

Question 1

The Singapore economy has grown at an average of 3% in recent years. However, there is growing consumer concern over higher prices of food and beverages due to a significant rise in labour and rental costs by approximately 10%.

Discuss how the combination of economic growth and rising costs might affect expenditure by consumers on hawker food and high end fine dining. [25]

Introduction

Higher prices of food and beverages are a result of changes in their demand and supply.

Demand refers to the quantities of a good that consumers are willing and able to purchase at each possible price during a period of time, *ceteris paribus*, while supply refers to the quantities of a good that producers are willing and able to offer for sale at a given set of prices during a period of time, *ceteris paribus*.

Economic growth and rising costs will result in changes in the demand and supply of food and beverages respectively. In this essay we will discuss how these changes will impact consumer expenditure in the markets for hawker food and high end fine dining, using the elasticity concepts of PED and YED.

Consumer expenditure is measured by Equilibrium price multiplied by Equilibrium quantity in the market and Price Elasticity of demand refers to the responsiveness of quantity demanded of a good to a change in its own price *ceteris paribus*, while income elasticity of demand refers to the responsiveness of the demand of a good to a change in consumers' income, *ceteris paribus*.

Body

Demand

Continued economic growth will lead to an increase in average incomes, purchasing power and hence expenditure on normal goods, both necessities and luxury goods. ($YED > 0$)

On the other hand, for inferior goods ($YED < 0$), a rise in average incomes would result in a fall in demand for them.

Impact on hawker food

For the upper income class in Singapore, Hawker food is likely seen as an inferior good, especially in comparison to high end fine dining. Hence for this group of people in particular, a rise in income will lead to a fall in demand for hawker food.

However, for the average income Singaporean, the impact of an increase in income on their demand for hawker food is likely be significantly less than on fine dining as they are generally more of necessities to them, especially those who are unable to cook and are unable to afford relatively more expensive dining options. ($YED < 1$)

Therefore as average incomes rise, demand for hawker food will rise but less than proportionately to the rise in income.

Therefore leading to a rise in consumer expenditure on hawker food.

Evaluation

As economic growth is expected to be modest, impact on hawker food which is a necessity for most will be limited.

In addition, even for the upper income class in Singapore, who see it as an inferior good, the potential fall in demand due to rising income is likely to be insignificant as growth is modest and confidence in the economy still not strong due to uncertainties in Europe and US.

Hence general demand for hawker food unlikely to change significantly and increase insignificantly for the majority.

Impact on fine dining

Demand will rise much more significantly and more than proportionately to rise in income as it's a luxury. ($YED > 1$)

Therefore leading to a significant rise in consumer expenditure on fine dining.

Evaluation

However, as growth is still modest and unpredictable, the switch to high end dining may not be as significant in the short run and consumers may be more likely to choose to "upgrade" to mid range restaurants instead.

In addition, consumers are unlikely to change their dining patterns so significantly in the SR, especially with income change is not significant and job security may still not be high. Hence the increase in demand may not be as significant in the SR.

Synthesis

Therefore demand is unlikely to change significantly for either hawker food or fine dining in the short run.

Supply

Rising costs will result in a fall in supply of both types of goods.

In addition, many have been forced to shut down too if they are not able to remain price and cost competitive compared to other competitors.

This can be seen in the increasing closing down of eateries be it hawker stalls or restaurants, including long established eateries in recent times, often due to rising labour and rental costs concerns.

Evaluation

Impact on both hawker stalls and fine dining restaurants have become increasingly significant and difficult for many to absorb the higher costs anymore, leading to rising prices.

Restaurants however, may have other avenues to cut costs to lower overall costs and minimize the impact of higher rental and labour costs better. For example by replacing the need for as much labour by employing technology to take orders or to offer more attractive takeaway menus to replace the need for as much shop space.

Synthesis

Hence the relative impact on the supply of hawker food and fine dining is debatable, depending on the context (as long as student justifies logically)

Demand and supply and total expenditure changes

Hence demand will increase and supply will fall for both types of firms.

For hawker stalls

Increase in demand is likely to be insignificant as demand for the majority of Singaporeans of it is unlikely to change significantly in the SR and hawker food can be seen as a necessity to the average Singaporean when they have to eat out.

Hence demand will rise and consumer expenditure will increase.

Supply will fall as costs of rental, labour and raw materials have generally risen and extent can be rather significant.

PED is likely to be <1 for hawker food as it is largely a necessity and relatively a much smaller proportion of the average Singaporean's income.

Hence Price is expected to rise and with a less than proportionate change in quantity as hawker food is largely a necessity to the average Singaporean, total consumer expenditure will rise.

Hence Consumer expenditure on hawker food is expected to rise unambiguously as a result of the 2 changes.

Figure 1

Price

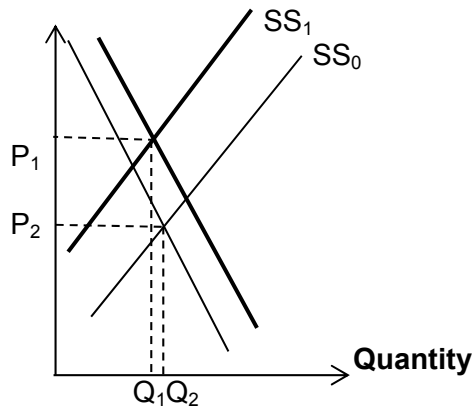


Figure 1 depicts the market for hawker food for the average Singaporean whose demand is likely to be relatively inelastic. A rise in incomes will lead to a rise in demand from DD_0 to DD_1 and rising costs lead to a fall in supply from SS_0 to SS_1 . Hence price will definitely rise but the fall in quantity is less than proportionate as PED is likely to be less than 1. Hence the expenditure of an average consumer on hawker food is expected to rise unambiguously.

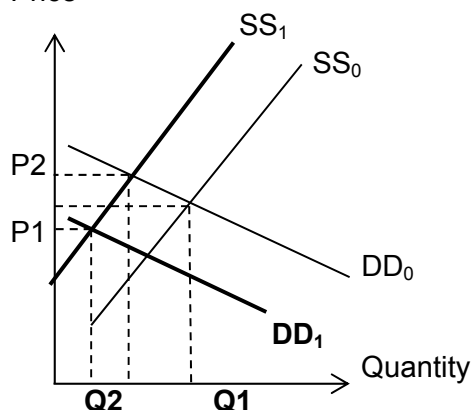
However, for the high income earners who see hawker food as an inferior good, as demand falls as incomes rise, this will cause a fall in consumer expenditure.

However, PED is likely to be greater than 1 too for this group of consumers who have many more alternative dining choices available and affordable to them. Hence as supply falls due to rising costs, the price rise is likely to lead to a more than proportionate fall in quantity demanded for hawker food and hence a fall in consumer expenditure.

Hence for this group of consumers, the combined impact of both changes is likely to lead to an unambiguous fall in total consumer expenditure on hawker food.

Figure 2

Price



With reference to Figure 2, for high income earners who view hawker food as an inferior good, demand falls from DD_0 to DD_1 as income rises and rising costs causes Supply to fall from SS_0 to SS_1 . Price will hence definitely rise. As PED is likely to be greater than 1, Quantity falls more than proportionately from Q_1 to Q_2 . Hence as explained above, consumer Expenditure will unambiguously fall.

For Fine dining restaurants

In SR, probably rising costs more significant as economic growth is still modest and unlikely to have a great impact in SR, especially with increasing crises in other parts of the world.

Hence significant switch to high end dining is not foreseeable to be significant

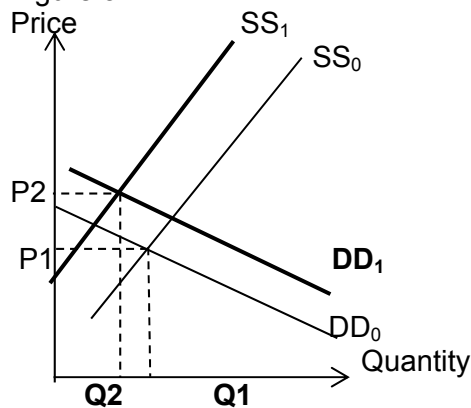
So demand is likely to rise insignificantly and consumer expenditure will hence rise too.

When Supply falls and price increase, because PED is likely to be greater than 1 for this luxury

good, quantity demanded will fall more than proportionately and cause a fall in consumer expenditure.

Therefore the impact on total consumer expenditure is indeterminate.

Figure 3



With reference to Figure 3, demand for high end fine dining rises from DD_0 to DD_1 as income rises. Rising costs causes Supply to fall from SS_0 to SS_1 . Price will hence definitely rise. As PED is likely to be greater than 1, Quantity falls more than proportionately from Q_1 to Q_2 . Hence as explained above, change in consumer Expenditure is indeterminate.

Evaluation:

In the SR, consumer expenditure is likely to fall, as the increase in demand is likely to be relatively insignificant compared to the rising costs, including in reality rising labour costs as well.

However, high end restaurants usually cater to the very rich, where fine dining may take up a small proportion of their income and to them may be a necessity for their status. Hence their demand for fine dining may be rather inelastic.

Therefore, a rise in price due to a fall in supply would lead to a less than proportionate fall in quantity demanded and hence total expenditure will rise.

In this case, coupled with the increase in demand, total expenditure for fine dining may actually unambiguously rise too.

Conclusion

Comparison and evaluation

Therefore consumer expenditure is likely to definitely increase for hawker food but fall for fine dining restaurants in the SR. In the LR, with more people getting affluent and possibly more willing to spend on luxury items as the economy stabilizes too, consumer expenditure may rise for fine dining restaurants too.

In addition, for fine dining, the combined impact on expenditure largely depends on the PED of the demand for fine dining based on the different groups of consumers.

