Answers to 2015 H2 Economics Preliminary Exam Paper 2

Question 1
In the developed world, the trend away from direct tax towards indirect tax has been hastened by the global financial crisis.

http://www.taxation.co.uk/taxation/Articles/2011/06/03/25122/shift-indirect-taxes-rise-globally
Accessed on 24th August 2015

Discuss the combined effect of increases in indirect taxes and decreases in personal income tax on consumers in different markets. [25]

Introduction

To analyse the combined effect of increases in indirect taxes and decreases in personal come tax on consumers in different markets, demand and supply analysis and the concepts of price elasticity of demand and supply and income elasticity of demand will be used.

Body

Rise in indirect taxes

An indirect tax is a compulsory levy imposed on the sale of goods and services. The producer or retailer has the *legal responsibility* to pay the tax to the government. E.g. GST and excise taxes on tobacco.

An increase in indirect taxation will effectively add on to the marginal costs of production of firms. The increased marginal cost of production will reduce the profits of producers, leading to a fall in the supply of the good. The supply curve shifts up by the full amount of the tax.

Cut in personal income taxes

Direct taxes are taxes levied by the government directly on the income and wealth of individuals and firms. Personal income tax is on households' income. When income taxes are cut, households' disposable income rises.

A fall in income tax will have different impacts on demand - it depends on the income elasticity value of the demand for the good concerned. A rise in disposable incomes due to a fall in income tax will cause demand for normal goods to rise as these goods have positive income elasticity, for which demand will increase when income rises and demand decreases when income falls. Normal goods can be classified as luxury goods and basic necessities.

Case 1: $Ep<1$ + $0<Ey<1$

A product with a demand that is price inelastic has few close substitutes or price takes up small percentage of income. For instance, the demand for cooking oil tends to be price inelastic, as there are no close substitutes for it, hence its $Ep<1$.

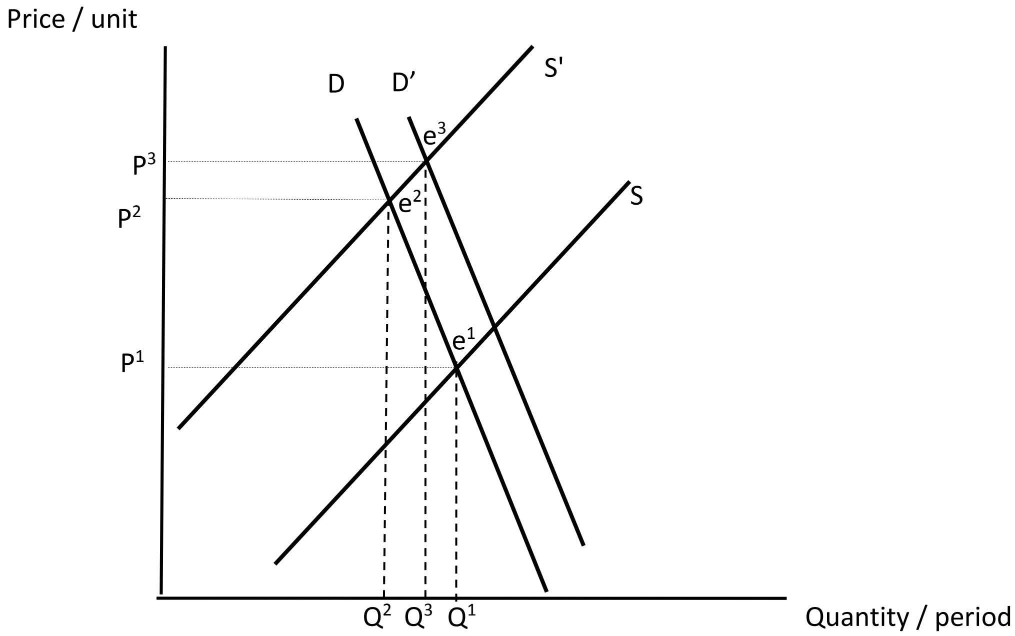
As explained earlier, an increase in indirect tax will shift the supply curve leftwards.

An increase in disposable income caused by cuts in personal income taxes will cause a less than proportionate increase in the demand for basic necessities. The demand for basic necessities such as cooking oil is income inelastic, $0<Ey<1$, and is illustrated by an small rightward shift of the demand curve when disposable income increases due to a reduction in personal income tax.

With a fall in supply and a rise in demand, the effect on the market equilibrium price of cooking oil will rise unambiguously, as shown below. This is because decrease in supply together with increases in demand creates a shortage. Those who can't get the good will bid up the price. However, if the effect of the rise in indirect taxation outweighs the effect of the increase in disposable income, i.e. the fall in supply outstrips the rise in demand, the combined effect will be a reduction in the equilibrium quantity for cooking oil. Similarly, if the effect of the increase in disposable income outweighs the effect of the rise in indirect taxation, the combined effect will be an increase in the equilibrium quantity of basic necessities. Therefore, the combined effect on the equilibrium quantity is indeterminate as it may reduce, remains unchanged or increase, depending on the relative shifts of the demand and supply curves.

Evaluation:

It is more likely that the fall in supply for cooking will outweigh its rise in demand as the good is a basic necessity for everyday cooking; the effect of a rise in disposable income as a result of a fall in income tax has very little on its demand. Since the rise in equilibrium price has exceeded the fall in the quantity, total expenditure by consumers rises.



First, holding demand constant, the fall in supply would have caused TE to rise when the equilibrium point changes from e^1 to e^2. This is because given a price inelastic demand, the fall in quantity demanded would have been less than in proportion to the rise in price such that the increase in spending from having to pay a higher price would have more than offset the decrease in spending from buying fewer units. Then, letting demand rise as well, both price and quantity increases, thus resulting in further increases in TE.

Case 2: Ep>1 + Ey>1

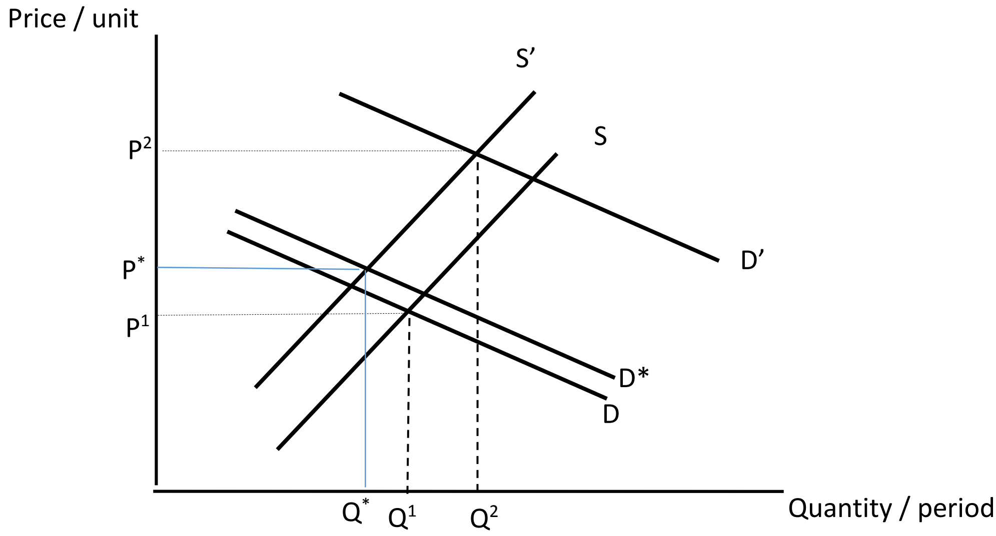
A good with a demand that is price elastic has close substitutes or price takes up a big % of income, Ep>1. For example, the demand for a BMW cars tends to be price elastic, as there are other brands of cars widely available, on top of the public transportation that exist as substitutes.

Luxuries such as cars and overseas holidays have a high income elasticity of demand, Ey>1. Demand rises more than proportionately to a rise in income. Hence, the demand for luxury goods such as a BMW car is income elastic and its demand will significantly shift rightwards when disposable income increases due to the reduction in personal income tax.

Again, the market equilibrium price of BMW cars will rise unambiguously, since there will be a shortage, as shown below.

Evaluation:

If the fall in income tax was substantial enough, the rise in demand will outstrip the fall in supply, as the demand for a BMW car is extremely income elastic, given that it is a luxury good. This causes a rise in quantity sold. This means that consumers ultimately face a rise in their total expenditure on BMW cars since both the equilibrium price and quantity rose.



However, with income taxes being reduced in times of a recession, the rise in demand may not be much since households are uncertain of their future income stream. This means that with demand rising by only a little (e.g. to D and the final equilibrium being at P*), total expenditure by consumers could well be lowered or unchanged or at most increase slightly.*

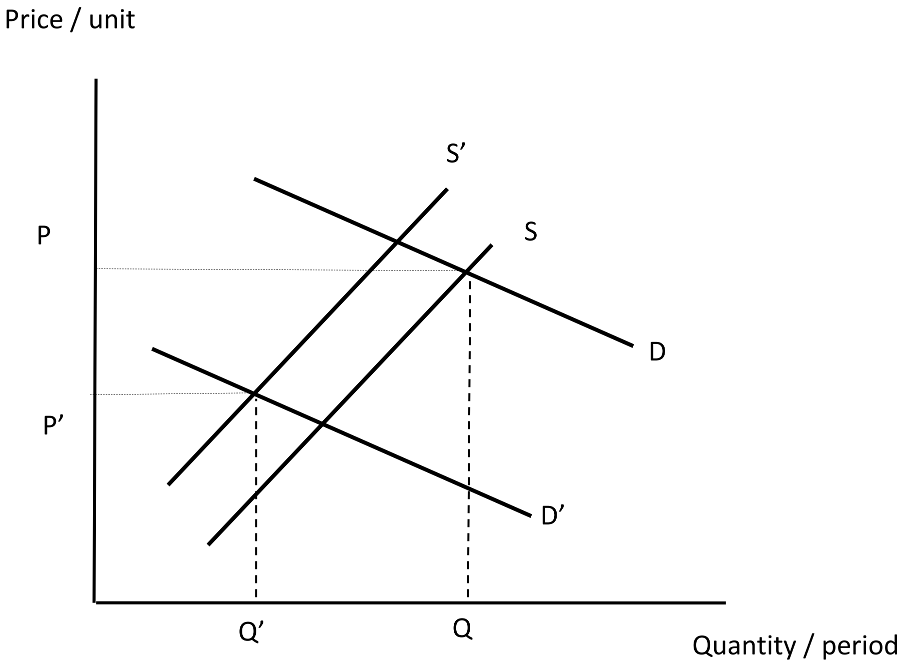
Case 3: Ep>1 + Ey<0

Inferior goods are goods where demand falls when income rises and demand rises when income falls. The income elasticity of demand has a negatively value. An example of an inferior good is non-smart mobile phone. An increase in disposable income will reduce the demand for these inferior goods, shifting the demand curve to the left. As explained, an increase in indirect taxation shifts the supply curve to the left.

