examples of FTAs that Singapore has with other countries: ASEAN Free Trade Agreement, FTAs with Australia, India and USA, Trans-Pacific Partnership (TPP) etc.

Define economic performance as the different aspects of measuring how the economy is doing and is tied to the 4 macroeconomic objectives, high economic growth, low and stable inflation, low unemployment and healthy balance of payment

Define Standard of Living: *Standard of living (SOL)* refers to the level of economic welfare and social well-being of an individual or household. It includes the quantitative (material) and qualitative (non-material) aspects of living.

Body

Signing free trade agreements is a form of trade liberalization to lower trade barriers and promote international trade.

A free trade agreement is a legally binding agreement between 2 or more countries that agree to remove some trade barriers between the signatories.

- May target at reducing barriers to foreign investment (and even labour restrictions)

Signing of FTAs will help boost free trade, especially between countries with **comparative advantage in different industries**.

For example, assuming that there are 2 countries (Singapore and Vietnam) and 2 goods (electronic components and clothes),

Due to the higher current level of technology that Singapore possesses, Singapore has absolute advantage in the production of both electronic components and clothes. However, due to differences in factor endowments (Heckscher-Ohlin Theory), the 2 countries have comparative advantage in different industries.

Singapore has a comparative advantage in production of electronic components due to its capital-intensive nature of production and the relative abundance of capital goods in the country whereas Vietnam has a comparative advantage in production of clothes due to its labour-intensive nature of production and the relative abundance of labour in the country.

Thus Singapore has lower opportunity costs in producing electronic components (in terms of clothes) and Vietnam, lower opportunity costs in producing clothes (in terms of electronic components)

Thus Singapore will benefit from the increase in production if Singapore specialises based on its comparative advantage and will be able to benefit from increase in consumption if the two countries trade based on a set of mutually beneficial terms of trade. Signing of FTAs will result in the lowering of barriers to trade and encourage production and specialisation based on comparative advantage.

AD-AS analysis

Effects on AD

Signing of FTAs means that barriers to trade such as tariffs are reduced or removed completely. Removal of the barriers will lead to a lowering of prices for both imports and exports for Singapore.

If Price Elasticity of Demand for exports (PED_x) is higher than PED_m , then net export revenue will increase and this will lead to an improvement of balance of trade and ultimately in balance of payment position. As Singapore tends to have a high PED for exports, due to the availability of close substitutes for Singapore's exports (e.g. electronic components) and a low PED for imports, due to degree of necessity and dependence on imported raw materials and basic necessities, there will a net increase in net exports ($X-M$). [Student may also make use of YED concepts to analyse the long-term changes as a result of freer trade due to the FTAs]

Lowering barriers to investment into Singapore will allow Singapore to benefit from an influx of foreign direct investment by foreign multinational enterprises (MNEs). This is especially so as firms choose to outsource production to countries with lower opportunity costs of production. For example, Singapore, which has a comparative advantage in capital-intensive industries, is a net recipient of such foreign direct investment.

Assuming that net exports ($X-M$) and FDI increases, there will be an increase in aggregate demand (AD) and this results in actual growth for the economy.

Effect on AS

Signing of free trade agreements will have a direct impact on the prices of imports, lowering the prices of imports through the lowering of tariffs and other forms of barriers. In the longer term, the agreements help to diversify Singapore's import sources and reduce dependence on any one source of import and this will reduce Singapore's vulnerability and decrease the market power and ability of any of the importers to increase prices. This will reduce the occurrence of imported inflation and possibility of cost-push inflation, thus leading to an increase in SRAS. [Alternatively, the removal of barriers to trade such as tariffs will result in less governmental restrictions on trade and a decrease in structural rigidities, thus leading to a decrease in the cost of imported raw materials and a decrease in cost of production for firms and thus leading to an increase in SRAS.]

The MNEs are likely to invest in capital-intensive, knowledge-intensive sectors in which Singapore has a comparative advantage in. The influx of FDI will also improve the quality of factors of production and the level of technology in the domestic economy. There will also be dynamic gains from trade through innovation, technological advances and productivity improvements through the increase in competition with the entry of multinational enterprises. The increase in competition will reduce the onset of x-inefficiency and enabling firms to be productively efficient as well as increase the pace of innovations to attract consumers thus resulting in dynamic efficiency. These will lower cost of production as well as increase the productive capacity of the economy, increasing SRAS and LRAS.

(Illustrate with diagram showing increase in AD and the increase in SRAS and LRAS).