L3 (15-21)	<p>For an answer that</p> <ul style="list-style-type: none"> • Depicts good understanding of question requirements(i.e. explains clearly the overall impact on consumer expenditure for both markets using relevant elasticity concepts) • Provides sufficient rigour/analysis to explain the likely combined impact on consumer expenditure in both markets with enough scope to explain different possible scenarios (For Eg, hawker food being either an Inferior good or necessity to different consumers) • Makes a clear attempt to discuss the extent of impact of the changes on the 2 markets, showing awareness of real world circumstances
L2(10-14)	<p>For an answer that</p> <ul style="list-style-type: none"> • Lacks in either scope or depth in coverage (Analysis is underdeveloped). Eg does not consider extent of impact but just over generalises combined impact on consumer expenditure or does not explain combined impact of both changes clearly or overgeneralises again • Does not have or inaccurate graphical analysis • Arguments may lack clarity and/or coherence • With some minor conceptual errors
L1 (1-9)	<ul style="list-style-type: none"> • For an answer that shows little understanding of the impact of economic growth and rising costs • Or uses the wrong framework, for example the Cost revenue framework instead. • Or has major conceptual errors or does not bring in elasticity at all or does not use it appropriately • Or only explains changes in demand and supply and the market but little coherent explanation of impact on $P \times Q$
E2 (3-4)	<ul style="list-style-type: none"> • For an evaluative judgement based on economic analysis on the relative impact of the changes on the 2 markets
E1 (1-2)	<ul style="list-style-type: none"> • For a summary of the impact on the 2 markets with minimal judgment/comparison, or one that is not supported by analysis.

Question 2

- (a) Using appropriate examples, explain the difference between internal and external economies of scale. [10]
- (b) Discuss how greater free trade and internet advancement might enable a firm to reap the above Economies of scale and practice price discrimination. [15]

(a)

Introduction

Economies of scale refers to the fall in unit costs of production as the scale of production increases

Internal Economies of scale refers to a fall in unit cost of production when the firm increases output by expanding its scale of production while External Economies of scale refers to External economies refer to the fall in unit cost of production experienced by the firm as a result of growth in the industry for every level of output.

Examples of IEOS due to expansion of the firm

◆ TECHNICAL (PLANT) ECONOMIES

Technical or plant economies are costs savings arising because of the large size of a factory.

1. Specialisation and Division of Labour

- ◆ As scale of production expands, there is greater scope for specialization of man & machines.
- ◆ Specialization allows the production processes to be broken down into simpler and repetitive processes.
- ◆ With specialisation and division of labour, less training is needed and workers can be more productive in their particular job and there is less time loss in workers switching from one operation to another and thus lowering unit costs.
- ◆ For example, the assembly lines for car manufacturing allow workers to concentrate in simple and repetitive processes which increases efficiency, for example some will specialise in the installations of hood while others in engine and wheels.

2. Indivisibilities

- ◆ Certain machines come only in fixed and large sizes; they are indivisible. Only large firms will be able to utilize these machines more efficiently.
- ◆ The most obvious example is machinery. A firm producing on a large scale will be able to spread the huge capital outlay of the machine over larger output levels, thereby lowering unit costs.

3. Research & Development

- ◆ A large firm will have the resources to support research leading to the development of better products & cheaper techniques of production and with the large scale of production, it is able to spread the huge R&D costs over a large output, thereby lowering unit costs.
- ◆ For example, a supermarket chain such as NTUC Fairprice and Sheng Siong can invest in technology that improves stock control. It might not, however, be viable or cost-efficient for a small grocery shop to buy this technology.

◆ NON-TECHNICAL (NON-PLANT) ECONOMIES

◆ Marketing Economies

1. Bulk Purchase

- ◆ Large firms have bargaining advantage and are given a preferential treatment by their suppliers because they buy raw and processed materials and components in bulk.
- ◆ Bulk buying of raw materials enables a large firm to obtain the goods at lower costs & better terms with respect to quality & delivery, thereby lowering unit costs.
- ◆ A good example would be the ability of the electricity generators to negotiate lower cost when negotiating coal and gas supply contracts. The major food retailers also have buying power when purchasing supplies from farmers and other suppliers.

2. Large Scale Advertising

- ◆ For large firms, although the advertising expenditure may be substantial, the advertising cost per unit may be lower than that for a smaller firm because of the larger output level.
- ◆ For example, a one-page advertisement in the Straits Times could be \$10,000 per day. Big supermarkets such as NTUC Fairprice with 100 outlets in Singapore may put an advertisement for its groceries. The average cost per outlet is \$100. Compared to a small provision store that has to bear the entire cost on its own.
- ◆ Administrative & Managerial Economies
- ◆ Generally, administrative costs will not rise in proportion to the size of an order. For instance, administrative costs will not be much higher for an order of 1000 units compared to an order of 100 units. Thus, the cost of administration per unit of output, spread over a larger output, is much reduced.
- Each managerial role can also be allocated to a specialist in that field. Large firms can buy management services and retain the best management with attractive pay. This would result in higher productivity and lower turnover costs.

◆ Financial Economies

- ◆ A large firm, with a higher sales volume and more assets to offer as collateral, is deemed by lenders to be more credit-worthy compared to a small firm.
- ◆ Hence banking & financial institutions are more willing to offer loans or extend credit to large firms.
- ◆ In addition, large firms also enjoy better terms (lower interest rates) when they borrow large amounts, lowering unit costs.
- ◆ Large firms can also raise funds by issuing shares to the public, which is a cheaper alternative to borrowing from the banks, as no interest payments are incurred.
- ◆ For example, a newly established neighbourhood bubble tea store would have a harder time getting a microloan of \$100,000 at a low interest rate than a large company that is able to get a loan worth a few million dollars.

External EOS

Economies of Concentration

These economies arise when many firms carrying out similar activities are located very close to one another, i.e. concentrated together. For example, many chemical firms are located in Jurong Island in Singapore.

Trained workforce

As the industry expands, the demand for labour with the necessary skills increases. Training schools may be set up, which means that a pool of skilled workers is readily available and thus reduce costs that are originally incurred by firms to train their employees.

Better Infrastructure

Due to concentration of industry in the region, facilities such as better transport, banking & telecommunication systems may be set up to serve the needs of the industry, thereby lowering operating costs.

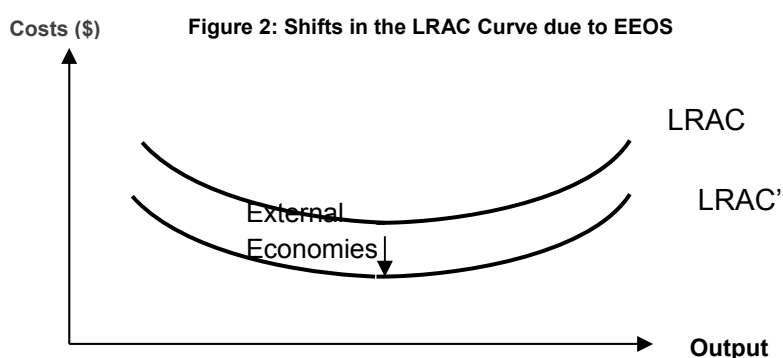
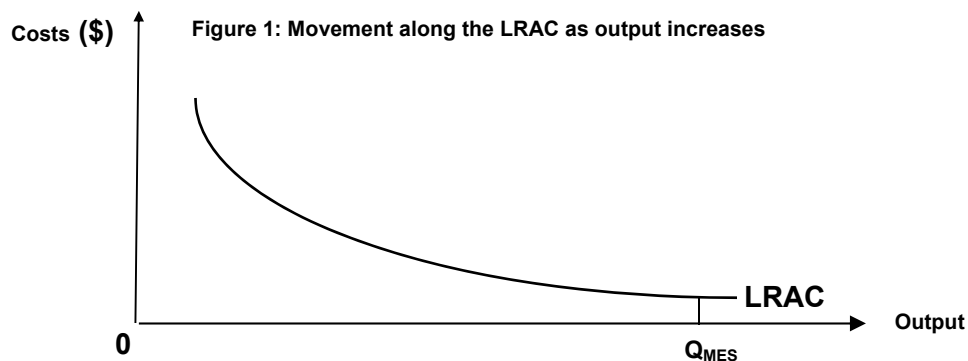
◆ Economies of Disintegration

When an industry is heavily localised, it becomes possible for firms to split up the production process and specialise in a single process or the manufacture of a single component. As the components are mass produced to supply the whole industry, they can be produced and supplied at a much lower costs.

For example, a range of firms can specialise in the production of different inputs for the manufacture of cars, such as seat belts, tyres and exhausts. These firms can provide their output at lower prices to the main (car) industry, because specialisation allows the subsidiary firms to produce at a larger scale and therefore enjoy greater economies of scale.

Graphical Illustration

Graphically, IEOS gains by the firm are represented by a downward movement along the firm's LRAC (Figure 1) as the firm increases its output up to its minimum efficient scale quantity, Q_{MES} , whilst EEOS gains by the firm are represented by a downward shift of its entire LRAC curve as the firm enjoys lower costs regardless of its level of output. (Figure 2).



Mark Scheme

LEVELS	DESCRIPTION	MARKS
3	Clearly explains the difference between IEOS and EEOS and provides appropriate examples (3-4) of both IEOS and EEOS With clear graphical illustrations for both	7-10
2	Only either concept well explained with examples or both explained with examples but with conceptual errors or no or inaccurate graphical illustrations Or accurately explained with Graphical illustrations but lacking sufficient appropriate examples (only 1-2)	4-6
1	Major conceptual errors with little coherent explanations No examples at all or examples are irrelevant or inappropriate	1-3

(b)

Introduction

Further on from part (a), we will now discuss the extent to which free trade and internet advancement has either enabled or hindered firms to reap the above EOS as well as practice price discrimination.

Price discrimination is the practice of charging different prices for different groups of consumers for the same product or for different units of it and it is not due to differences in cost.

The aim of the firm is to increase revenue and hence profits in comparison to when a uniform price is charged.

In order to practice price discrimination, the firm must be able to meet 3 conditions:

The firm must have a degree of monopoly power so that consumers who are charged discriminatory prices find it difficult to turn to an alternative supplier who might offer lower prices, it also must be able to segregate the market into separate and identifiable groups. These groups may be separated by geographical boundaries, age group etc. Lastly, Different buyers must have different degrees of willingness to buy a product and this is reflected by their different price elasticities of demand.