If the fall in demand is relatively greater than the fall in supply, equilibrium price reduces since there would be a surplus. However, if the fall in supply is greater, causing a shortage, then the price of non-smart mobile phones will rise. As both demand and supply curve shift to the left, the combined effect of the rise in indirect taxation and reduction in personal income tax will be an unambiguous fall in the equilibrium quantity of non-smart phones.

Evaluation:

The fall in demand is likely to be bigger as non-smart mobile phones are highly income elastic, due to availability and accessibility of smart phones, especially in Singapore where income levels are relatively high. This results in a fall in the equilibrium price and output, as shown below, and hence, a fall in total expenditure on non-smart phones by consumers.



Conclusion

Stand: The combined effect of the rise in indirect taxation and reduction in personal income tax will increase the equilibrium price of normal goods, with impact on TE dependent on the relative extent of shifts in the demand and supply curves. The combined effect of the rise in indirect taxation and reduction in personal income tax will reduce the equilibrium quantity of inferior goods.

In addition, the extent of the increase in indirect taxation and reduction in personal income tax will have an influence on the relative shifts of the supply and demand curves respectively.

Something special: Although a reduction in personal income tax will increase disposable income and tends to increase demand for normal goods, the extent of the increase in demand is also dependent on the prospect of the economy and the level of consumer confidence. In addition, the fall in income taxes would not affect the lower income households much, as they may not even be taxed in the first place. In such a case, impact on consumers would be adverse since indirect taxes are regressive.

Knowledge, Application, Understanding and Analysis		
L3	For an answer that analyses 3 markets. The explanation is well developed. Examples are relevant the analysis. <u>Considers impact on consumers in terms of their TE, and not just about equilibrium price and quantity.</u> For an answer that uses analysis to underpin the discussion of the combined effect on the equilibrium price, equilibrium quantity of goods with different income elasticity of demand, in at least 2 markets.	**18-21** **15-17**
L2	Answer is more relevant to the Q (e.g. links to impact on consumers) but the theory is incompletely explained. For an answer with limited economic concepts that gives an underdeveloped explanation of the combined effect on the equilibrium price and equilibrium quantity of goods with different	**12 - 14** **10-11**

	income elasticity of demand. Mid L2 for an answer that only discusses 1 market	
L1	For an answer that shows a descriptive knowledge of the combined effect on the equilibrium price and equilibrium quantity. Answer is mostly irrelevant except for a few valid but unexplained points.	**6-9** **1-5**
Evaluation		
E2	For an evaluative assessment based on economic analysis, e.g., extent of increase in indirect taxation and reduction in personal income tax, consumer confidence etc.	**3 - 4**
E1	For an unexplained assessment or one that is not supported by economic analysis.	**1 – 2**

Question 2

Starbucks Coffee Company today announced that it is opening its first store in Brunei – the company's 64th global market - and its 100th store in Singapore, which will give people with autism the opportunity for meaningful employment and new lifelong skills.

http://www.marketwatch.com/story/starbucks-southeast-asia-growth-momentum-continues-with-significant-milestones-in-brunei-and-singapore-2014-02-14 Accessed on 2nd August 2015

(a) Explain how globalisation could increase a firm's profits. [10]
(b) Discuss whether price competition should be the primary business strategy for a coffee café chain like Starbucks in Singapore. [15]

Part (a)

Introduction

- Globalisation is the increased *integration* of economies around the world, through the movement of goods, services, capital, labour and knowledge across international borders.
- Based on traditional economic theory, all firms seek to maximise total profits, which is attained at the output level at which MC=MR. Total profit is the difference between total revenue (TR) and Total Cost (TC).
- Firms could make use of globalisation to increase its total profits by increasing AR and reducing AC.

Body

Profit-maximisation

A profit maximising firm produces where MR=MC This is because as long as MR>MC, total profits can still increase by producing more. On the other hand, if MR<MC, the increase in production will lower total profits.

Increase in AR as demand increases

When trade barriers are reduced/abolished, local firms gain greater access to foreign markets providing an opportunity for domestic firms to increase their exports. This increases demand for their products and hence their revenue, as they get to sell to a bigger market. As in fig 1, the DD(AR) curve shifts to DD'(AR').

Decrease in AC through iEOS

When a firm is able to sell its output in global markets, its scale of production increases. This enables it to more fully exploit economies of scale. Internal economies of scale (EOS) refers to the reduction of unit costs (average costs) as output level of a firm expands. The cost savings could come from technical improvements achieved in their production process due to the increase in their plant size. For example, a small steel manufacturing plant cannot install half an open hearth furnace, since capital is indivisible. However, when the firm decides to expand globally, it is able to produce larger volumes of output and hence, the costs of these machines are distributed over a larger output level, bringing its unit cost down.

Another example how firms are able to reap lower cost when they expand globally is when they are able to practice bulk buying; these larger firms also enjoy greater market power over their suppliers. They usually get bulk discounts from suppliers because they place large orders and this leads to lower unit costs, increasing their profits, ceteris paribus.

Decreases in AC through access to cheaper factors of production

- Via importing raw materials / components from countries with comparative advantage

  When a country reduces/abolishes trade barriers or transports costs reduced, local firms might be able to obtain some of it inputs more cheaply by importing them from countries which can produce them at lower opportunity costs, instead of buying them from other local firms.

- Via off-shore outsourcing of part of the production process

  With globalisation, firms may gain access to cheaper foreign inputs such as labour, such as outsourcing production to India and China where wages are much lower compared to their home country. For example, the tech giant Apple only designs its products in the USA, but outsources their manufacturing jobs to various countries like China and Mongolia. Foxconn is the company that is contracted by Apple to assemble iPhones in a southern Chinese city. Wages earned by a Chinese factory worker is at least 17 times cheaper than that of a US citizen, enabling Apple to lower its marginal cost and average cost of production drastically, reaping higher profits.

  Some firms also outsource their production elsewhere to tap on the existing expertise and technology that the foreign country has to offer. For example, Silicon Valley in the USA is a hotbed for start-ups looking for greater network and diffusion of technology.

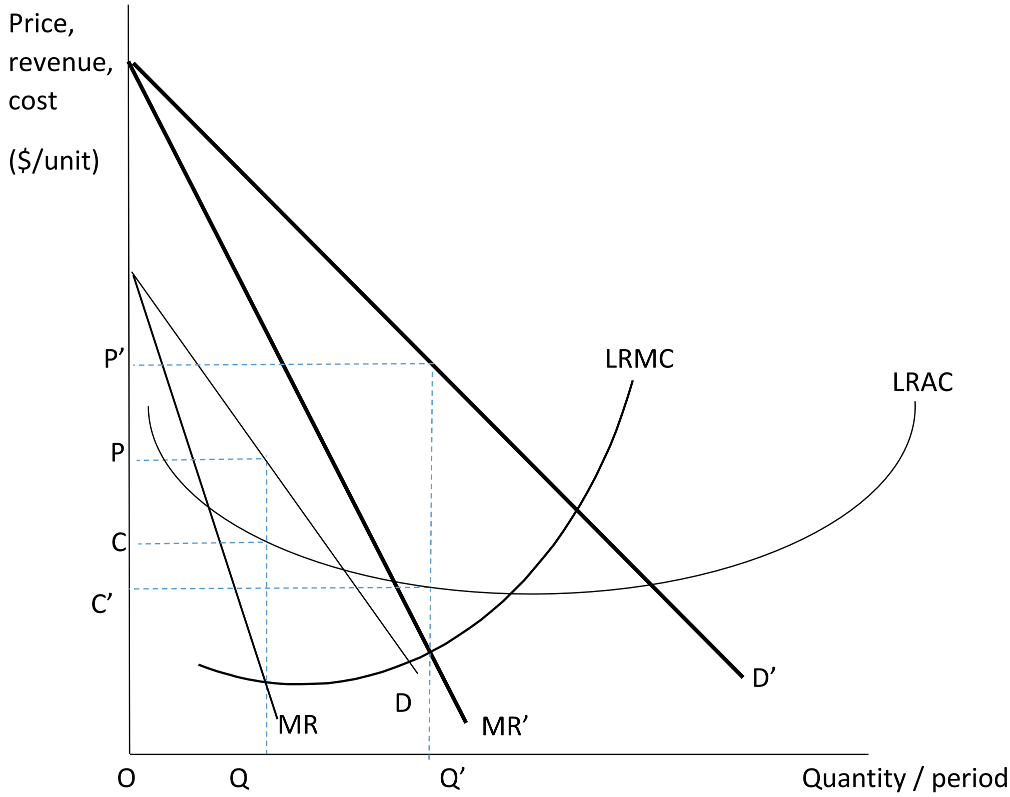
Decreases in AC through Improvement in productive and dynamic efficiency due to greater competition

In addition, the threat of competition from other firms in the global market would spur the domestic firms to invest more in R&D. The improvement in dynamic efficiency would result in a range of benefits to both consumers (including better quality and a wider range of products) as well as producers. This is because if the investment leads to more efficient production methods, this may also lead to a fall in average cost of production for firms, thereby increasing their profits. Also, given the increase in competition from foreign competitors, domestic firms are likely to become less complacent and more cost efficient. The reduction in X-inefficiency would help to lower AC and MC, and hence improve profits.