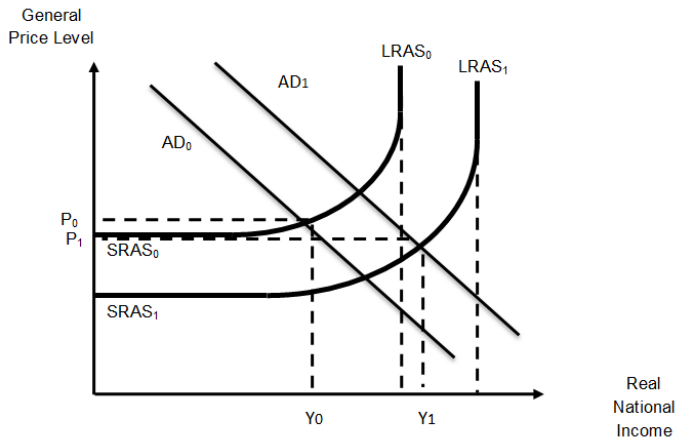


Fig 1: Increase in AD and AS with FTAs

As illustrated in Fig 1, there is an increase in AD (from AD_0 to AD_1) due to the increase in net exports and FDI and an increase in SRAS (from $SRAS_0$ to $SRAS_1$) and LRAS (from $LRAS_0$ to $LRAS_1$) due to the influx of investment. There is an increase in national income from Y_0 to Y_1 .

Impact on economic performance

Economic growth, inflation and Balance of Payment

Economic Growth and Inflation: The increase in real national income results in an increase in economic growth, both actual and potential growth. If the growth of SRAS and LRAS keeps pace with the growth in AD, there will be sustainable economic growth, alleviating fears of demand-pull inflation and any inflationary pressure.

Balance of Payment: With growth of FDI and (X-M), there will be an improvement in both the capital and financial account and current account. Since Singapore is experiencing a balance of payment (BOP) surplus, this will lead to a larger BOP surplus.

Evaluation:

- Whether Singapore enjoys a net inflow of investment and increase in net export revenue or not depends on the nature of countries and the specific terms of the free trade agreement. The specific terms of the FTAs depends on the bargaining power that Singapore has in its negotiations with the other signatories.
- However, considering the many complementary schemes by the Singaporean government to attract Foreign Direct Investment (FDI), there may be a net inflow of FDI, this will lead to an improvement in the capital and financial account of BOP, although this may cause a worsening of current account due to factor incomes outflow in the long run.
- Signing of free trade agreements will have a direct impact on the prices of imports. In the longer term, the agreements help to diversify Singapore's import sources and reduce dependence on any one source of import and this will reduce Singapore's vulnerability and decrease the market power and ability of any of the importers to increase prices. This will reduce the occurrence of imported inflation and possibility of cost-push inflation. This will also alleviate the onset of demand-pull inflation as a result of increased aggregate demand arising from the increase in FDI and (X-M).
- However, if there is world-wide inflation, the negative impact on Singapore will be greater due to increased exposure to imported inflation.

Unemployment

Due to the increased production of goods and services, derived demand for labour will increase thus

reducing cyclical unemployment.

Evaluation:

- However, due to structural changes brought about by signing of FTAs, there will be creation of new job opportunities in the capital intensive, knowledge-intensive industries while labour intensive industries will see more jobs made obsolete and it is unlikely that the new industries, which does not require as much labour inputs, will be able to absorb the excess labour due to the retrenchments.
- This will then result in structural unemployment, especially for the older, low-skilled workers who may find it difficult to transit to the newly developed industries. Structural unemployment will thus increase with the restructuring of the economy, and become a source of chronic unemployment. This is especially so with the increasing pace of technological advancements and innovations that may lead to technological unemployment.
- The occurrence of cyclical unemployment will ultimately depend on Singapore's trade position (whether it is having a balance of trade surplus or deficit). If the FTA includes labour provisions that remove the restrictions on foreign labour, there might be increased competition from foreign labour, resulting in increased unemployment and increased income inequality that lowers the standard of living in Singapore.

Impact on SOL

Positive Impact

- Increase in economic growth → increased availability of goods and services for consumption → increased material SOL.
- Inter-industry Trade: Assuming mutually beneficial terms of trade, Singapore will benefit from an specialisation and an increase in trade based on inter-industry trade with increased consumption for the Singaporean population and an increase in material standard of living for the signatories.
- Even if both countries signing the FTA have similar comparative advantages, Singapore can also benefit from intra-industry trade, with companies in both Singapore and the other signatory (e.g. USA) being able to continue reaping internal economies of scale even as consumers benefit from the increased variety of goods and services that are now available with trade → improvement in non-material SOL. Increase in competition with entry of foreign firms may also result in price and non-price competition that leads to lower prices and increased variety of goods → Improvement in non-material SOL.