	Reap EOS		Practice Price Discrimination	
	(+)	(-)	(+)	(-)
Free Trade Refers to the scenario of the lowering or absence of trade barriers between trading partners. Eg. Less import tariffs or quotas	Opportunity for firms to expand and reap EOS: Free trade enables firms to gain access to a larger export market Hence this enables them to increase their scale of production and reap more internal economies of scale Industry potentially grows bigger: If free trade enables countries to build up a new comparative advantage on certain goods and services and the industry grows as a result, This may enable the firms to enjoy external economies of scale due to the expansion of the industry.	Firm may face more competition from foreign producers Greater access to imports for consumers may lower their demand for the domestic firms. Hence the domestic firms may have to lower their scale of production or even face the danger of shutting down if they are not able to be competitive in terms of price and quality in the face of increased foreign competition. In addition, free trade has led to different countries either gaining a new Comparative Advantage in certain industries or certain countries losing their Comparative Advantage in their sunset industries, like low end manufacturing in USA and UK for example, as they fail to remain competitive compared to other	Opportunity for firm to expand overseas If there are fewer substitutes in the new overseas market or the good is of significantly better quality or a lot more popular than the domestic equivalent, then the demand for the good may be relatively more inelastic in the foreign market compared to domestically. Hence potentially enabling the firm to practice price discrimination if they now have 2 markets of different PEDs for their product. As firms reap EOS as per above, they will have lower variable costs and higher output. They may then be able to expand their market share by selling more domestically too due to the now lower price and	Harder to segment the markets based on Price elasticity of demand and geographical boundaries However, there may also be erosion of monopoly power as firms face more competition due to increase in imported substitutes from foreign producers. This will make their demand more elastic and make it harder for them to practice price discrimination. In addition, with greater exchange of goods and services between countries, it will make it harder for firms to charge different prices by segmenting the market by geographical boundaries as consumers can now have greater access to the good from other countries, making it harder to prevent seepage and practice price discrimination by

		emerging economies in particular. Hence if the sunset industries are shrinking, it may potentially lead to the firm reaping less external economies of scale instead.	higher output. Hence firms can potentially gain more monopoly power better enabling them to practice price discrimination.	geographical boundaries.
Possible evaluation	<p><i>The extent to which free trade enables firms to reap economies of scale, largely depends on the nature of the product as well as the type of market structure the firm operates in.</i></p> <p><i>For example, Natural monopolies that cater entirely to local consumers like Utilities or SMRT are unlikely to significantly benefit from free trade, though they may benefit from relatively cheaper/ greater variety of raw materials from it. Niche markets that only cater to localised demand or do not expand because of their specialised/ customised appeal, again may not be as greatly impacted by free trade and access to foreign markets.</i></p>		<p><i>Again the impact on a firm's ability to practice price discrimination largely depends on the nature of the firm's product and the market structure they are in.</i></p> <p><i>For example for Natural monopolies that are largely controlled by the government, from public utilities to public transport, etc they may not venture into overseas markets in the first place and their prices are largely controlled, hence limiting the change in their ability to practice price discrimination even with free trade. Often, these goods are also not traded between countries.</i></p>	
Internet Advancement Has led to easier access to information and easier access to consumers and producers worldwide as it practically makes purchase and sale of goods and services borderless if they can be exchanged online	Internet advancement has made the exchange of goods and services nearly Borderless between consumers and producers across countries. This is likely to increase the demand for firms as they can easily reach out to the worldwide consumer market If this increased demand makes the firms more	Firms will face increased competition as consumers have easier access to overseas producers and more substitutes Hence this may actually lead to a fall in demand for the firm, potentially leading to firms cutting back on their scale of production instead and hence being less able to reap internal economies of scale.	Enables firms to have better identification of the market Firms are more able to identify different groups of consumers easily, for example those whose demand is more price-inelastic due to last minute booking or their age simply through their login details that may be auto generated online. Internet advancement	Consumers have easier access to rival's products and information However, it may be harder to have market segmentation from separation by geographical boundaries across borders/countries, as it is now easier for consumers in one country to sell to another consumer in a different country. Hence the ability of the firm to prevent seepage and hence their

	<p>profitable and more firms are attracted to the industry, leading to an expansion of the industry, the firms may potentially be able to reap external economies of scale too.</p>		<p>also makes it easier to change prices offered relatively effortlessly and instantaneously, enabling the firm to practice price discrimination more easily. For example airlines can pre-set the higher fares for those who book last minute and lower for those who buy the tickets in advance based on their login period.</p>	<p>ability to practice price discrimination may be weakened.</p> <p>In addition, consumers also have much easier access to information of rival companies and can much more easily compare prices and product details online rather than have to travel from shop to shop. Hence Knowledge is less imperfect and easier comparison of prices make it harder for the firm to price discriminate between different groups of consumers</p>
Possible evaluation	<p><i>The reach of the internet and especially online shopping has definitely increased exponentially over the years as the internet age has taken root over the last 2 decades. With more companies increasing their online presence, the impact of the internet for firms is likely to increase, especially as internet security continues to be tightened.</i></p> <p><i>However, many consumers still prefer the personal touch of face to face purchases. They may also worry about fraud and the inability to test the products before purchase. Hence the extent of the expansion of the internet to benefit firms depends on the nature of the product, as well as how consumers view the security of the internet environment.</i></p>		<p><i>With the extensive use of search engines and many more firms using the online platform to market their products, increased ease of access to information will have an increasingly significant impact on firm's pricing and how they may have to be more aware of their rival's strategies to remain competitive</i></p>	

Conclusion (Final Judgment)

The impact that internet advancement and free trade has had on firms ultimately depends on the type of good or service they provide, as well as the type of market structure the firm is in. Generally industries that allow for mass production and easy marketing and transporting across boundaries have seen much growth due to both free trade and internet advancement as many have taken the opportunity to expand overseas or have an internet presence. For example, technological products or standard manufactured goods.

However, there will always be industries that focus on localised demand or the personal touch and hence may not expand despite the increase in free trade or may not see the need for an online presence. For example niche markets like antiques, jewellery or public utilities and many of our natural monopolies.

Therefore, the extent of the impact of free trade and internet advancement varies significantly across different industries.

Mark Scheme

LEVELS	DESCRIPTION	MARKS
3	<p>An answer that:</p> <p>Clearly explains the possible impact of both free trade and internet advancement on the firm's ability to reap EOS and practice price discrimination</p> <p>A rigorous and broad analysis of all aspects of the question with realistic examples</p>	8-11
2	<p>An answer that:</p> <p>Only explains either free trade or internet advancement well or looks at the impact of both changes but only links to either reaping EOS or the ability to practice PD well and may be limited in realistic examples</p> <p>May have some minor conceptual errors in some of the key</p>	5-7

	concepts in the question or is very theoretical with minimal realistic examples Or link to reaping EOS or practicing PD not well explained/ clear	
1	Major conceptual errors with little coherent explanations No examples at all or examples are irrelevant or inappropriate Missing link to key concepts in the question	1-4
E2	A conclusion justified with economic analysis	3-4
E1	An unjustified conclusion that does not attempt to explain the extent of the impact of both changes	1-2

Question 3

In many countries, governments hope that their citizens would unite in cheering for their respective nations for the World Cup. Hence, viewers watch the tournament for free on free-to-air television, or pay a very low price. On the other hand, viewers in countries where pay-TV providers have the exclusive broadcast rights are charged a high price. Besides, productivity is believed to be affected by the month-long season as workers may suffer from prolonged sleep deprivation.

- (a) Distinguish between public goods and private goods and consider whether a TV broadcast signal is a public good. [8]
- (b) Discuss whether governments should intervene in the World Cup TV broadcast market. [17]

INTRODUCTION
Public goods are those which there are non-rivalry and non-excludability in consumption whereas private goods are rival and excludable.
BODY
<u>Distinguish: Non-rivalry vs rivalry</u> A public good is non-rivalry in consumption, while a private good is rival in consumption. Non-rivalry in consumption: an additional person consuming the goods does not diminish the

amount available to others. Hence, the marginal cost of providing the good to one more person is zero. If the marginal cost is zero, the efficient price to charge should be zero ($P = MC$). If a price were charged, there would be a welfare loss to society. But no private firms whom are assumed to be profit-motivated would be willing to supply the good if the price is zero!

Streetlights: an additional person using the streetlight does not mean the light becomes dimmer. On the other hand, a private good like a hamburger, once eaten, there is one less for the next person.

Distinguish: Non-excludability vs excludability

A public good is non-excludable in consumption, while a private good is excludable

Non-excludability in consumption: Once provided, it is not possible / is costly to prevent non-payers from consuming the good, leads to the free-rider problems where consumers would rather not pay.

Streetlights: once street lights are provided, it is not possible / is costly to collect payments from users. Hence, non-payers could also get to enjoy the good. On the other hand, a consumer who refuses to pay for the hamburger can easily be excluded from consuming it.

TV broadcast signal is not a public good due to excludability.

Applying to TV broadcast signal

TV broadcast signals are non-rival since quality of signal is not degraded for additional viewers, but it is excludable, relatively easy for broadcasters to scramble the signal and charge households for a descrambler.

CONCLUSION

Since a TV broadcast signal is excludable, it is not a public good.

Mark Scheme

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> • Clear distinction between private and public goods. Use of relevant examples to support analysis. • Thorough analysis of why TV broadcast signal is not a public good 	7-8
L2	<ul style="list-style-type: none"> • Some analysis of why TV broadcast signal is a public or private good, though points are not convincing/inaccurate. • If students did not attempt to distinguish (horizontally), but explained instead (vertically), maxed at 6 depending on quality. 	4-6
L1	<ul style="list-style-type: none"> • Smattering of points, did not use the economic terms non-rival and non-excludable • Descriptive answer. 	1-3

b)

Introduction

Allocative efficiency requires production to the point where social welfare is maximized, where the sum of the consumer surplus and producer surplus is at the highest. Market

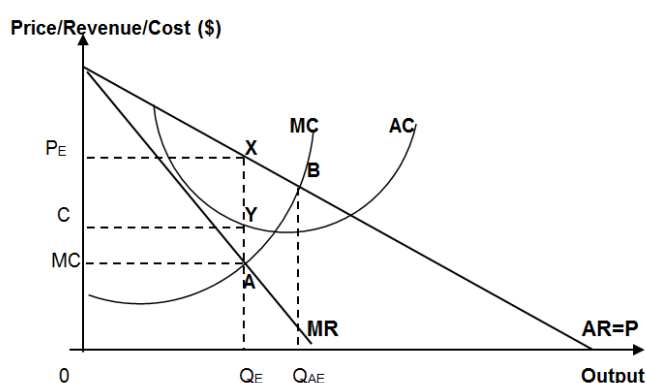
failure occurs when free markets, operating without any government intervention, fail to allocate scarce resources efficiently and hence social welfare is not maximised.

Whether or not the government should intervene in the TV broadcast market for World Cup will depend on whether the free market can satisfy the goals of both efficiency and equity.

Thesis: Governments should intervene to promote allocative efficiency and equity.