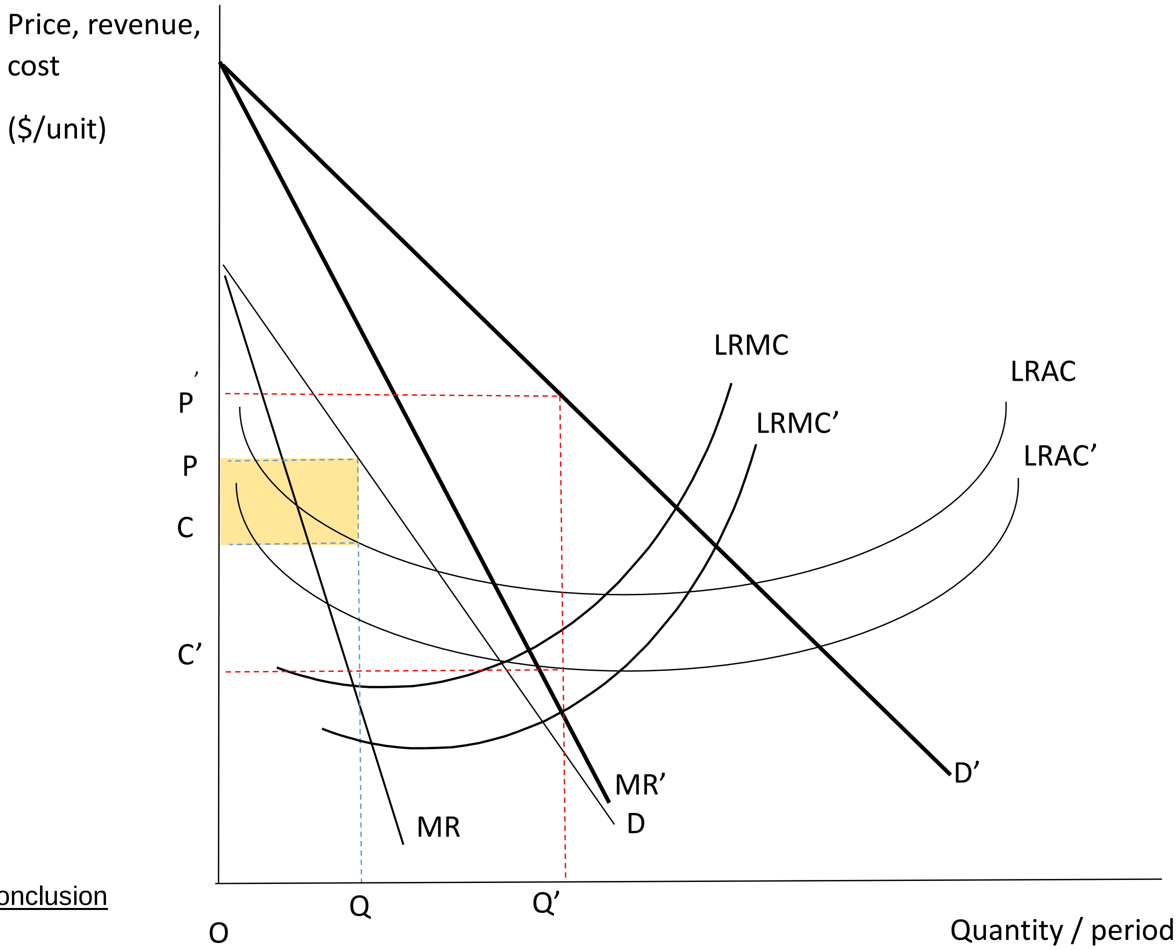
Impact on profits

With increase in AR and decrease in AC (MC curve and AC curve shifts down when a bigger plant is used or AC shifts down due to access to cheaper inputs) and increases in quantity sold, total profits rises from [P-C] x Q to [P'-C'] x Q'.

Figure 1
Note: if LRAC is drawn and the point about decreases in AC is only about greater exploitation of internal EOS, then the diagram looks as follows –



Note: Note: if LRAC is drawn and the point about decreases in AC is about ability to obtain cheaper factor inputs, then the diagram looks as follows –



Conclusion

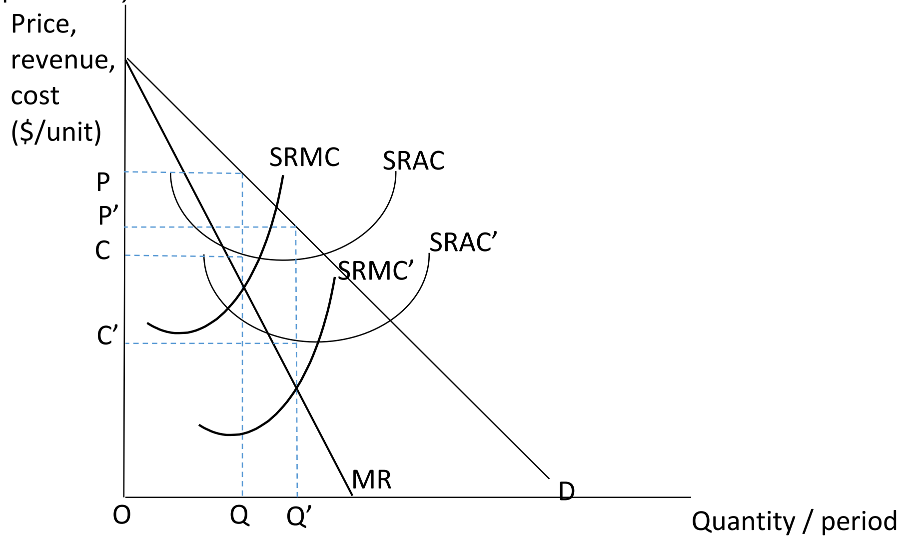
Hence, if firms are able to harness these opportunities by increasing demand and cutting cost as they expand globally, they would be able to increase their overall profits.

L3	For a complete analytical explanation on how globalisation can increase a firm's average revenue and lower average cost of production via EOS and acquiring cheaper factor inputs (or any other 2 ways to lowering AC, attributed to globalisation).	7 - 10
L2	For an inadequate explanation on how globalisation can increase a firm's profits. Considers impact on either AR or AC only.	5 – 6
L1	For an answer that shows some theoretical knowledge of how expansion into global markets can help a firm increase profits. Answer is mostly descriptive. Contains conceptual errors.	1 – 4

Part (b)

Introduction
The speciality coffee café industry is an oligopoly with a few dominant firms**,** namely, Starbucks, The Coffee Bean, TCC etc. There are few close substitutes and there are relatively high barriers to entry due to branding.
To analyse whether price competition ought to be the key strategy, the type of market structure and the objective of the firm needs to be considered.
Note: Explanation of this industry as a monopolistically competitive industry is accepted as well but the analysis and evaluative comments must match the market structure.

Body
Thesis: explain how price competition works to increase profits
Starbucks could give discounts to encourage consumers to buy more of their products. This lower price relative to its rival firms increases the quantity demanded of its products as consumers switch away from these other brands to patronise Starbucks. With price inelastic demand, a cut in price would actually lead to a less than proportionate rise in quantity demanded causing TR to fall. But if consumers grow to like this product, over time, demand rises due to change in taste. The firm can then revert to charging the profit-maximising price.
or
[If the argument is that there are close substitutes giving rise to price elastic demand] To engage in price competition to increase profits, the firm must lower its MC and AC first, e.g. by making the production process more efficient or by sourcing for cheaper raw materials. Assuming it is able to do so, the firm is then able to lower price (to P'), sell a bigger volume (Q') by winning over customers from its rivals and earn more profits (draw diagram with MC / AC shifting down resulting in a bigger profit area).



[Note: Another argument to explain why price competition is a possible key business strategy for an oligopolist is the strategy of limit pricing – i.e. temporarily lowering price (i.e. moving away from profit maximising price) but still being able to break even due to iEOS) to discourage entry of new firms. The aim here is to preserve market share. A counter argument to this point would be to question the usefulness of the strategy for the case of the café business as the EOS, though present, may not be very substantial]

Anti-thesis: explain why price competition may not be the better primary strategy for coffee café chains.

The above analysis assumes ceteris paribus. I.e. when price is cut, rival firms do not change their price. However, due to the interdependence of the firms in the speciality coffee café market, a fall in prices of Starbucks products will cause the rival firms to follow suit. Because there are only a few firms in this oligopolistic market, there will be a very high degree of rival consciousness. Applying the kinked demand model, if Starbucks were to lower its prices below the prevailing price, rival firms may interpret this price cut as an aggressive attack and so match the price cut. This inevitably results in a price war in which all firms lose, as they will all have lower total revenue. Hence, due to the element of interdependency, there is generally price stability in an oligopoly and *price competition may not be a good strategy for the coffee café chains to earn higher profits in the long term*.

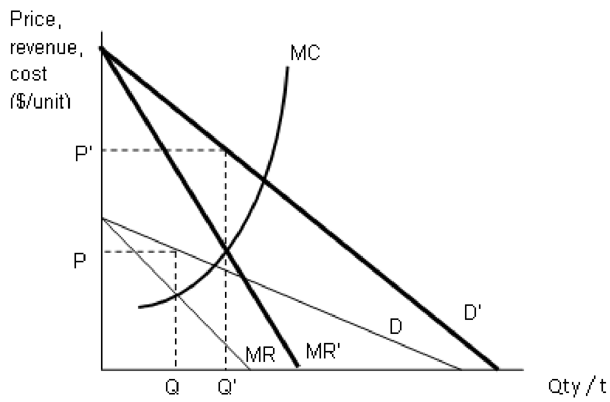
Hence, firms in an oligopolistic market would rather compete on the basis of non-price competition like advertising, branding and product differentiation.

Explain why non price competition could gain larger market share and earn more profits

As a result, these coffee cafes often use more non-price competition strategies to gain a larger market share and earn more profits by creating real differences to their products and service.

1. Advertising

Coffee café chains often advertise their brands and project different image to consumers. Starbucks products are usually already very well-known and established in the minds of the consumers but they continually try to compete with advertising. Advertising will create brand loyalty and generate a higher and more price inelastic demand as shown below. Demand shifts to the right to D’ from D. Starbucks now maximizes its profits by producing Q' where MC=MR' and is able to charge a higher price of P'. Assuming the increased total revenue it generates more than offsets the advertising costs, its profits will increase. In addition, advertising will raise market penetration costs to create a barrier to entry for prospective firms, thereby allowing Starbucks to retain its market share.



2. Social entrepreneurship

Starbucks also prides itself in taking on social issues, such as helping people with autism get employment to support themselves. As part of their corporate social responsibility efforts, they advertise for these campaigns but by doing so, they too benefit as people who relate and are equally passionate about these movements will patronise their products. For example, its TR increased by 9% when the company took on controversial movements such as the issue of gun possession in USA.

3. Loyalty programs
Coffee café chains may give rebates and loyalty points to encourage consumers to keep buying their coffee. For example, Starbucks loyalty card enables members to enjoy special birthday treats and free food and drinks after accumulating a certain level of points/stars. These coffee chains can also tie up with other credit card companies to offer more rebates and loyalty points. The Coffee Bean & Tree Leaf has tied up with UOB; customers who use their UOB credit cards to purchase their products get rebates on the spot.