Negative Impact

- Unemployment and negative impact on the society's overall standard of living with a permanent class of unemployed, who may result to crime (causing negative externalities) and bring about a variety of social ills on Singapore.
- To add on to the problem of income inequality, the profits repatriated by Singaporean firms from foreign markets are likely to benefit only a small group of shareholders and workers, thus increasing the differences between the rich and poor in Singaporean society.
- Problem of openness and volatility: Signing more FTAs will make Singapore ever more reliant on the external sector for employment and economic growth, this will make Singapore even more vulnerable, especially in the event of a worldwide recession. The increased vulnerability, unpredictability and volatility will add on to the stress of Singaporeans and is definitely a negative impact on Singaporean's non-material standard of living.
- Problem of increased pollution and depletion of natural resources: With the increased economic activity and investment, this may lead to increased pollution and depletion of natural resources. For instance, with the investment in petrochemical industries in Jurong Island, there is an increase in carbon emissions and emissions of other pollutants into the air. However, there are other types of investments such as investments in the banking sector and increase in economic activities that are unlikely to contribute much to pollution and depletion of resources.

Evaluation and Conclusion

Signing of FTAs tend to take a long time to negotiate and the effects often take a long time to materialise. The effects also depend on the specific terms of the free trade agreements.

Based on the analysis, signing of FTAs is likely to have a net positive effect on Singapore's standard of living and economic performance, especially in terms of material SOL and on Singapore's BOP position, economic growth and inflationary pressures but negative effects for employment as well as on non-material SOL. However, the effects of FTAs are further contingent on the following factors:

- State of the economy: The state of Singapore's economy, whether it is near full employment level of output or not will affect the impact of FTAs. If Singapore is already producing near the full employment level of output, an increase in net exports and FDI may result in overheating of the economy with little actual economic growth.
- Depends on conditions in the global economy: Signing FTAs lead to increased openness of Singapore's economy and vulnerability to worldwide conditions. If there is a worldwide recession, Singapore will be even more adversely affected by a fall in trading partners' income.
- Depends on the nature of economy of trading partners and worldwide conditions: The type of trading partners that Singapore has an FTA with also affects the impact on SOL and economic performance. For example, signing of FTA with India, a country with a different comparative advantage would confer different costs and benefits as compared to signing a FTA with a comparatively similar country like the USA and affect different domestic industries in Singapore.
- Type of government policies to mitigate/complement the effects: If the Singaporean government enacts income redistribution policies to provide assistance to the unemployed and the "losers" from the FTAs, the negative effects on SOL can be minimised.

Mark Scheme

Levels	Marks	Descriptors
High L3	18 - 21	<ul style="list-style-type: none"> • For an answer that shows excellent knowledge of how the signing of FTAs affect standard of living AND economic performance (at least 3 macroeconomic aims) through both positive and negative effects on trade and investment flows • Theory of comparative advantage as the underlying motivation for free trade is clearly examined. • Answer must cover both positive and negative impact on macroeconomic aims and standard of living • Excellent reference to AD-AS framework • There is excellent consideration of Singapore's context where Singapore's unique characteristics and nature of economy are examined with specific and relevant examples.
Low L3	15 - 17	<ul style="list-style-type: none"> • For an answer that shows good knowledge of how the signing of Free Trade Agreements affect standard of living AND economic performance (at least 3 macroeconomic aims) through its effects on trade and investment flows • Theory of comparative advantage as the underlying motivation for free trade is clearly examined. • Answer must cover both positive and negative impact on macroeconomic aims and standard of living • Good reference to AD-AS framework • There is good consideration of Singapore's context where Singapore's unique characteristics and nature of economy are examined with relevant examples
High L2	12 - 14	<ul style="list-style-type: none"> • For an answer that shows fair knowledge of how the signing of Free Trade Agreements affect standard of living AND economic performance (at least 2 macroeconomic aims) through its effects on trade and/or investment flows • Theory of comparative advantage as the underlying motivation for free trade is somewhat examined • Answer may cover either positive or negative impact on macroeconomic aims and standard of living

		<ul style="list-style-type: none"> Some reference to AD-AS framework There is some consideration of Singapore's context where Singapore's unique characteristics and nature of economy are examined
Low L2	10-11	<ul style="list-style-type: none"> For an answer that shows fair knowledge of how the signing of Free Trade Agreements affect standard of living and/or economic performance (at least 2 macroeconomic aims) through its effects on trade OR investment flows Theory of comparative advantage as the underlying motivation for free trade may not be examined. Answer may cover either positive or negative impact on macroeconomic aims and standard of living There is little consideration of Singapore's context
High L1	6 - 9	<ul style="list-style-type: none"> For an answer that shows little knowledge of how the signing of free trade agreements affect standard of living and economic performance through its effects on trade. Theory of comparative advantage as the underlying motivation for free trade is not examined. There is little/no consideration of Singapore's context
High L2	1-5	<ul style="list-style-type: none"> For an answer that is mostly irrelevant Contains only a few valid points made incidentally in an irrelevant context

Evaluation

Levels	Marks	Descriptors
E2	3 - 4	<ul style="list-style-type: none"> For a well-reasoned judgment on the effects of free trade agreements on economic performance and standard of living
E1	1 - 2	<ul style="list-style-type: none"> For a mainly unexplained judgment on the effects of free trade agreements on economic performance and standard of living