Body 1: Market dominance

Pay-TV providers, example SingTel in Singapore, have the exclusive broadcast rights, leading to market dominance problem.



- With reference to the diagram below, pay TV providers charge a price higher than marginal cost ($P_E > MC$) at profit-maximising output, Q_E at $MR=MC$ where MC is rising. As a result, they earn high supernormal profits of P_ECYX .
- Since price is greater than MC , it means the consumers place a higher value of additional units of the good produced than the opportunity costs of the firms producing it.
- So it is still possible to allocate resources in such a manner as to make someone (the consumer) better off without making someone else (the firm) worse off till the allocative optimum output Q_{AE} where $P=MC$.
- Thus, there is an underproduction of Q_EQ_{AE} causes a deadweight loss of area of ABX .
- For this underproduction of Q_EQ_{AE} , the incremental welfare gain is represented by the area BXQ_EQ_{AE} while the incremental cost is BAQ_EQ_{AE} . And benefits outweigh costs, the society suffers from a welfare loss of ABX for Q_EQ_{AE} of goods not being produced.

Type of Government intervention: Govt can use price regulation, MC pricing, to force the Pay-TV providers to charge $P = MC$.

Body 2: Merit good and positive externalities

Watching sporting broadcast is seen as a merit good, especially if your country has qualified for the World Cup since it can improve social unity, leading to greater cooperation among the different racial groups and the entire economy can benefit.

To show depth, students should explain clearly:

- Individual citizen only takes into account her PMB and PMC of watching, examples of PMB would be her own utility in watching.
- However, there is EMB, through improvement in social unity; for example, this might lead to greater cooperation among different racial and ethnic groups.
- The amount of watching would be where $PMB = PMC$.

- However AE requires $SMB = SMC$.
- There would be under consumption of WC TV broadcast, leading to deadweight loss.

Evaluation: Less relevant for Singapore since we did not qualify.

Type of govt intervention: Justifies govt subsidies and show how such subsidies lowers PMC through diagram, achieving a more efficient resource allocation.

Body 3 Non rivalry may mean that the govt should intervene so that a zero price can be charged

Non-rivalry means $MC = 0$ for the additional viewer and hence charging $P = 0$ helps to achieve AE. Since, private firms are profit maximizers, they will not operate in a market that does not allow her to charge a price.

Type of govt intervention: Governments can use tax-payers money to finance.

Body 4: Promoting equity

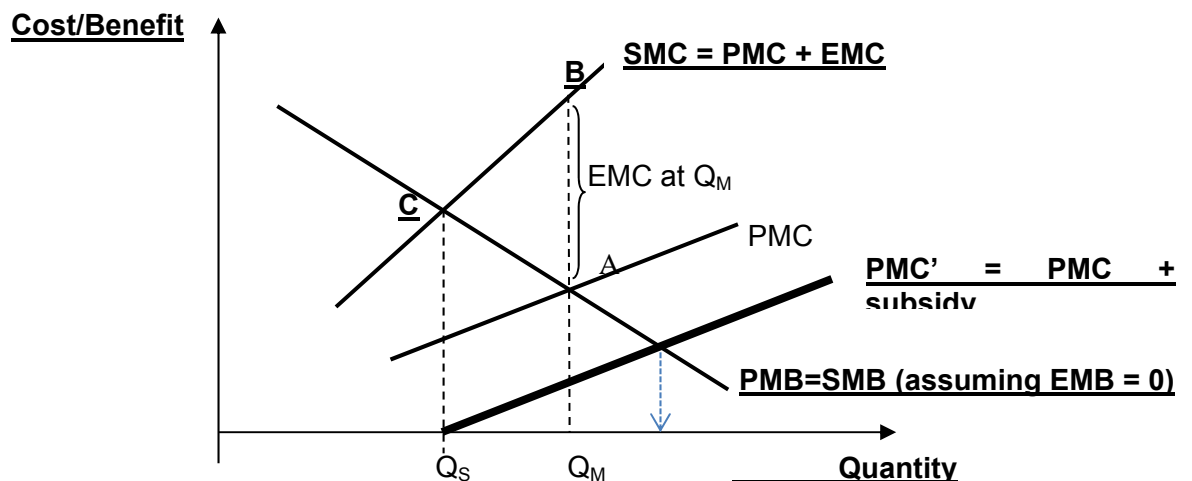
Its socially desirable to have rich and poor able to enjoy sporting events. If dominant firms like Singtel is allowed to charge too high a price, those who are poorer would not be able to signal their wants for WC watching to the market mechanism, leading to an unsatisfactory allocation of resources.

Type of govt intervention: Govts can subsidize public viewing, for example, in Singapore, everyone can watch in community centres for free.

Anti-thesis: Governments should not intervene due to possible govt failure from intervention

Body 1: Governments may worsen the overconsumption due to possible negative externalities..

In Singapore's case, it may lead to a worsening productivity due to sleep deprivation, if the Singapore govt further subsidize world cup broadcast. *(If students already explained positive externalities in depth in thesis, there is no need to explain negative externalities here with the same level of detail but if they did not, then they can do that here.)*



Body 2: European countries may want to cut government subsidies due to increasing opportunity cost of funding such broadcasts.

Using tax revenue to finance free World Cup viewing takes away government funds for healthcare or the current economic restructuring. In the light of Euro crisis and the need for many of the European countries to undergo austerity, this may be especially important for them.

Body 3: Lack of dynamic efficiency if Sg government intervene to prevent Singtel from charging monopoly prices:

If government sets AC or MC pricing for pay-TV broadcasters like SingTel, it could result in less supernormal profits and hence affect dynamic efficiency. Example, Singtel may not be able to do RnD on viewing WC broadcast on mobile devices.

Synthesis and conclusion

For Singapore's case, if she views gambling as a serious problem, allowing Singtel to charge a higher price may reduce the viewing of World Cup and hence correct that negative externality (2nd best theory). So there may not be a need for further govt intervention in the case of Singapore.

For European countries, even though households may not have to pay for World Cup broadcast, it may not necessarily be due to government subsidies. It could be the firm's profit max decision to only charge for advertisement.

Allow any well justified conclusion

Mark Scheme

Level	Descriptors	Marks
L3	For a well-developed answer, with a clear central structure that is able to explain why governments in some countries may intervene while others may not.	10-13
L2	For an under-developed answer that is able to explain why governments in some countries may intervene while others may not.	
	A balanced discussion with at least 2 sources of market failure well discussed	8-9
	At least 1 source of market failure well discussed	6-7
L1	A smattering of valid points but does not indicated that the meaning of the question has been understood	1-5
E2	For an evaluative assessment based on economic analysis.	3-4
E1	For an unexplained assessment or one that is not supported by economic analysis.	1-2

Question 4

- (a) Explain how equilibrium national income is determined. [8m]
(b) Discuss the view that monetary policy is preferred to fiscal policy in raising national income during a recession. [17m]
-

(a)

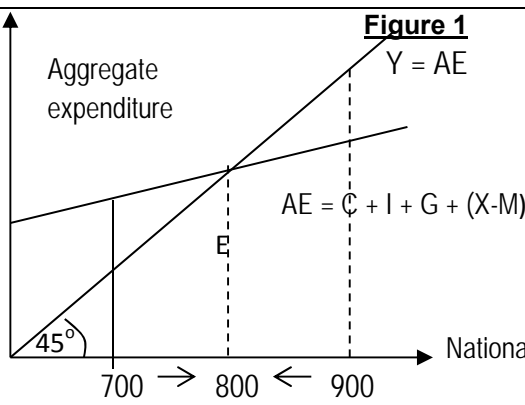
INTRODUCTION	
Define equilibrium level of national income	
BODY	
Approach 1	Approach 2 (Alternative)
Use of $Y=AE$ diagram or numerical table to illustrate concept of equilibrium	Use Circular flow of income in a 4-sector economy to explain how injections and withdrawals interact to achieve equilibrium level of income
CONCLUSION	

Suggested Answer (Approach 1):

Explain how equilibrium national income is determined.

[8m]

INTRODUCTION																																		
Key Words	Equilibrium national income refers to a situation where there is no tendency for national income to change. It is the level of income when the plans of all economic agents in the economy are fulfilled and consistent with each other.																																	
Issue and Approach	Approach 1 The income-expenditure approach to income determination can be use to explain how the economy arrive at the equilibrium level. Approach 2* (see appendix for answer)																																	
BODY (Approach 1)																																		
State	The income-expenditure approach to income determination states that in an open economy with a government sector, the equilibrium national income occurs where national income, Y_e = aggregate expenditure (AE)																																	
Explain & Elaborate	<p>Aggregate expenditure is the planned total expenditure on goods and services, and in a four-sector economy; this comprise of consumption expenditure, planned investment expenditure, government expenditure and net exports. Investment (I), government expenditure (G) and the value of exports (X) are assumed to be autonomous, i.e. independent of the level of income. The table below provides a numerical example for the determination of equilibrium national income.</p> <p style="text-align: center;"><i>Table 1: National income and components</i></p> <table><tr><th>National Income Y (\$b)</th><th>Consumpti on C (\$b)</th><th>Investme nt I (\$b)</th><th>Govt Spend ing G (\$b)</th><th>Export s Rev X (\$b)</th><th>Import s Expen diture (\$b)</th><th>Agg Expenditur e (\$b)</th></tr><tr><td>700</td><td>475</td><td>200</td><td>50</td><td>100</td><td>75</td><td>750</td></tr><tr><td>800</td><td>537.5</td><td>200</td><td>50</td><td>100</td><td>87.5</td><td>800</td></tr><tr><td>900</td><td>600</td><td>200</td><td>50</td><td>100</td><td>100</td><td>850</td></tr></table> <p>As shown in diagram (Table 1), the equilibrium national income occurs at $Y=800$, where aggregate expenditure is equal to national income.</p> <p>If national income is at \$700b planned AE exceeds planned output. This means that goods and services are being bought at a faster rate than are being produced. There is a fall in unplanned inventories (stocks) by \$50b. When the firms see this, they will take steps to expand output. They will hire more workers. This will cause output, income and employment to rise. National income will rise until the equilibrium position E is reached when planned AE equals planned output.</p> <p>On the other hand, if national income is at \$900b, the planned output exceed</p>						National Income Y (\$b)	Consumpti on C (\$b)	Investme nt I (\$b)	Govt Spend ing G (\$b)	Export s Rev X (\$b)	Import s Expen diture (\$b)	Agg Expenditur e (\$b)	700	475	200	50	100	75	750	800	537.5	200	50	100	87.5	800	900	600	200	50	100	100	850
National Income Y (\$b)	Consumpti on C (\$b)	Investme nt I (\$b)	Govt Spend ing G (\$b)	Export s Rev X (\$b)	Import s Expen diture (\$b)	Agg Expenditur e (\$b)																												
700	475	200	50	100	75	750																												
800	537.5	200	50	100	87.5	800																												
900	600	200	50	100	100	850																												