Conclusion
Stand: *It should not be its primary strategy.*
Substantiation: *Price competition is not a good strategy for profit maximising firms like Starbucks, given the interdependence nature of oligopoly. At best, it could practice price competition in the short term to increase sales and win customers' over.*
To avoid price wars, profit maximising coffee café chains should rely more on non-price competition to increase profits.
Something special: If it wishes to start a price war to win market share, then it should adopt cost reducing strategies to ensure that it can win the war. These include sourcing for cheaper suppliers for their coffee beans and increasing the number of outlets in Singapore. Expansion enables these coffee chains to enjoy economies of scale, as discussed in part (a). *However, given that this is not a capital-intensive business which means that the MES is not that high, the scope for EOS is not that substantial and so it might not be that easy to win a price war even though Starbucks is a big firm. Non-price competition would thus be preferred. This would invite counter non-price measures by rival firms but it may not be that easy to replicate.*
It should also be noted that a firm like Starbucks may have other objectives besides profits maximisation for which price competition will not even be relevant and thus will be the primary strategy.

L3	For an excellent, balanced answer on why price competition could be the primary strategy and why it could not, with good application to the coffee café chain industry.	9 - 11
L2	For an inadequate (i.e. there are gaps in the explanation) balanced answer analysing why price competition should and should not be primary strategy with some application to coffee café chain industry. 1-sided answer with analytical explanation and contextual relevance – max 7m	6 – 8
L1	For an answer that shows very limited theoretical knowledge of how price and non-price competition helps a firm increase profits with no application to the coffee café chain industry. Explanation is descriptive. Contains conceptual errors	1 – 5
E2	• Reasoned and argued evaluative statements	3 - 4
E1	• Evaluative statements without reasoning or justification	1 – 2

Question 3

Governments often subsidise training programmes and intervene in markets where there is possible abuse of market power.

(a) Explain why immobility of factors of production and market dominance may lead to market failure. [10]

(b) Evaluate current policies adopted by the Singapore government to correct for these types of market failure. [15]

(a) Explain why immobility of factors of production and market dominance may lead to market failure. [10]

<u>Introduction</u>

When the following assumptions hold, i.e. no externalities, private good, perfectly competitive markets, the free market will lead to efficient allocation of resources. However, when the assumptions fail, such as when resources are not perfectly mobile, or when firms have market power, the markets can fail.

<u>Body</u>

*Immobility of factors of production and market dominance may lead to *allocative inefficiency*.

1. Immobility of factors of production may lead to allocative inefficiency.

   Labour may be geographically or occupationally immobile.

   Geographical immobility may occur because of the high cost of moving house from one state to another. It can prevent unemployed labour from moving elsewhere to find work. The economy is producing within the PPC, i.e. there is unemployment. This leads to wastage of resources (productive inefficiency), and less resources are thus channelled into the production of goods and services that will lead to greater societal welfare. Thus, when there is productive inefficiency, there will be allocative inefficiency, with the former a prerequisite for the latter.

   Occupational immobility occurs because of a mismatch between workers' skills and job requirements. In reality, workers tend to have job specific skill sets, and may not be able to respond easily to changing demand conditions. For example, retrenched workers from the electronics manufacturing industry in Singapore do not have the necessary skills required for them to find jobs in the growing tourism sector (structural unemployment). Labour may thus be put to inefficient use, instead of being allocated into markets where the labour is needed most. There is thus inefficient allocation of resources, with too little resources being channelled into the tourism sector in this example.

   [It is possible to consider other factors of production e.g. capital instead of just labour. For example, machines specifically designed to weld electronic components together is likely unable to meet the needs of a pharmaceutical company. This prevents capital from moving from production of goods and services that society no longer values so much of, into new markets.]

2. Market dominance may lead to allocative inefficiency.

   Market dominance implies that a firm is in the position of having a large market share, leading it to possess significant market power and thus price setting ability. The firm can set prices without losing all its customers, i.e. face a downward-sloping demand curve.

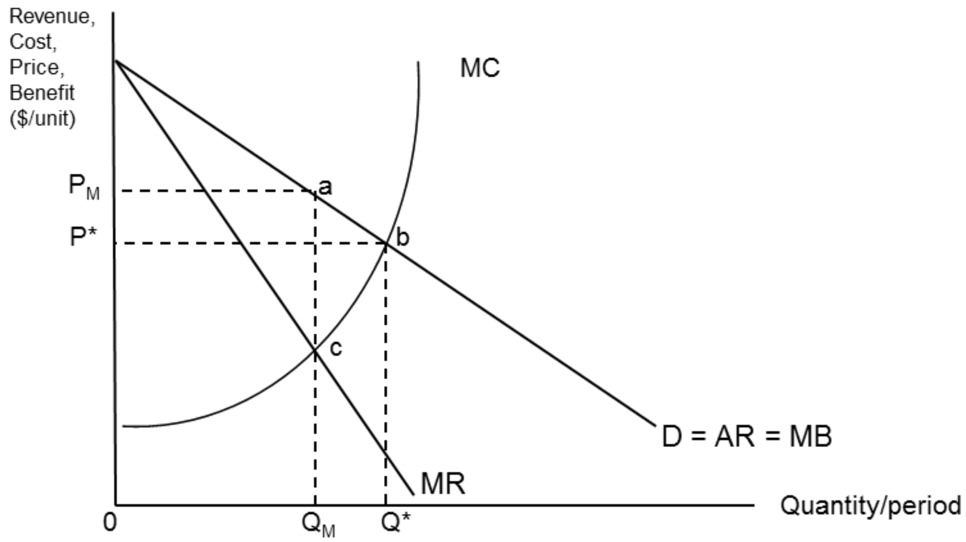


Fig. 1: Diagram showing revenue and cost curves of a firm with market power

Profit-maximising firms would produce Q_M where MC = MR. This is because when MC < MR, producing one more unit will add more to total revenue than total cost, and vice versa. The firm then charges the maximum possible price it can, P_M (indicated by DD curve).

However, in the absence of externalities, socially optimal output Q* is where MC = MB. Since Q_M is less than Q*, there is underproduction of the good by a firm with market dominance. Producing Q_M to Q* units incurs a total benefit of Area abQ*Q_M, and incurs a smaller total cost of Area cbQ*Q_M. There is thus welfare loss of Area abc (net benefit not gained) as too little resources is channelled into the production of the good.

3. Immobility of factors of production and market dominance may also lead to *inequity*.

Case of factor immobility: In countries where the economy is transitioning between industries e.g. from secondary industries such as the manufacturing of machine parts to tertiary such as financial services, the income gap between workers in declining industries and growing industries is likely to grow. This is because demand for labour will be rising in the expanding industries thus driving up the wage rate while demand for labour in the contracting industries will be falling, pushing down wage rate. As long as labour is immobile, the wage gap will not be able to narrow. If workers are immobile, lacking the necessary skills or willingness to find jobs in growing industries, they may earn less and be less able to afford goods and services. This may result in a less equitable distribution of goods and services within a country.

Case of market dominance: Prices tend to be higher when firms have market power, i.e. P_M in Fig. 1 than without, i.e. P*. For necessities, e.g. electricity, this can lead to poor households being unable to afford the good, leading to a less equitable distribution of the good.

Firms with significant market share because of high barriers to entry are also likely to earn sustained supernormal profits. This can lead to greater inequity as the firm owners receive more profit at the expense of consumers, who may be earning lower income than the firm owners.

	Descriptors	Marks
L3	• Good explanation of how immobility of factors of production AND market dominance may lead to market failure.	7-10
L2	• Undeveloped explanation that explains how immobility of	5-6

	factors of production and market dominance may lead to market failure. OR • Developed explanation of either how immobility of factors of production <u>or</u> market dominance may lead to market failure.	
L1	• Response shows some knowledge of immobility of factors of production and/or market dominance, but how they lead to market failure is not explained.	1-4

(b) Evaluate current policies adopted by the Singapore government to correct for these types of market failure. [15]

Introduction

The Singapore government has intervened in these cases of market failure, and the policies used will be evaluated in terms of how well they work to reduce inefficient allocation of resources or inequity, taking into consideration other consequences that may have resulted.

Body

To tackle market dominance:

1. Anti-competition regulations have been implemented in Singapore to prevent dominant firms from anti-competitive behaviour. This may include collusive agreements between dominant firms in an industry, or anti-competitive mergers that can led to a substantial lessening of competition. Cartel agreements can lead to prices being fixed or output restricted to increase prices, leading to an even greater degree of underproduction and higher prices for consumers. Anti-competitive mergers can lead to even larger firms that have greater market power, allowing them to charge higher prices.

   The Competition Commission Singapore (CCS) identifies firms that have violated the regulations, and have the capacity to impose fines and enforce the regulations, such as preventing Parkway Holdings from acquiring outpatient diagnostic chain RadLink Asia. This *increases the level of competition between firms in Singapore*, so that demand facing each firm will be lower and more price elastic because of substitutes. This will prevent firms from attaining higher levels of market power, which can cause markets to fail as explained in (a).

2. Besides reducing anti-competitive acts, the SG government has been encouraging competition to reduce market dominance in certain industries. This has been done through issuing more licences, e.g. Tower Transit for the provision of bus services, or possibly through reducing regulations. Another example includes deregulating the telecommunications industry and allowing Starhub and M1 to enter the industry previously dominated by Singtel.

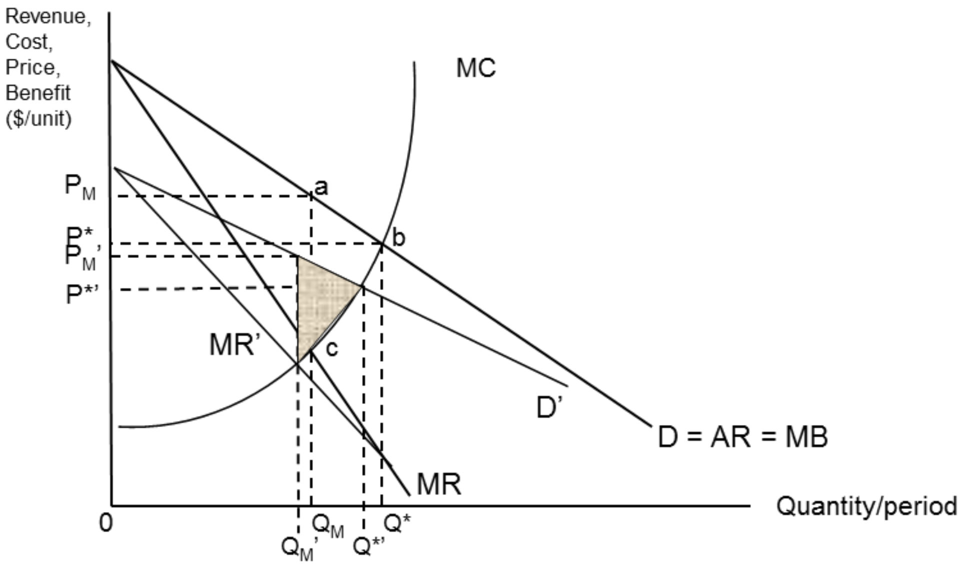


Fig. 2: Diagram showing lower and more price elastic DD firm faces with greater competition

With new entrants into the industry, incumbent firms likely face a falling demand, i.e. DD falls from D to D' in Fig. 2. Demand also becomes more price elastic with more substitutes available. The prices that incumbents can charge has fallen from P_M to P_M', making it more affordable for households to purchase the good or service.

The firm now produces where MC = MR', i.e. Q_M', and incurs a smaller welfare loss (shaded area) compared to Area abc. There is less underproduction of the good by the incumbent firms.

However, if firms produce at a lower output, it can mean the loss of potential internal economies of scale (EoS). In particular, this applies to industries with significant internal EoS to be enjoyed, e.g. telecommunications where start-up costs are high. Spreading the high start-up cost over a larger output will lead to lower average costs. The loss of internal EoS may hinder the firms from competing with MNCs in SG, or with firms worldwide if the goods or services are exported. It may also lead to higher prices for households if the firms become less able to pass on cost savings to consumers.

E: As such, there is a need to balance between liberalising the market and making sure firms can enjoy significant internal EoS to benefit society. To that end, the SG government seems to have taken into account this need. For example, even as the government deregulated the banking industry and allowed the entry of foreign banks, it also allowed some of the local banks to grow through mergers and/or acquisitions to reap internal EoS, e.g. spreading out of advertising cost, managerial internal EoS from having one manager oversee a bigger department.

E: Both points 1 and 2 are significant to keeping the power of oligopolies in check, which is likely the predominant source of issues of market dominance in Singapore.

3. In the case of public transportation (bus, train), prices are regulated to keep them affordable for the masses. This leads to a more equitable distribution of services. However, the prospect of earning less supernormal profits may mean our public transport companies have less incentive to improve on services, which consumers are concerned about beyond issues of market failure.

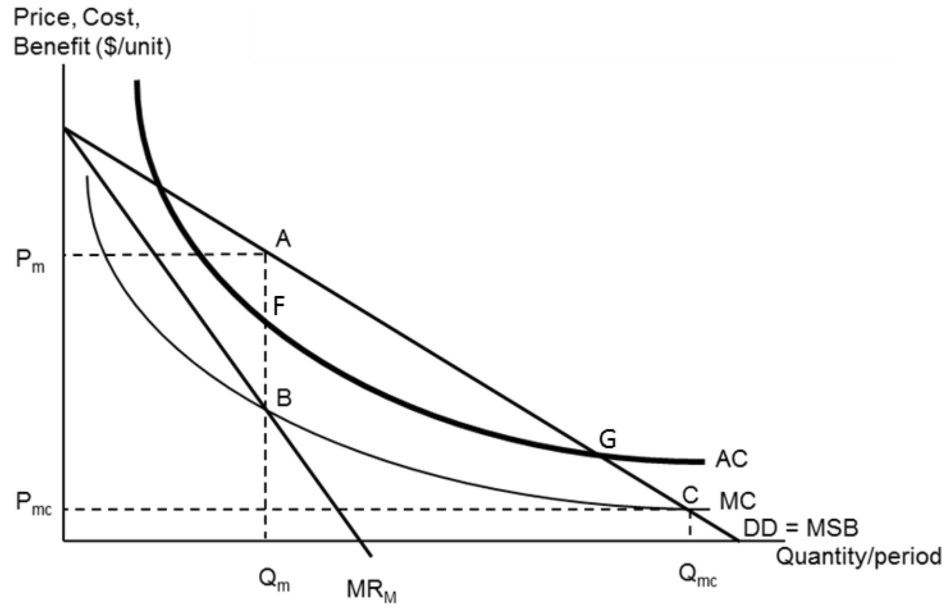


Fig. 3: Diagram showing natural monopoly e.g. rail transport in Singapore

If the industry in question is a natural monopoly, e.g. rail transport in Singapore, encouraging competition is impossible since the presence of more than one firm will lead to losses for both.

These industries have extremely high start-up cost, e.g. cost involved in the building of rail infrastructure, such that minimum efficient scale is reached at an output that is very large relative to level of market demand.

E: *Given that it is a natural monopoly, the Singapore government has made an economically sound decision by issuing only 1 license per track. And since a profit-motivated firm would not fully exploit its internal EOS and instead charge the monopoly price, the government has intervened appropriately by regulating price in the industry. The government seems to have opted for AC pricing since MC pricing will lead to losses for the company.*

While AC pricing means the government need not subsidise losses, the output produced is still not allocative efficient. However, the output where P = AC is larger than the output where MC = MR, and thus the new output has still led to improvements in efficiency. Welfare loss has been reduced from Area ABC in Fig. 3 to the smaller Area AFG.

E: The cons of regulation are less significant in this industry given that licences expire, and firms can be fined in the event of breakdowns.

Note: MC pricing is a weak point here as it isn’t practised by the SG government.

Transport vouchers are also given to lower income households who qualified to help them cope with affording public transport services.

4. Nationalisation such as for water is one other way the government tackles the issue of market dominance. With the government being the producer of the good or service, production is likely closer to socially optimal output (i.e. produce where P = AC to improve efficiency and avoid subnormal profits) since the government is not a profit-maximiser.

E: X-inefficiency due to lack of profit motive is not likely to be a significant issue for Singapore, since the government and state-owned firms are generally efficient and will seek to minimise cost.

To tackle immobility of factors of production:

E: Geographical immobility is not a significant problem in Singapore, given the small size of our island and relatively well-connected transport system.

1. The key measure implemented in Singapore to tackle occupational immobility of labour is **subsidising training programmes**, e.g. SkillsFuture, to increase the skill level of workers. Subsidising training programmes encourage workers to go for training since it is now cheaper to do so. If successful, this can reduce the mismatch between workers' skill set and job requirements. This will help them transit to jobs that is required by society, improving on efficiency in the allocation of labour resources.

   However, this is dependent on workers' willingness and ability to go for the training. This may be an issue particularly for older workers.

   E: In spite of this limitation, skills retraining is still the right policy that the Singapore government has chosen to adopt over the other possible policies e.g. protectionism to reduce unemployment. This is because retraining is a long term solution that tackles the root cause of the problem.

   The increasing pace of globalisation may also mean that available jobs and their requirements may be changing faster than workers can train for. As such, there may still be a need for social safety nets to improve to help occupationally immobile workers cope with rising costs of living to ensure that they can still consume basic necessities.

<u>Conclusion</u>:

Stand: Well targeted measures have been adopted by the SG government to tackle the issues arising from factor immobility, particularly for labour, and market dominance.

Substantiation + 'something special':

Occupational immobility has become an issue of concern in recent years, as SG continues to transit into high-value knowledge based industries. The new SkillsFuture programme takes into account the age group of workers, and increases the subsidies as the workers become older to further reduce their cost of training and incentivise them to sign up for courses and upgrade themselves. This measure will be more sustainable in the longer term than simply improving on social safety nets.

The implementation of anti-competition laws and deregulation of certain markets is aimed to ensure that oligopolistic firms in Singapore cannot enjoy so much market power such that they can increase prices easily and benefit at the expense of consumers. The CCS in particular has intervened in cases when anti-competition regulations have been flouted, and its constant monitoring is likely to serve as a deterrent to firms looking to do so.

If point 3 has been brought in:

For industries whose products tend to be necessities, price regulations have been implemented to ensure products remain affordable to improve on equity. On the other hand, for goods that are not necessities, e.g. movie tickets, the government has kept its intervention to a minimal. After all, regulated prices may reduce a firm's incentive to come up with better products, and the improvement in quality of services is something that consumers will benefit from beyond a more equitable and efficient distribution.

[Any other reasonable conclusion with a clear stand + justification will be accepted.]

	Descriptors	Marks
L3	• For a good analytical explanation of the strengths and weaknesses of current policies Singapore adopts to tackle immobility of factors of production and market dominance.	9 – 11
L2	• For an undeveloped explanation of current policies to tackle the sources of market failure explained in (a), OR • A developed explanation of policies adopted to tackle either immobility of factors of production or market dominance.	6 – 8
L1	• Response shows some understanding of policies adopt to tackle the market failure in (a), but is mostly descriptive or contains glaring conceptual errors.	1 – 5
E2	For an evaluative assessment of whether policies are appropriate, based on economic analysis. Reference must be made to the context of Singapore.	3 – 4
E1	For an unexplained assessment of whether policies are appropriate, or one that is not supported by analysis.	1 – 2

Question 4

"A current account deficit has a more adverse impact on the economy than a capital account deficit". Discuss. **[25]**

Introduction:

- Whether a current account deficit has a more adverse impact than a capital account deficit depends on the size and duration of the deficit and the method of financing this deficit. In the end, it is the overall BOP position of an economy and its impact on the other macro goals of the country that matter.

Body:

- Define current and capital account deficits. Briefly describe the components of these 2 accounts.

- Assume the current account is initially in equilibrium. Consider the causes of a current account deficit. Some causes are:
  - ➢ Higher domestic inflation relative to rest of the world such that export competitiveness is reduced
    As price of exports is now relatively more expensive, quantity demanded of exports fall leading to fall in export revenue (assume demand of exports is price elastic) and hence (X-M), c.p.
  - ➢ Loss of comparative advantage
    Eg: it is said that China is gradually losing its comparative advantage in low value-added manufacturing to other low-cost Asian countries. Left unchecked, this will cause China's exports to lose price competitiveness and leading to substitution towards imports. Again there is a fall in (X-M), c.p.
  - ➢ Economic development of a country (eg LDCs)
    This will lead to a rise in imports of capital goods at the initial stage of the country's economic development leading to CA deficit as imports rise faster than its exports

- Consider the impact of current account deficit on the country's internal & external macro goals
  Thesis

  - Starting from a position of current account balance, a current account deficit implies a fall in AD and actual growth. The fall in AD would have led to unplanned rise in inventories. Firms respond by cutting production which reduces income. The fall in income further induces cut in consumption resulting in further contraction of output and hence income via the multiplier.