	<p>planned AE. This means that businessmen find their sales are less than expected. There is a rise in unplanned inventories (stocks) by \$50b. This causes firms to cut back on production and lay off workers. This will result in a drop in income, employment and output. National income will fall until equilibrium level E as shown in Figure 1.</p>
Diagram	<div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p>Equilibrium income is determined where the AE line cuts the 45° line. The 45° line represents all points where income equals planned expenditure.</p> </div> </div>
CONCLUSION	

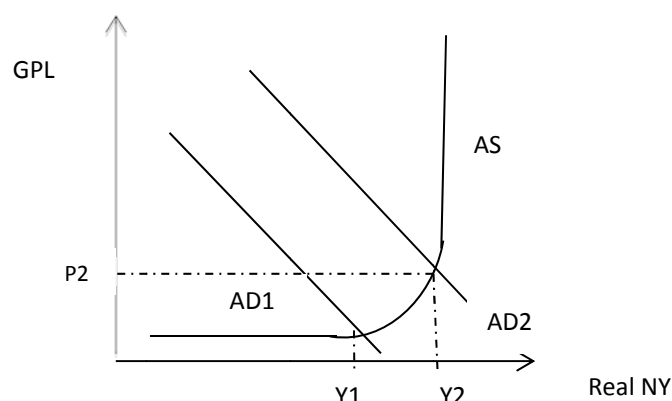
Knowledge, Application, Understanding and Analysis	
Level 1 (1-3)	Largely descriptive or inaccurate explanation of how equilibrium national income is determined. Eg. Just a regurgitation of what circular flow of income is.
Level 2 (4-6)	Application of AE-income analysis to explain for equilibrium but explanation is incomplete.
Level 3 (7-8)	Application of AE-income analysis to explain for equilibrium with clear explanation of adjustment process to equilibrium and the use of a clearly labelled diagram.

(b)

Discuss the view that monetary policy is preferred to fiscal policy in raising national income during recessions. [17m]

INTRODUCTION
<p>Recession is where EG is negative for two consecutive quarters. MP is the increase in M_s and / or interest rates in order to fulfil gov't macroeconomic objectives FP on the other hand is the changing of G and T to affect the economy.</p>
<p>Both monetary (MP) and fiscal policy (FP) are demand-management policies. During recessions, government can use either expansionary MP or FP to increase AD to trigger a multiplied increase in national income.</p>
<p>BODY Explain how expansionary MP works: Traditionally by cutting interest rate or raising money supply. Reduction of Interest rate will reduce the incentive to save which will lead to an increase in autonomous consumption. Lowering interest rate will also lead to more profitable planned investment and cause an increase in investment. Explain how expansionary FP works: Traditionally, FP works through increasing government spending or reducing direct (personal income and/or corporate) taxes. If personal income tax is reduced, then disposable income of households will</p>

increase and AD will increase via consumption expenditure. A decrease in corporate tax will lead to higher after-tax returns on planned investments resulting in an increase in investment expenditure and AD.



In the diagram, an expansionary MP or FP will shift AD from AD1 to AD2, firms will employ more factor inputs and produce more output and hence pay more factor income to households. The household will spend a proportion of the additional income on consumption, depending on their marginal propensity to consume (MPC). With the increase in C, firms will employ even more factor inputs to produce even more output and hence pay even more factor income to households. This cycle of spending and re-spending on consumption will continue until the increase in income becomes negligible. Hence an increase in AD will lead to a larger increase in national income, from Y1 to Y2. The multiplier, k , represents how many times the national income increases with respect to the initial change in AE.

Thesis: MP is preferred	Anti-thesis: FP should be preferred
Merits of MP	Merits of FP
<p>Ease of implementation Unlike FP which requires policymakers to undergo months of deliberation, the change to interest rates can be easily lowered by Central Bank.</p> <p>Secondary effect on ER – reduction in interest rate leading to depreciation of country currency and has a favourable impact on country's BOP</p> <p>If interest rate is lowered, then it will lead to an outflow of hot money. This assumes free capital movement and ER is freely fluctuating, then the ER will depreciate as there will be a fall in demand for the country's currency in the FOREX market. If ML condition is satisfied, then BOP will improve.</p>	<p>Direct Impact on AD Unlike i/r centered MP, FP such as increase in G will have a direct impact on AD.</p> <p>Reduction in Corporate Tax can be used to attract FDI When the corporate income tax is reduced in periods of recession, the expected after-tax returns on planned investment will rise. This will lead to a possible influx of FDI.</p>
Demerits of FP	Demerits of MP
Inflexibility of changing G and T	Investment & Consumption may be interest

<p>Changing G and T involves a high level of inflexibility as they are subjected to parliamentary debates and approvals which may take from a few months to years before they are implemented. This is also known as decision time lag.</p> <p>Possible crowding out effect The crowding out is the effect of an increase in G that result in a decrease in private investment/ consumption expenditure. This is because G if financed from borrowing (and not from taxes) will lead to a competition for funds and drive up interest rates. This will lead to a possible reduction in both C and I.</p> <p>Implementation Lag of FP The effect of FP is spread out over time and hence the full effect is realised only a period of several months.</p>	<p>inelastic</p> <ul style="list-style-type: none"> • MP works indirectly via change in i/r. Interest rate works to increase the level of I and C. • If C and MEI is interest inelastic, then the fall in interest rate must be sufficiently large in order to effect an change in I. <p>Liquidity Trap if interest rate is too low MP may be ineffective in a recession if the interest rate is too low.</p>
Synthesis/ Exemplification	
<p>US: The U.S. subprime mortgage crisis was a nationwide banking emergency that coincided with the U.S. recession of December 2007-June 2009. It was triggered by a large decline in home prices, resulting in mortgage delinquencies and foreclosures. Declines in residential investment preceded the recession and were followed by reductions in household spending and then business investment.. The crisis had severe, long-lasting consequences for the U.S. with nearly 9 million jobs lost during 2008 and 2009, roughly 6% of the workforce</p> <p>Policies by the US Govt</p> <p>1. Lowering of interest and operation of Quantitative Easing (QE)</p> <ol style="list-style-type: none"> 1. Federal Reserve (FED) aka as the Central Bank lowered interest rate, called the discount rate, from 5.75% to 2.25%. 2. In December 2008, the Fed further lowered the federal funds rate target to a range of 0–0.25% 3. In addition, the FED undertook, along with other central banks, open market operations to ensure member banks remain liquid. 4. In November 2008, the Fed announced a \$600 billion program to buy bonds from the private sector. This is also known as quantitative easing and was pursued because the interest rate could not be lowered further. 5. In March 2009, the FED further purchased up to an additional \$750 billion of government-sponsored enterprise mortgage-backed bonds, bringing its total purchases of these securities to up to \$1.25 trillion. <p>2. Fiscal stimulus package</p> <ul style="list-style-type: none"> • On 13 February 2008, President George W. Bush signed into law a \$168 billion economic stimulus package, mainly taking the form of income tax rebate checks mailed directly to taxpayers. • On 17 February 2009, U.S. President Barack Obama signed the American Recovery and Reinvestment Act of 2009, a \$787 billion stimulus package with a broad spectrum of spending and tax cuts. • Over \$75 billion was also specifically allocated to programs which help struggling homeowners. This program is referred to as the Homeowner Affordability and Stability Plan • The U.S. government continued to run large deficits post-crisis, with the national debt rising from \$10.0 trillion as of September 2008 to \$16.1 trillion by September 2012. The debt increases were \$1.89 trillion in fiscal year 2009, \$1.65 trillion in 2010, \$1.23 trillion in 2011, and \$1.26 trillion in 2012 	

The US relied on both MP and FP (as fiscal stimulus) to solve the subprime Crisis.

Europe:

The **eurozone crisis** (often referred to as the **euro crisis** or the **sovereign debt crisis**) is an ongoing crisis that has been affecting the countries of the eurozone since early 2009, when a group of 10 central and eastern European banks asked for a bailout. At the time, the European Commission released a forecast of a 1.8 per cent decline in EU economic output for 2009. The crisis made it difficult or impossible for some countries in the eurozone to repay or refinance their government debt without the assistance of third parties like the European Central Bank or IMF. Banks in the eurozone were undercapitalised and have liquidity and debt problems.

Causes of the crisis varied by country. In several countries, private debts arising from a property bubble were transferred to sovereign debt as a result of banking system bailouts and government responses to slowing economies post-bubble. In Greece, high public sector wage and pension commitments were connected to the debt increase. The structure of the eurozone as a currency union (i.e., one currency) without fiscal union (e.g., different tax and public pension rules) contributed to the crisis and harmed the ability of European leaders to respond.

Policies undertaken by Eurozone Countries

1. Monetary Initiatives

The European Central Bank (ECB) has taken a series of measures aimed at reducing volatility in the financial markets and at improving liquidity. In May 2010 it began open market operations buying government and private debt securities reaching €219.5 billion in February 2012.

With the aim of boosting the recovery in the eurozone economy by lowering interest rates for businesses, the ECB cut its bank rates in multiple steps in 2012–2013, reaching an historic low of 0.25% in November 2013. The lowered borrowing rates have also caused the euro to fall in relation to other currencies, which is hoped will boost exports from the eurozone and further aid the recovery

2. Austerity Measures rather than fiscal stimulus

Austerity describes policies used by governments to reduce budget deficits during adverse economic conditions. These policies may include spending cuts, tax increases, or a mixture of the two. Austerity policies may be attempts to demonstrate governments' fiscal discipline to their creditors and credit rating agencies by bringing revenues closer to expenditures

Comparing US & Europe use of MP and FP:

MP in both countries/ zones involves mainly QE ie buying of bonds rather than interest rate as interest rate is already very low. The MP used in US and Europe involves mainly Quantitative Easing; this involves the buying of bonds by the Government. This is because of the low interest environment that is present in many developed countries. As such, further lowering of interest rate is ineffective in raising I.

For Europe, many of the aid given is tied to their agreeing to austerity measures. This was because many believed that the crisis started due to the fiscal imprudence of these countries hence the bailout packages required countries to undertake concrete steps to reduce G/ reduce budget deficits.

It seems that there was **greater use of MP in Europe** due to the indebtedness of countries such as Greece and the rest of the PIGS economies (government indebtedness).

Singapore:

Despite an average growth rate of nearly 8 per cent from 2004 to 2007, Singapore was the first East Asian country to fall into a recession from the current global economic crisis after July 2008. The economy contracted by 6.3% in the third quarter, on an annualised seasonally adjusted basis, having shrunk by 5.7% in the second quarter of 2008.

The exposure of Singapore's banks to sub-prime mortgage is limited, due to its well regulated market. The recession came mainly through the fall of the non-oil exports in manufactured goods, induced by

the overall deterioration of economic conditions in the US and Europe. This clearly reflects the greater vulnerability of the Singapore economy to global economic shocks given the openness of its economy. Singapore's economy, which is heavily dependent on exports to the developed world, is one of the first in Asia to be hit by a global economic slowdown. Both Europe and United States are still Singapore's key export destinations, accounting for nearly 33 per cent of the total non-oil exports over the last few years. The ASEAN countries – Indonesia, Malaysia, and Thailand – accounted for nearly 20 per cent and Northeast Asia accounts for around 24 per cent of Singapore's non-oil exports.

1. Govt fiscal stimulus with SS side slant

The govt announced a \$20.5 resilience package, financed from its reserves aimed at boosting AD. Of this amount.

Training : Of this amount, \$5.1 billion will be spent to save jobs. The jobs credit scheme has been implemented to subsidise company's wage bill for local workers. \$600 million will be set aside for Skills Programme for Upgrading and Resilience (SPUR); programme which pays part of the workers wages while they are undergoing training. The cost of training is lower during a downturn, so the downturn provides a good opportunity to train and retrain productive workers in the economy. CET programmes need to be targeted at specific sectors and upgrading of skills in both generic and technical skills of workers will be equally important. Workers out of the work for an extended period lose part of their human capital and are unable to secure similar paying jobs. Given that the current recession might be a long and a protracted one, workers require extended period of training and upgrading in specific skills. Training grants need to be extended beyond CET training to provide for general education and skills for workers to acquire post-graduate diploma and even university degrees. This will have a stronger impact on re-employment and retaining productive workers in the labour market.

Tax Concessions: To ensure business cash flow, there will be 40% rebate for industrial and commercial property in 2009. A reduction of the corporate tax rate to 17%. For individuals, govt will give 20% tax rebate and 40% property tax rebate for owner-occupied residential properties.

Infrastructural Improvement: Govt will boost infrastructure spending, which will not only provide jobs but will enhance the country image and destination for FDI. \$4.4 Billion will be set aside for infrastructural development such as road works, sewage networks, upgrading of health and education infrastructure.

2. ER policy

Singapore's central bank, known as the Monetary Authority, shifted its foreign exchange rate policy to a "zero per cent appreciation" of the Singapore dollar from a "modest and gradual appreciation" in a bid to boost the competitiveness of the country's exports. A strong Singapore dollar has been quite detrimental to growth, especially manufacturing hence it was much better to take a risk with inflation and deal with growth by making the Singapore dollar weaker and support exports.

3. Wage Policy

In the current downturn, companies should be encouraged to make wage adjustments rather than quantity adjustments in terms of retrenchment. In 2004, the government introduced the wage restructuring policy and the key objective of the policy is to increase the flexibility of the labour market to external shocks by allowing greater flexibility in wages.

Evaluation: In Singapore, traditional demand management policies are not effective in itself due to our small multiplier size. Even when we do use expansionary FP to pump-prime economy, we use it with supply-side slant. The government's fiscal stimulus is also unlikely to have little impact on the growth, given the small share of the domestic demand to total demand, although it should provide some relief for vulnerable households in the lower income group.

Instead focus is on use of exchange rate centred monetary policy (Importance of trade to drive

growth) AND ss-side policies to ready itself for the economic upturn.

Evaluation/ Synthesis

- Effectiveness of Demand Management Policies dependent on size of multiplier
- Recession may create pessimism and despite the lowering of interest rate and reduction in taxes, consumption and investment expenditure may not rise corresponding
- For Spore, not appropriate and effective to use FP or MP; instead more dependent on ER policy and SS-side policies in face of recession

CONCLUSION

Whether monetary or fiscal tool is preferred and chosen depends on many factors such as ability of the government, nature of the economy or the state of the economy as seen in the discussion above. However, the effectiveness of demand-management policies depends on the multiplier size of the economy.

And more often than not, countries find themselves having to depend not only on demand management policies but also supply side policies to re-structure and improve supply side capabilities to raise competitiveness or trade policies to influence the external sector to revive growth.

Mark Scheme

L1 (1-5)	An answer that shows some <u>incomplete or inaccurate attempts</u> to explain how the policies work to increase national income.
L2 (6-9)	For an answer that shows how policies work through multiplier process to increase national income and some evaluation of the policies. Explanation may not be clear or fully elaborated. <u>Lop-sided response</u> where students only explains why 1 policy is preferred without weighing against the other.
L3 (10-13)	For an excellent explanation and detailed analysis of how both the policies work through the multiplier effect to revive growth. Students demonstrate ability to develop a <u>balanced discussion</u> to highlight <u>other factors</u> that would influence the choice of either fiscal or monetary policies in different countries.
E1 (1-2)	For an unexplained assessment.

E2 (3-4)	For a judgment or evaluative assessment based on sound economic analysis with reference to different economies.
---------------------	---

Question 5

In order to raise productivity in Singapore, the Government will spend S\$2.5 billion over the next 5 years on the training of workers and also provide tax incentives to help companies grow their R&D spending. In addition, the government will raise the foreign worker levies and tighten the inflow of foreign workers so as to support companies' innovation and automation efforts.

Discuss the possible trade-offs in economic goals that may arise as the government implements these strategies to raise productivity in Singapore. [25m]

INTRODUCTION
Government's objectives include micro and macro objectives. Micro objectives include: greater allocative and productive efficiency, reduce income inequality and greater income equity. Macro objectives include: internal stability such as sustainable economic growth, low unemployment, price stability & external stability such as exchange rate stability. Labour productivity refers to the output per worker per hour of work or output per man-hr.
Singapore has a problem of low productivity compared to other developed countries. Labour productivity growth can be achieved by improvement in the quality of labour resources through measures such as subsidy on education & training to equip workers with new knowledge/skills, tax

incentives/subsidies to encourage firms to mechanise & do R&D etc. The Singapore government has been also tightening the supply of foreign labour policy is to achieve productivity driven growth. Affected industries are mainly the labour intensive types such as cleaning companies, transport companies, F&B industry etc.

BODY – THESIS (TRADEOFF IN ECONOMIC GOALS)

Trade off 1

Strategy (State)	Spending of \$2.5 million on training to produce skilled workers
Explain / Exemplification	<ul style="list-style-type: none"> Government is adopting SS-side policy in the training and education of workers to assume higher skilled jobs. This is because the Spore economy is re-structuring our economy to a knowledge-based / productivity based economy. Whilst cutting down the inflow of cheap foreign workers, it must be noted that the govt is encouraging the flow of skilled workers into Spore to supplement and add to the pool of skilled workers.
Tradeoff MicroEcon Goal - Greater income inequality	<ul style="list-style-type: none"> In the 21st Century where there is a global competition for resources, skilled workers are highly valued and command higher wages. As the Spore economy restructure and transform to become a more knowledge-based economy, there will be a segment in society that may not be as well-trained. These unskilled and semi-skilled workers may not be able to command high salary and hence may widen the income gap in society. In fact, Spore Gini coefficient has been raising in recent years and Singapore has the second highest income gap between the rich and the poor, as indicated by the Gini coefficient, among the 38 countries with very high human development, according to the 2009 United Nations Development Report. Only Hong Kong has a higher income gap. Singapore, according to the 2009 UN report, had a Gini coefficient of 42.5, exceeded only by Hong Kong (43.4) among the countries with very high human development.
Evaluation	<ul style="list-style-type: none"> Training and education require workers to be receptive Long gestation period of supply-side policies Spore govt need to be careful because too much reliance on foreign talent can backfire. This is because they are highly mobile and if they find Spore no longer attractive, the mass exodus of such workers will have a destabilising effect on the economy In addition, there is the opportunity cost of using G (\$2.5 billion) to support training, could have been used to provide healthcare / education => However, it should also be noted that this is not a big problem as the Spore Govt has strong reserves and is already spending a substantial amount on healthcare

Trade off 2

Strategy (State)	Raising of workers levies and tightening the inflow of foreign workers into Singapore.
Explain Tradeoff MacroEcon Goal – Inflation	<ul style="list-style-type: none"> As labour becomes scarce due to tightening of foreign labour, its price (wages) will rise. Firms are also forced to hire more expensive domestic labour to replace the cheaper foreign workers. This increase in wage cost is a necessary part of the restructuring process and will feed through in a general increase in prices for a range of consumer services such as healthcare, cooked foods and hospitality that previously depended heavily on foreign labour.