    However, if the economy originally had an inflationary gap, then the current account deficit would have been desirable since it lowers AD. *The state of the internal economy thus matters.*

  - In a floating exchange rate system, since the current account is the flipside of capital account, this means that the current account deficit is financed by borrowing and the country is a net borrower. Such borrowing is unsustainable in the long term and these countries will be burdened with high interest payments and possible capital flight due to loss of confidence by foreign investors when the current account deficit is persistent. Countries with large interest payments also have little left over to spend on investment and hence have an adverse impact on potential growth
    Eg: Asian crisis of 1997 where countries like Thailand and Indonesia had run up large current account deficits by attracting hot money flows to finance the deficit. But when confidence fell, these hot money flows dried up, leading to a rapid devaluation and crisis of confidence.

  - A current account deficit (especially a rising deficit) means that foreigners have an increasing claim on that country's assets hence reducing its long term income for residents.

Anti-thesis

  - However, a current account deficit may be desirable, especially for LDCs. In general, LDCs tend to export low valued agricultural goods. However, if they also import capital goods which are often higher valued than the agricultural goods, the deficit that arise may not be a concern. This is because these capital goods not only lead to more investment opportunities and job creation, they may also enable these countries to produce and export goods of a higher value in the future and possibly reversing the initial current account deficit. In addition, there is higher actual and potential growth and the country may be able to pay its debts back. However, there will be a fall in current material SOL.
    Whether current account deficit has an adverse impact on the economy depends on whether the borrowing will finance investment that will yield a return that is higher than the interest rate the country has to pay on its foreign liabilities.

  - A country that spends increasingly on imports of consumer goods may just indicate a strong economy, which is growing rapidly. This means that it will have higher current material SOL but possibly lower SOL in the future if capital accumulation lags behind.

- Assume the capital account is initially in equilibrium. Consider the causes of a capital account deficit due to short / long term capital flows
  (eg capital account deficit which means a net outflow of investment capital as domestic institutions and individuals increase their holdings of assets valued in foreign exchange):
  - If the deficit is persistent, speculators may expect a further fall in exchange rate. This can lead to short term capital flight as people prefer to put their money in countries where the monetary situation is more stable. This is also bad for doing businesses and so, owners of

capital in countries anticipating or experiencing such risks will often move assets to other countries that are more stable. This further worsens the capital deficit problem.

- Political instability will cause capital flight as there is no guarantee that assets currently owned by foreigners or even locals would not be taken over by, say, a new government.
- Weak business expectation of that economy will deter FDI as expected return on investment will fall and lead to an increase in long-term capital outflow from that country.

- Consider the impact of <u>capital account</u> deficit on the country's internal & external macro goals

  <u>Thesis</u>

  - A capital account deficit will mean a net outflow of investment funds. Such investment away from the domestic economy towards countries that offer lower labour costs or better investment opportunities will lead to a fall in the national output and employment of workers in the domestic economy. However, this means the country is building up a portfolio of overseas investments, which may lead to future returns of interest, profit and dividends. This may be beneficial in the medium-term.

  <u>Anti-thesis</u>

  - A capital account deficit is likely to correspond with a current account surplus in a floating exchange rate system. Starting from a position of current account balance, a current account surplus will lead to rise in AD and hence rise in GDP via the multiplier.

    This is desirable if there existed a deflationary gap. But if the economy initially was in internal balance (at Yf with no inflation), the current account surplus will open up an inflationary gap, causing demand pull inflation. *Thus the desirability of capital account deficit depends on the state of the economy.*
  - Capital account deficit due to short term speculative outflows of funds may have disastrous effects on an economy in terms of the depreciation of the exchange rate, loss of confidence, impact on investment, output and jobs. Several countries in recent years, e.g. Thailand, Indonesia, Russia and Brazil have been badly affected by these speculative outflows of funds. The depreciation of the exchange rate led to cost-push inflation in these countries.

- Synthesis: Comparison of CA vs KA deficit

  Whether current / capital account deficit has more adverse impact on an economy depends on the factors giving rise to that imbalance.

  - The source of the deficit is an important factor to consider. If the deficit reflects an excess of imports over exports, it may be indicative of price competitiveness or quality problems. In addition, if the deficit reflects low savings rather than high investment, it could be caused by reckless fiscal policy or a high consumption by households. But a current account deficit can equally be due to a highly productive and growing economy if investment has been rising. In the case of a capital account deficit, it may not be a concern if it is part of a government's effort to encourage firms to invest overseas. Eg: the Chinese government has been encouraging domestic companies to play a bigger role in the global economy by investing overseas. But if the capital account deficit is due to LT capital outflow due to fundamental problems with the internal economy – e.g. rising unit cost due to labour shortages, then the capital account deficit will be a cause for concern.
  - The method of financing a current account deficit. If a country is borrowing from abroad to finance consumption, this is damaging in the long-term. If it is financing the current account deficit through attracting long-term capital investment, this could have positive benefits on the domestic economy as FDI brings about long term potential growth
  - The time period of the deficit. If a deficit is due to a shock that temporarily depresses the economy's ability to access productive capacity or short term capital flows in search of higher returns, then this may not be a concern for the economy.

- For countries on a fixed or managed float system, overall, what matters is the BOP position. Both its current and capital accounts could be in deficit. If a country has a persistent BOP deficit and is on a fixed or managed float exchange rate regime, a persistent deficit will mean that the central bank will have to use its foreign reserves to maintain its overvalued currency by buying its own currency. This reduces the domestic money supply causing a contractionary effect of AD and hence GDP. Once it runs out of foreign reserves and is unable to borrow foreign currencies (from IMF or from other countries' central banks), it will be forced to devalue its currency. This may lead to speculative outflows and an adverse impact on the economy.

Conclusion

Stand: Disagree that current account deficit has a more adverse impact on the macro economy than capital account deficit.

Substantiation: Both can have equally adverse effects on the economy by creating or worsening internal imbalance. It depends on the state of the macro economy. If a country is in recession, a current account deficit will worsen the recession. If a country is booming, a current account surplus (i.e. capital account deficit) will create more inflation since it causes AD to rise, creating demand-pull pressure.

In addition, it will also depend on the source of the deficit, method of financing the deficit and its duration. However, it also depends on the country in question. For example, the US probably has less reason to be concerned about a current account deficit as it can attract a lot of capital flows to buy its dollar securities. However, a developing economy may be more vulnerable to a current account deficit. This is because investors may be quicker to fear an economic downturn and hence remove their capital. Overall, it is the BOP position and the other macro indicators of the health of an economy that are important considerations.

Levels	Descriptors	Marks
1	• Contain a few valid points made incidentally in an irrelevant context • Provide definitions of current / capital account deficits and shows the ability to either list factors leading to the deficits or some consequences on the economy.	1-5 6-9
2	• Explanation of the effects of deficits in the 2 accounts is rather descriptive. Ideas are poorly organised. • Rather analytical but under-developed explanation of the consequences of the deficits in the 2 accounts but 1-sided or 2-sided discussion but explanation tends to be descriptive rather than analytical - e.g. Limited explanation linking the causes of the deficits to consequences on the economy.	10 – 11 12 - 14
3	• 2-sided discussion with analytical and well-developed explanation of the effects of deficits in the 2 accounts, with links to their causes, but narrow in scope. • Comparison of current account vs capital account deficits • Well-reasoned arguments and analysis linking the causes of the deficits to the consequences on the economy, considering the wide-ranging impact on both internal and external macro goals (ie inflation, unemployment, standard of living, exchange rate) AND taking into account the initial state of the internal economy • Effective use of contrasting real world examples and AD/ AS diagram/s to support the arguments • Evidence of critical comment and clear conclusion that addresses the question	15 - 17 18 - 21
E1	Mainly unexplained judgement	1-2
E2	Judgement based on analysis • Critically evaluates alternative theories, contemporary issues,	3-4

	perspectives and policy choices • Evaluates relevance of unstated assumptions • Synthesises economic arguments to arrive at well-reasoned judgements and decisions such as in a good summative conclusion	

Question 5

Unlike most other countries, Singapore has adopted the use of the exchange rate rather than interest rate as the instrument of monetary policy.

(a) Explain the factors that may limit the effectiveness of interest rate policy for an economy [10]

(b) Discuss the extent to which conflicts in macroeconomic objectives may arise for Singapore when it adopts exchange rate policy [15]

Suggested outline for part a)
Approach:
Students are required to explain 3 factors that may limit the effectiveness of monetary policy.

Introduction:
Interest rate policy refers to a policy where the monetary authority of the country changes the level of interest rates to influence the level of economic activity and the general price level of the country. The factors that may limit the effectiveness of monetary policy are consumers' and investors' confidence, the exchange rate system of the country, the size of domestic sector and multiplier.

1) <u>Consumers and investors sentiments during a recession/economic boom (Interest rate elasticity of demand for loans</u>
It is impossible to use monetary policy as a precise means of controlling aggregate demand. It is especially weak when it is pulling against the expectations of firms and consumers. If the economy is in recession, Central Bank will lower interest rates to achieve economic growth and full employment but no matter how low interest rates are driven, households cannot be forced to borrow if they expect their future income level to decrease. Thus consumption will not rise significantly. Firms will not borrow to invest if they predict a continuing recession and they expect their profitability on their investments to decrease, so the rise in investments may also be limited. Overall, there may not be a large rise in AD and national income, rendering the interest rate policy ineffective.
On the other hand, when there is an economic boom and inflationary pressures, the central bank may raise interest rates. If investors think the economy is going to grow faster, firms will continue to borrow to invest if they expect their rates of returns on investments to increase. Due to strong household's confidence in the economy, the increase in interest rates may not deter spending.

2) <u>The exchange rate system of the country</u>
[Assertion] If the country has a fixed exchange rate system (managed float), in order to maintain the exchange rate, Central Bank loses control of its money supply. **[Concept]** For example, if the country has demand-pull inflation and Central Bank raises interest rates (hence attracting short-term capital inflows), this will put upward pressure on the exchange rate. To prevent the currency from appreciating, the Central Bank has to sell the domestic currency in the foreign exchange market. This will eventually increase the money supply in the domestic economy and lower interest rates, negating the effects of the original rise in interest rates. e.g. Singapore's choice to adopt a managed float exchange rate system means that it loses control of its money supply and interest rates.