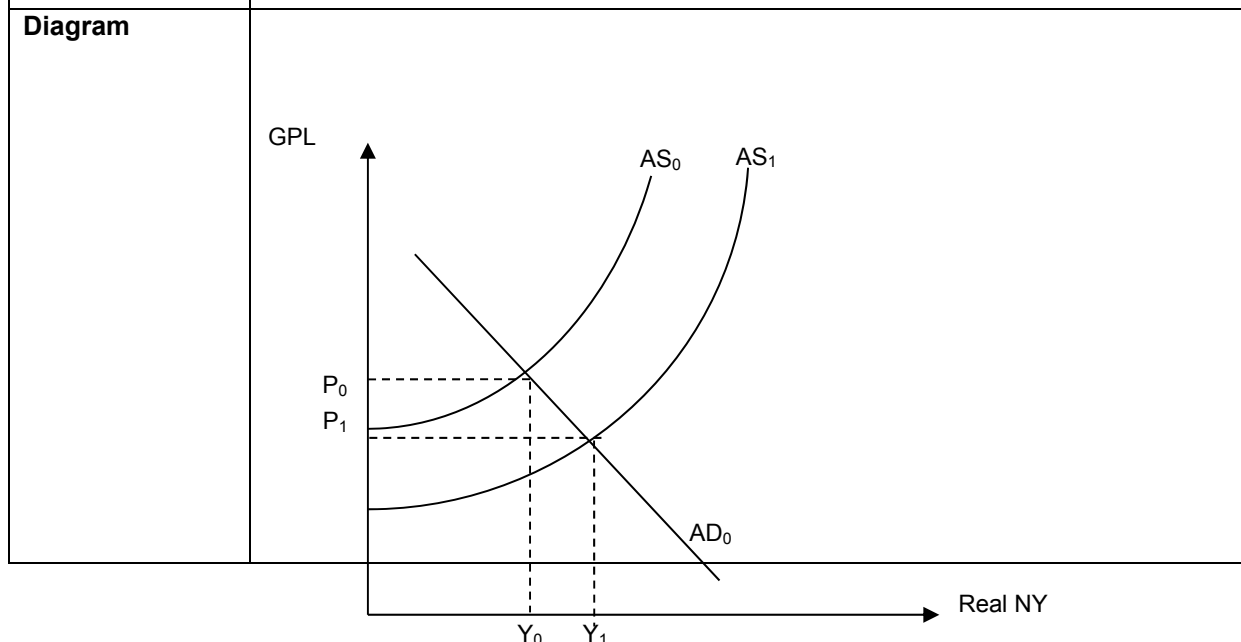
	<ul style="list-style-type: none"> In the SR, the economy may undergo inflation due to possible wage-push inflation. This is due to the fact that companies need to raise wages in order to attract “scarce” resources.
Exemplification	<ul style="list-style-type: none"> The effects of restricting flow of labour to Spore have already resulted in higher prices. According to MAS, the Core inflation, which excludes the costs of accommodation and private road transports, inched up to 2.2 percent in July 2014 from 2.1 percent in the preceding month, due to the pickup in service inflation. For 2014, MAS Core inflation is expected to stay elevated at 2-3 percent. In fact, MAS expects the Core inflation to be 1% higher in this decade compared to the last decade. MAS Core inflation is likely to average 2.5% per annum, and CPI-All items inflation at 3%. This compared to the average of 1.3% per annum during 1985-2005.
Diagram	<ul style="list-style-type: none"> In the diagram below, the increase in wages will lead to a leftward shift of the AS from AS1 to AS2 resulting in higher prices, from P1 to P2.
Evaluation	<ul style="list-style-type: none"> The govt must manage inflation expectation and communicate to the people that in the short to medium term, inflation is likely to be higher. In addition, as the economy transit to a more productivity-based economy, support and subsidies must be given to companies (SMEs) to innovate. In the last few govt Budgets, there has been a strong emphasis on granting funds for companies to innovation in the form of Productivity and Innovation Credit (PIC). The amount that companies can claim for deductions is raised from \$400,00 to \$600,000 over the years. The Culture of innovation requires time to take root. During this transition which will take a few years, the growth-inflation trade-off will likely to worsen.
Trade off 3	
Strategy (State)	Automation of firm's production.
Explain Tradeoff	<ul style="list-style-type: none"> As the govt raise the foreign workers levies and tighten the inflow of foreign workers into Singapore, so as to encourage automation, companies will be prompted to adopt labour-saving technologies. In terms of production methods companies will also be forced to utilise less labour so as to “economise” on the use of labour which is now more expensive. Higher wages and lack of workers may cause labour intensive companies to close down Technological and Structural unemployment will rise as the economy restructure to a more productivity-based economy.
MacroEcon Goal – unemployment	

	<ul style="list-style-type: none"> This will also lead to a fall in national income due to the rise in unemployment. The SOL of Sporeans will be adversely effected. During this time, the government will face itself with falling tax revenue to the rising unemployment. It is imperative for workers to be trained for the new economy as the longer a person remains unemployed, he / she loses touch of the skills and knowledge he once possessed.
Exemplification	<ul style="list-style-type: none"> The Spore govt has been active in providing grants/ subsidies to companies to help workers upgrade/ re-skill themselves for the new productivity-based economy. The Workforce Development Agency (WDA) which runs the Continuing Education and Training Centers (CET) helps workers gain the necessary skills for the workforce.
Evaluation	<ul style="list-style-type: none"> The limitations of the training lies in the attitude, aptitude and age of the workers. Without a good learning attitude, an aptitude and flair for new learning, the training will not be internalise and the higher level of productivity may not materialise. This problem is compounded in Spore becos of our ageing population and the fact that older workers are more resistant to change. In addition, the cost of providing and subsidising training can impose a burden on govt budget.

BODY – ANTITHESIS (NO TRADEOFF IN ECONOMIC GOALS)

ANTITHESIS PARA 1

Strategy (State)	impact of labour productivity growth on both ST/ LT economic growth
Explain / Exemplification	<ul style="list-style-type: none"> ↑ in labour productivity eg through training/upgrading of skills → ↑ in the capacity of the economy to produce output i.e. more output can be produced at full employment level ↑ in potential economic growth which is broad-based across industries & create employment opportunities for the wide age range in the labour force → inclusive economic growth.



ANTITHESIS PARA 2	
State	positive impact of labour productivity growth on both employment & income
Explain / Exemplification	<ul style="list-style-type: none"> • \uparrow in labour productivity \rightarrow lower per unit labour cost \rightarrow lower cost of production \rightarrow more attractive to FDI, which is important to Singapore because of our heavy reliance on FDI for capital \rightarrow inflow of FDI creates employment opportunities \rightarrow increase in employment level \rightarrow reduce income inequality & When the supply of foreign labour is tightened, the supply of unskilled & semi-skilled workers (domestic + foreign workers) will be decreased further reducing income inequality • In the short run, when the PED for labour is price inelastic, more domestic labour will be employed when the foreign labour supply is tightened. • In the long run, with the sustained economic growth attainable, more resources will be employed. • The inflow of FDI also increases productive capacity (\uparrow in AD and LRAS) if they bring with them better technology/management practices etc. \rightarrow higher actual and potential economic growth. • When the firms experience an \uparrowCOP, they may choose to automate, mechanize and re-organize in the long run. They can also send the workers for more training to increase their productivity. These enabled the productivity driven growth causing an increase in productive capacity in the economy, illustrated by an outward shift of the LRAS curve \rightarrow higher potential economic growth.
Evaluation	<ul style="list-style-type: none"> • However, if productivity growth is achieved through automation/mechanization, less labour will be employed.
ANTITHESIS PARA 3	
Strategy (State)	labour productivity growth allows the economy to <u>grow without causing inflationary pressure</u>
Explain / Exemplification	<ul style="list-style-type: none"> • Explain how Persistent \uparrow in AD without corresponding \uparrow in LRAS will lead to DD-pull inflation (GPL increases from P0 to P1) • Labour productivity growth \rightarrow \uparrow in LRAS (rightward shift of AS from AS0 to AS1) \rightarrow Eases the inflationary pressure when AD continues to \uparrow while the economy operates near or at full employment. (GPL decreases from P1 to P3 & real NY increases from Y1 to Y2) • The lower cost of production also helps mitigate any cost-push inflation which the economy may be facing. • With higher productivity, workers can be paid higher wages without employers encountering rising unit labour costs \rightarrow inclusive economic growth.
Diagram	

ANTITHESIS PARA 4	
State	increase in labour productivity may improve the BOT
Explain / Exemplification	<ul style="list-style-type: none"> • ↑ in labour productivity → lower per unit cost of producing the output → improvement in cost competitiveness and thus international competitiveness → improvement in current account balance. • Particularly important for Singapore because of its reliance on the export sector for growth.
Evaluation/ Synthesis	
<ul style="list-style-type: none"> • In the SR, policy to get companies to innovate through reduction of labour supply and increase in levies can lead to shortage and bidding up of wages => may cause wage-push inflation • Production and FDI inflow may be affected if Spore becomes expensive place to do business • Effect may trickle to BOP issues/ problem • Tradeoffs and implications on the economy is hence not limited to inflation and unemployment but to other macroeconomic objectives such as EG and BOP. • Ageing population will pose a problem as Spore faces a fall in its labour force in the coming years • Possible solution is to raise the retirement age and encourage more women to rejoin the workforce. Flexible work arrangement has also been adopted in bid to overcome the shrinking labour force. • Need for micro-policies such as income policy to reduce gap; seen in latest round to raise wages of unskilled workers such as security guards and cleaners • Possible policy options include min wage; however, may create unemployment. In Spore, overcome disadvantage of min wage through Workfare supplement – reward those that remain the workforce • It must also be noted that SS side policies not SR policies but LR policy, if successfully implemented, then able to raise the LR capacity of the economy. In face of rising AD, then able to achieve non-inflationary EG • In addition, the initiative can improve the ability of Spore to compete for FDI if productivity can be improved, this is face of competition from China, India and SEA for FDI 	
CONCLUSION	

- The policy may lead to short term conflicts in objectives, but in the long run will be compatible with many of the government's objectives.
- This reduction on the reliance of foreign workers to promote productivity growth may be a more sustainable measure. The cheap foreign labour can be more costly in the future,
- In the short run, it looks like the group of domestic unskilled and semi-skilled workers is the only one to gain in terms of higher wage level. But in the long run, most will stand to gain.
- Ageing population will pose a problem as Spore faces a fall in its labour force in the coming years
- Possible solution is to raise the retirement age and encourage more women to rejoin the workforce. Flexible work arrangement has also been adopted in bid to overcome the shrinking labour force.
- Need for micro-policies such as income policy to reduce gap; seen in latest round to raise wages of unskilled workers such as security guards and cleaners
- Possible policy options include min wage; however, may create unemployment. In Spore, overcome disadvantage of min wage through Workfare supplement – reward those that remain the workforce

Mark scheme

Knowledge, application, understanding, analysis		
L1	<ul style="list-style-type: none"> • Lack use of economic framework/concepts in analysis • Lack scope and depth- one sided answer only • Irrelevant answer 	1-9
L2	<ul style="list-style-type: none"> • Use of relevant framework/ concepts such as AS/AD framework in analysis • Explanation of concepts is sketchy/ underdeveloped or lacks rigor • Made attempt to link to productivity driven growth to conflict but analysis is weak and poorly developed. 	10-14
L3	<ul style="list-style-type: none"> • Good use of relevant concepts/ framework such as AS/AD to support analysis • Good application to the Singapore economy • Cover productivity growth, cover both conflicting and compatible attainable macro and micro objectives 	15-21
Evaluation		
E1	<ul style="list-style-type: none"> • An unexplained judgment , one that is not supported by analysis 	1-2
E2	<ul style="list-style-type: none"> • Evaluative assessment supported by economic analysis • Excellent synthesis and is able to justify and arrive at a convincing stand 	3-4

Question 6

Despite the risks associated with globalisation, many countries are still embracing it. This has resulted in significant changes in the patterns of international trade.