3) <u>Size of domestic sector</u>
Size of domestic market (domestic C + I) out of GDP affects the extent of impact of interest rate policy. If consumption and domestic investments are small relative to the export sector, interest rate policy aimed at increasing these components might not have much impact for the country. For example, Singapore has a small domestic consumption and investment as % of

GDP. If Singapore uses expansionary monetary policy to boost AD to increase national income, the extent of rise in AD may not be significant. Singapore has a small population size, thus her C and I out of her GDP are small. This limits the effectiveness of interest rate policy to achieve full employment.

4) Size of the multiplier
The size of the multiplier would also determine the effectiveness of interest rate policy in achieving full employment and economic growth.
The size of the multiplier depends on the marginal propensity to withdraw (MPW) MPW, which is the percentage of additional income that households save, spend on imports and pay taxes. This in turns depends on the marginal propensity to save (MPS), marginal propensity to tax (MPT) and marginal propensity to import (MPM). A country like Singapore with a small multiplier due to a large MPM (small country with very few resources) and MPS (compulsory CPF scheme) would experience a much smaller increase in national income if MAS lowers interest rate.

L3	7 - 10	Able to explain at least 3 factors where explanation is underpinned with accurate use of theory and relevant examples. Max 7 only if considered only 2 factors.
L2	5 - 6	Incomplete explanation of factors (i.e. there are gaps in the explanation). Limited use of examples Max 5 only if only 1 factor is considered.
L1	1 - 4	Answers are mainly descriptive, wrong analysis

b) Discuss the extent to which conflicts in macroeconomic objectives may arise for Singapore when it adopts exchange rate policy [15]

Approach for part b)
Students must explain that the use of exchange rate policy to achieve a certain macroeconomic goal may conflict with another. Students should show understanding that the extent of the macroeconomic conflicts is affected by the nature of Singapore's economy, its manufacturing sectors and government policies to address these conflicts. Students then need to explain that by adopting exchange rate policy, under certain circumstances, macroeconomic conflicts may not arise.

Suggested outline for part b)

Introduction:
Given that interest rates in Singapore are largely determined by the rest of the world as well as the importance of capital mobility and exchange rate stability, monetary policy with interest rates variable is not very useful as a policy tool in Singapore. Instead, the use of exchange rates is a more significant tool to help Singapore achieve her economic goals. Through exchange rate policy, the Singapore government is able to control its inflation, which in turn will make her exports competitive and attract FDIs. However, the use of exchange rate policy needs to be complemented with supply side and trade policies to ensure that Singapore's maintain her economic growth and remains resilient.

Body

Thesis: the use of exchange rate policy may result in conflicts in macroeconomic objectives

1. The use of exchange rate policy to achieve price stability conflicts with economic growth and full employment
[Concept] If Singapore's demand-pull inflation is caused by a strong demand for her exports, the central bank may implement exchange rate policy to dampen AD. A stronger currency may erode Singapore's exports competitiveness in foreign currency and export revenue decreases. Imports on the other hand, become cheaper in Sing Dollars, and imports expenditure rises.

Assuming that Marshall Lerner condition holds, net exports revenue decreases and since trade as proportion AD is very large, when (X-M) falls, AD falls significantly and causes a fall in the general price level.

However the fall in AD instead will cause GDP to fall via the multiplier. As national output decreases, firms will hire fewer workers and this results in demand deficient unemployment.

The extent of the impact on employment is dependent on the fall in net exports revenue. When the Sing dollar is allowed to appreciate, imported factor inputs become cheaper in Sing dollars. As Singapore is reliant on these imported raw materials and Singapore's exports have high import content, the loss in exports competitiveness caused by the stronger currency is partially offset by the fall in the cost of production. A stronger currency only causes a fall in exports competitiveness by a small extent, assuming that the global economy demand is strong. Thus there may only be a slight fall in AD and the negative impact on actual growthand employment may be limited.

2. The use of exchange rate policy to achieve a healthy BOP (ensures export competitiveness) conflicts with price stability

When faced with a deteriorating BOP due to her current account, Singapore may adopt a weaker currency that will increase her exports competitiveness whilst her imports become more expensive. Exports revenue rises whilst import expenditure falls, assuming Marshall-Lerner condition holds. This will improve her current account and BOP, assuming ceteris paribus.
Since net export increases, AD rises and cause a rise in the general price levels. This is more significant if Singapore's equilibrium is closer towards full employment. Also, when MAS intervenes to sell Sing dollar in the foreign exchange market, the increase in supply of Sing dollars in the forex market will eventually cause a rise in the domestic money supply. This would then cause an increase in consumption and investments that would further fuel the rise in AD and cause a further rise in the general price level.

The devaluation could also result in cost-push inflation as the price of imported raw materials increase in Sing dollars. Since Singapore has no natural resources and is highly dependent on imported finished goods and raw materials, this may cause an increase in cost of production of the firms. The horizontal portion of the AS curve shifts up wards and the general price level rises resulting in cost push inflation. Thus a healthy BOP is achieved at the expense of price stability.

How significant the impact on cost-push inflation is dependent on the state of the global economy. If there is a slowdown in the global economy (and this may have caused the deterioration in the current account in the first place), this could result in a fall in global demand for raw materials and commodities as major economies cut back on production. The price of commodities decreases and the devaluation would not result in cost-push inflation. E.g. in March 2015, MAS allowed the Sing dollar to depreciate against the US dollar as the economy was afflicted by a slump in manufacturing and exports that was also hurting the rest of the region whilst Singapore's inflation was weak (due to low oil prices)

3. The use of exchange rate policy to achieve sustained growth conflicts with equity

If the aim of the Singapore government is to achieve long-term growth, MAS should maintain a gradual appreciation of the Sing dollar. This would ensure a strong demand for her exports as the strong currency helps to maintain exports competitiveness, which will boost her AD. The strong Sing dollar is also important for investors who need to import imported factor inputs for their production. Foreign investors are willing to invest in Singapore as the exports competitiveness raises their expected rates of return. There will be net inflow of FDI into Singapore and this causes Singapore's AD and AS to shift to the right, achieving actual and potential growth.

However, by allowing the external sectors to drive Singapore's growth may result in unequal income distribution between high skilled and low skilled workers. High skilled workers working in sectors in which Singapore has comparative advantage e.g. legal and financial services, high tech manufacturing, will see a faster rise in their wages as the service or final products (exporting sectors) that they produce can be sold in the global market. There is a greater rise in the demand for such goods resulting in a greater demand for these workers. Furthermore, as the economy restructures and companies find ways to innovate and enhance productivity, the demand for higher-skilled workers will also increase.

Low skilled workers or those who are working in sectors where Singapore does not have CA in e.g. sectors that cater only to the domestic market e.g construction, cleaning services, will see a slower rise in their wages. This results in widening income gap between these two groups of workers.

This trade-off with equity of income distribution occurs when exchange rate policy is pursued alone. If there is another policy that could be implemented as well to address the income inequality, the trade-off won't be severe. For example, with the objective to help the low income workers, Singapore government has ensured that workers are able to upgrade themselves and increase their occupational mobility through numerous manpower skills upgrading programmes. The SkillsFuture programme is one of them, it was introduced in 2015 by the Ministry of Manpower, to provide all Singaporeans with the enhanced opportunities to acquire greater skills proficiency, knowledge and expertise. For continuing education and training, workers can sign up for programmes and courses under the Singapore Workforce Qualifications System to enhance their employability. These manpower policies help to stabilise the income gap in Singapore. E.g. cumulatively in the last 5 years, the bottom 10% of household's income see a rise in income of about 17% whereas the top 10% see a rise of about 15%.

Anti-thesis: the use of exchange rate policy does not result in conflict in macroeconomic objectives

1. **The use of exchange rate policy to achieve economic growth does not conflict with the macroeconomic objective of full employment**
   If the Singapore economy is operating far below its full employment level on the horizontal section of the AS curve, output and employment can be raised through exchange rate policy. AD will rise through a rise in net exports revenue if the currency is devalued (assuming M-L condition) and there will be an increase in national income via the multiplier. Real GDP rises, firms will employ more workers resulting in a fall in demand deficient unemployment.

2. **The use of exchange rate policy to achieve price stability does not conflict with the macroeconomic objective of healthy BOP**
   If Singapore experiences cost push inflation due to higher price of imported raw materials, a revaluation will help to lower the price of imported raw materials in Sing dollars. The horizontal portion of AS curve shifts down wards and the general price level decreases resulting in cost push inflation.
   Since the strong Sing dollar is important for investors who need to import ~~imported~~ factor inputs for their production which will make the goods that they export to be competitive in the long term. Foreign investors are more attracted to invest in Singapore as most of these firms are export oriented and the competitiveness ensures a high demand for their goods in the global market. There will be net inflow of FDI into Singapore and this improves Singapore's capital account -> improvement in BOP, assuming ceteris paribus.

   Stability of a country's currency is just one consideration for investors to invest in a country. There are many other factors that affect investors' decision and their expected rates of returns on their investments. The emergence of many newly industrialised economies that have a pool of productive workforce together with their governments offering incentives, create competition for Singapore as an investment destination. Singapore's needs to continue with its effort to raise productivity growth to be able to lower the cost of production further to attract these foreign firms.

Conclusion:

The use of exchange rate policy may result in trade-offs between certain macroeconomic objectives, for example in order to achieve economic growth, the Singapore government may devalue the currency and this impacts price stability. But these trade-offs do not always occur as it depends on the state of the domestic and global economy. The trade-off between growth and price stability, for example, is more apparent when the economy is growing rapidly and has limited excess capacity. Also, a devaluation may not necessarily result in imported inflation if there is a slowdown in the global demand for imported raw materials. The nature of Singapore's manufacturing production where her exports contain a high percentage of imported inputs also affects the significance of these trade-offs. Nevertheless, in order to minimise conflicts in government's objectives, the use of supply side and trade policies should be implemented to ensure that the demand for her exports remains strong with a larger export market and greater improvement in the quality of her exports. The focus on raising productivity is also important to maintain Singapore's competitiveness. These policies will be able to offset further some of the loss in exports competitiveness when Singapore adopts a strong exchange rate policy.

L3	9 - 11	Accurate and complete conceptual/ theoretical (analytical) explanation of the arguments for and against the view as to whether conflicts in macroeconomic objectives may arise due to the use of exchange rate policy. Reference was made to the nature of Singapore's economy throughout.
L2	6 - 8	There is analytical explanation of the arguments for and against by applying relevant theoretical concepts but there are gaps in explanation as to whether conflicts in macroeconomic objectives may arise due to the use of exchange rate policy. Limited reference was made to Singapore's economy Max 7 if there is analytical and contextual explanation but 1 sided.
L1	1 - 5	Answers are mainly descriptive, limited analysis

.

E2	+ 3-4	Makes a stand supported by good synthesis of the arguments in the body and stand is also linked to varying contexts.
E1	+ 1-2	Makes a stand but substantiation is weak – can't really link arguments in body to the stand taken – i.e. weak synthesis. Reasoning to support stand seems more memorised than understood.

Question 6

a. Explain the possible challenges that can arise from a country's openness to trade with the rest of the world. [10]

b. Assess the appropriateness of using protectionism to help a small country tackle those challenges relative to a large country. [15]

a.

Intro

Many countries are becoming increasingly interconnected as a result of increased openness to trade. While this brings many benefits to a country, there are possible challenges to attainment of macro goals and welfare maximisation.

Body

- Difficulty in developing higher value added infant industries that can earn more income
  Openness to trade implies that it may be difficult to develop a country's domestic / infant industries which could have a potential comparative advantage. This is especially true in developing countries. These industries are too small yet to have gained economies of scale and will not survive against competition from abroad.

- Macro instability due to dependence on other economies

- Openness to trade implies that it may be difficult to develop a country's domestic / infant industries which could have a potential comparative advantage. This is especially true in developing countries. These industries are too small yet to have gained economies of scale and will not survive against competition from abroad.
- Openness to trade encourages a country to depend on others for imports. However, in unforeseen circumstances such as war or natural disasters, a country which depends on others for imports of essential products like oil, food and important raw materials can experience severe economic set-back in such circumstances. Supply shocks will result in cost-push inflation which is accompanied by rising unemployment.
- Economies which are dependent on external demand for growth are more vulnerable to external shocks. A country that is overly dependent on exports will face adverse effects on its GDP performance if external demand falls due to recession in other countries. The growth of the exporting country will slow down and even become negative (i.e. recession) resulting in cyclical unemployment. Eg: fall in global demand for Singapore's exports due to the 2008 financial crisis which resulted in job losses and slower economic growth.

- Structural unemployment
  - Openness to trade can led to structural unemployment. Eg in US, ageing industries have lost their comparative advantage (e.g. shoes, textiles, steel and automobiles) to developing countries like China who are moving up the value chain.
  - With advancement in technology that has enabled firms in developed countries to outsource certain production processes overseas, openness to trade has also led to unemployment of white-collar workers in developed countries. For example banks make use of the services of call centres located in India for their provision of customer-support services.

- Exposure to unfair competition
  - When a country allows imports into the domestic market, it will be opening up its domestic market to foreign competition. Dumping occurs when foreign producers sell their products at prices below their marginal production cost by making losses so that the prices of these foreign imports will be lower than those of the domestic products. In some instances, firms are able to sell at below marginal costs overseas because of government assistance in the form of subsidies. One reason for such an act is to try to force the domestic firms out in order to gain monopoly power. Once monopoly power is established, the foreign firms will then charge high monopoly prices to reap supernormal profits. Although the consumers may enjoy lower prices in the short run, they will suffer from higher prices and lower output in the long run. Society will suffer a welfare loss.
  - Eg: US cotton producers get subsidies from the federal government with each additional bushel they produce, this encourages overproduction with the surplus dumped on the foreign market. Such dumping lowers prices and creates not only unfair competition to foreign producers, but it also undercuts the livelihoods of many poor farmers especially those in LDCs

Levels	Descriptors	Marks
1	• Contain a few valid points made incidentally in an irrelevant context • Able to list or describe the challenges with minimal use of economic	1-4

	concepts	
2	• Narrow in scope • Explanation of challenges lack rigor or use of relevant examples • May show recognition of unstated assumptions	5-6
3	• Analytical explanation of challenges with good use of relevant concepts/theories and examples • Shows ability to comment on unstated assumptions	7- 10

Markers' comments

Skills:

- The term "challenges" also highlights that the minimum breadth needed would be 2 challenges thus students ought to keep to 2-3 main points rather than sacrificing depth for breadth.
- Question is specifically about openness to trade so students should not treat it as a globalisation question which would require a wider scope and discuss capital and labour flows.

Content:

- Students ought to carefully select their points in light of the term "challenges". For example, rather than highlighting the loss of comparative advantage as a challenge, they should pinpoint the negative consequences associated with it such as structural unemployment.
- In order to ensure more rigour, avoid dropping terms like "comparative advantage" or "multiplier" without at least some explanation of the concept in relation to the point they are making.
- Some students associate structural unemployment with export industries, it would be more accurate to discuss structural unemployment in the context of domestic industries that cannot cope with cheaper imports.
- Imported inflation due to a supply shock leads to a shift in horizontal AS since it affects unit cost of production. Some students explained it as a shift in AD when they link to a fall in export competitiveness due to more expensive imported inputs. However this is inaccurate as the fall in AD is actually a movement along the AD given the shift in the horizontal AS.
- Students should make an effort to delineate their points to ensure clarity. Many students mixed the infant industry challenge with that of structural unemployment when the latter ought is more accurately associated with declining industries.
- There is some confusion between cyclical and structural unemployment. When comparatively disadvantaged domestic industries decline as they fail to compete with cheaper imports, what results is structural rather than cyclical unemployment. The reason is that there are jobs available but the unemployed cannot fill them due to the lack of necessary skills. Cyclical unemployment results when there are insufficient jobs due to a lack of **<u>aggregate</u>** demand.

b. **Assess the appropriateness of using protectionism to help a small country tackle those challenges relative to a large country. [15]**

<u>Introduction:</u>

Protectionism refers to the partial or complete protection of domestic industries from foreign competition in domestic markets. These include both tariff and non-tariff barriers. To assess the appropriateness of protectionism in tackling the challenges of free trade, the following criteria should be considered i) effectiveness in solving the problem and ii) solving the problem at minimal trade-off of another objective. While protectionism can address the challenges mentioned in (a), it tackles them better in the context of a large / less open economy than a small / open country.

Body:

- Protectionism to develop infant industries with potential CA

  Protectionism makes imported goods relatively more expensive causing residents to turn towards domestic substitutes produced by the infant industry. In this way, the domestic infant industry is able to produce on a big scale and enjoy EOS. Once it has reached this stage, protectionism can be removed and the infant industry can compete and survive foreign competition on its own.

  This argument is more applicable to large countries like India rather than small countries since the former as a large enough market for the domestic infant industry to enjoy EOS. It will not work for small countries. Even then, it may also not work for large countries because protectionism tends to promote inefficiency and the infant industry never grows up.
- Protectionism promotes macro stability by enabling a country to rely less on trade partners.
  - When protectionism is practiced, trade will be reduced. This reduces the country's exposure to AD shocks from falling X due to recession in trade partners' countries or AS shocks caused by rise in prices of imported raw materials.
  - This advantage will likely benefit large countries like US / Australia more due to the large domestic market where Cd takes up a large proportion of the GDP. This provides a viable alternative growth engine to these countries and insulates them from the volatility of world markets to a certain extent. However, it will be difficult for a small country like Sg to do the same given its small domestic market. Cd will not be enough to replace X as a driver of actual growth it will have to depend on trade partners for its export markets as long as it desires high economic growth.
  - Moreover, protectionism will also come at the expense of current society's welfare due to the deadweight loss incurred (explain using the tariff diagram). *While this applies to both large and small countries*, t*his trade off will be very high for a small economy with no natural resources.* These countries will have to weigh between adopting an open trade policy which enables them to increase welfare plus tap on the world market for export and subjecting themselves to the volatility. Rather than suffer welfare loss and decreases in growth rate, the problem of volatility can be better addressed by diversifying and forming FTAs with different countries.

- Protectionism can slow down structural unemployment brought about by trade
  - Protectionism slows down the decline of import-competing industries and those that have lost their comparative advantage. It provides time for these workers to be retrained and reallocated to other growing industries. How long this takes will in turn depends on the cost and extent of retraining that is required and the mind sets of both employers / workers.
  - In reality, protectionism may tend to slow down a country's restructuring process, depriving growing industries of resources that can be reallocated to them. *This will have a more significant adverse impact on a small, resource-poor and open country like Sg.* With these workers structurally unemployed, growing industries will face resource constraint leading to rise in factor prices (e.g. wages) and possible cost-push inflation. Export competitiveness of these industries will also be compromised and hence growth. While the same can be said of large countries, however, these countries can rely on other engines of growth. In addition, the resource constraint due to slowing down of restructuring may also be less severe.
  - Instead of using protectionism to overcome the structural unemployment brought about by trade, government should adopt supply –side policies targeted at provision of training and upgrading of skills.

- Protectionism reduces a country's exposure to unfair competition like dumping
    - Protectionism ensures that import competing industries are not subject to unfair competition and the foreign firms will not gain a foothold in the country.
    - If indeed foreign countries dump their products, such protectionism is justifiable. *However, regardless of small / large economies, protectionism itself leads to a fall in total trade volume and hence national income and growth of countries.*

Conclusion:

Protectionism is likely to benefit a large country more since its size enables the country to have an alternative internal engine of growth. However, as protectionism can be hard to prove, this is often used as a disguise to protect inefficient industries. The usefulness of protectionism to a small country tends to be limited as its economic growth and welfare may be too greatly sacrificed. While protectionism may be able to address the challenges that arise from openness to trade in the short-term, the welfare of countries (whether big or small) using it will be reduced due to the possible deadweight loss incurred. Hence, both big and small countries should consider adopting supply side policies. This will ensure that it exports goods that it has comparative advantage in and that new niche areas of growth are identified and developed and a nimble and quality workforce can be developed. Beyond trade, the government can also put in place policies to attract FDI to overcome the restraints faced by a small country.

Levels	**Descriptors**	**Marks**
1	• Answer shows some knowledge of what protectionism is and asserts some relevant points about its usefulness but does not indicate that the meaning of the question has been properly grasped • Explanation, if present, tends to be descriptive.	1-5
2	• Shows ability to link protectionism to the challenges in (a) but the arguments are undeveloped • Some faint attempts to compare the benefits of protectionism between the small / big countries • Some use of relevant e.g.s but they may be undeveloped	6 - 8
3	• Evidence of depth of analysis in comparing the benefits of protectionism between the small / big countries • Good use of relevant examples • Clear links are made to the macro goals and shows understanding of the resultant welfare loss	9 - 11
E1	Mainly unexplained judgement	1-2
E2	Judgement based on analysis	3-4