- (a) Explain possible reasons for changes in the pattern of trade between countries. [10]
- (b) Discuss if the size of the economy is the key factor in influencing its ability to gain from globalisation. [15]

- (a) Explain possible reasons for changes in the pattern of trade between countries. [10]

Introduction:

Key term- Define pattern of trade

The pattern of trade refers to the composition of a country's **exports and imports** as well as her **trading partners**. In other words, in the context of international trade it is about "who sells what to whom". Typically there are 2 distinctive pattern of trade -**Inter-industry and intra-industry trade**. These patterns of trade depend on factors such as a country's factor endowment, taste and preference and government policies.

Development:

State	First and foremost, for inter-industry trade, the POT is best explained by using the theory of comparative advantage (CA). According to the theory of CA, a country should export products in which it has a CA and imports those products in which it does not have a CA. CA refers to the ability to produce a good or product at a lower opportunity cost .
Explain	CA differs amongst countries due to the fact that factor/resource endowment differs across countries. Some countries have factors/resources that are better suited to produce agricultural goods (e.g. plentiful land, suitable climate) whilst others have resources that are better suited for manufacturing.

Example of 2 countries Singapore and Thailand, producing 2 goods rice and microchips with equal allocation to each good

Country	Rice (units)	Microchip (units)	Opportunity Cost of Producing 1 Unit of R	Opportunity Cost of Producing 1 Unit of M
Spore	120	480	$480/120=4 \text{ units of } M$	$120/480=0.25\text{unit of } R$
Thailand	100	100	$100/100 = 1 \text{ unit of } M$	$100/100 = 1 \text{ unit of } R$
Total	220	580		

To produce a unit of microchip, Thailand has to give up 1 unit of rice while Singapore has to give up 0.25 unit of rice. Likewise to produce rice, Singapore and Thailand have to give up 4 units and 1 unit of microchip(s) respectively. As a result, Singapore has comparative advantage in producing microchip as it incurs a lower opportunity cost than Thailand while Thailand has comparative advantage in producing rice as it incurs a lower opportunity cost as compared to Singapore.

Changing CA due to Globalisation

Define: Globalisation

Globalisation refers to the integration or inter-connectedness of national economies through trade of goods and services, foreign direct investment, capital flows, spread of technology and labour migration.

1.) Increased off-shoring

Increasing globalisation might be one of the main reasons for changes in a country's trade pattern. With greater integration into world markets, developed countries might find that the production of low cost goods or services which they used to have comparative advantage in might now shift to lower cost countries (off-shoring). With such a shift, the country will no longer produce such goods or service and would most likely produce and export higher end products and import the goods that they used to produce domestically. *For example how many US manufacturing plants outsourced their production to cheaper cost countries such as China and Vietnam etc. To add, the opening up of domestic markets in closed economies like China would not only increase the exports of countries that could provide the goods and services which they lack but also increase the number of trading partners that China would have.*

2.) Changes in technology and increased innovation (or any other example of resources such as labour flows)

This may change the types of goods being traded by a country. With increased technology and innovation in the country, the productive capacity and production structure might change and result in the gaining of comparative advantages in different goods. *For example, with the development of the knowledge based economy in Singapore, the goods that are traded evolved from low end manufactured electronics to higher end products such as semi-conductors and micro-chips.*

3.) Government policies eg. trade policies which could include regional blocs, FTA or even protectionism

Elaboration (depends on choice of policies analysed)

Countries would also have a change in their main trading partners when a Free Trade Agreement (FTA) is signed. This will lead to the removal of tariffs for exports and imports between the signatories of the FTA and affect the countries that a nation trades with. With the relatively cheaper imports and competitive exports, there will be

increased trading activities (**trade creation**) between these 2 countries. *In Singapore, globalization has also altered the composition of our trade partners.*

Eg. Singapore- Traditionally, the major advanced economies like US and EU and regional economies like ASEAN have been our key trade partners. Today, due to the growing network of FTAs, trade has extended to emerging economies like China, India as well as non-traditional trade partners like Peru, Panama, Russia and some Middle Eastern Countries like Jordan. The forging of FTAs has been prompted by the need to diversify our markets (e.g. decoupling) to cushion the economy against the threat of contagion and protectionism in a globalised world.

There might also be **trade diversion** from other countries that do not have such agreements as their goods or services might be now relatively more expensive due to tariffs. Thus a country will end up trading relatively more with those countries whom they have signed such agreements than those who have not.

For example, post NAFTA: Mexico's alleged increased shares of U.S. imports apparently at the expense of several Asian countries.

Other possible reasons

- Changing factor endowments – depletion of natural resources
- Economic conditions – economic development of other trading partners
- Changes in taste and preferences etc.

Mark scheme (6a)

L1 (1-3)	An answer that shows some awareness of trade patterns and mainly listing of possible reasons that could change it without economic rigour.
L2 (4-6)	Incomplete or insufficient economic explanation of the possible reasons affecting trade patterns. Answers are often not well exemplified.
L3 (7-8)	Able to clearly explain at least 3 factors (it must include a globalisation discussion) with exemplification, covering both changes in trading partners and type of goods traded. CA must be explained.

(b) Discuss if the **size of the economy** is the key factor in influencing its ability to gain from globalisation. [15]

Suggested plan:

Introduction: <ul style="list-style-type: none"> - Size of economy usually measures in terms of its domestic market size typically through indicators such as the country's Gross Domestic Product (GDP). - Eg of some smaller economies like Hong Kong and Singapore while larger economies would be USA, UK, China etc. 	
Development	
Thesis: The size of the economy is the key factor influencing a country's ability to gain from globalisation. NB: "Influencing ability to gain" : Could be both positive and/or negative	Anti-thesis: The size of the economy is not the key/only factor influencing a country's ability to gain from globalisation.
<p>1. Size of domestic market</p> <p>Small domestic market</p> <ul style="list-style-type: none"> - Cannot depends on its domestic factors (domestic consumption and investment especially) to drive growth so small economies need to embrace globalisation and maximise its net benefits to survive/thrive - Therefore the ability to export to the rest of the world (X-M) and FDI is significant to these counties to increase AD and therefore raise national income and employment→ improving standard of living. Increase in FDI increased both AD and AS → bring about both actual and potential growth. (<i>Students should draw diagram if this is the main benefit discussed</i>) - Therefore, the government policies of small economies such supply-side policies are focused on improving trade and foreign investment to maximise the gains of globalisation. Eg. Singapore, 	<p><i>While it is true that smaller economies tend to be more open, the degree of "openness" could be autonomous from its size.</i></p> <p><i>Eg. UK is a large economy but it is open as an economy.</i></p> <p>Explanation (some <u>other</u> possible advantages not covered in thesis): An open economy will gain by trading based on its areas of CA by gaining exports revenue that will increase growth and employment. The economy will be able then to enjoy a bundle of goods outside its PPC. Being able to off-shore could lower their cost of production substantially. Even for a larger economy, the gains of globalisation are just as substantial.</p> <p><i>Evaluate: The degree of how open an economy is however subjective. Economists look at various indicators such as (x+m) as % GDP or the degree of use of protectionist measures</i></p> <p><i>In recent years due to the various crisis-</i></p>

<p>Hong Kong going for export-oriented growth model</p> <p>In contrast, Large domestic market</p> <ul style="list-style-type: none"> - Has the option to turn to domestic factors (C and domestic I) to drive growth - Eg. China could turn to rebalancing as an option during recession. China can choose to be less dependent on globalisation. <p>However,</p> <p>The smaller economy i.e Singapore is also therefore more susceptible to the negative impacts such as “contagion effects” during global recession. Eg in the recent global financial crisis in recent years, the falling world income has caused our exports demand and revenue to fall significantly as the demand of our exports tend to be income elastic. This has results in a recession in 2009 with a reduction in national income and rise in unemployment.</p>	<p><i>subprime/global financial/EU crisis however, it is observed that many LOE (Large open economies) like US or UK have increasingly been turning to protectionist measures. They are said to be practising “gated globalisation” which is not to totally avoid it but to selectively use protectionist measures.</i></p>
<p>2. Amount of resources in economy</p> <p>Small → Lack of resources</p> <ul style="list-style-type: none"> - Benefit from the inflow of cheaper factors of production from the rest of the world - Not just raw material but also benefit from inflow of labour (Boost economic growth both actual and potential, lower COP etc.) eg. Singapore with its ageing population. The ability to have inflow of labour will help to reduce unit cost of production and increase our productive capacity. - However, its small labour force and lack of natural resources are also the reasons why we do not 	<p>It is not just about the quantity and type of resources but it's also about the quality of the resources.</p> <p>For Singapore to gain fully from globalisation, a skilled, well-educated work force is necessary so that the economy remain dynamic and responsive to changes brought about by globalisation. The workforce must be able to continuously adapt to the changing areas of comparative advantage which is increasing in high-tech areas such as biomedical industries.</p>

<p>have certain areas of CA in labour intensive industry and therefore we are unlikely to gain in those areas.</p> <p>Evaluate: <i>Sweden for example is considered a relatively smaller economy (compared against the many larger European economies but for your own information: it is the largest Nordic economy though) but it is resource-rich (eg copper, gold, iron ore etc). Even then, with the value of exports amounting to about one-third of its GDP, Sweden is still highly dependent on free international trade to maintain its living standard.</i></p> <p>Large economy → Tend to be more abundant in resources (especially natural resources)</p> <ul style="list-style-type: none"> - Depending on the resources available, they will gain their respective areas of comparative advantage eg. China with rare earth has given her an edge in the manufacturing of high-tech goods. Her large pool of labour has also attracted FDI into the country. <p>However,</p> <p>That also implies that the smaller economy is also more susceptible to the negative impacts such as imports-price push inflation and brain drain. <i>Just as Singapore enjoys labour inflows, many of her own skilled talents have migrated to other economies affecting her productive capacity.</i></p>	
<p>Other possible point/s:</p> <ul style="list-style-type: none"> - <i>Inability to influence world price due to insignificant contribution to overall world demand/supply)</i> 	<p>Other possible point/s:</p> <ul style="list-style-type: none"> - <i>Role of government policies would influence the ability to benefit from globalisation eg. supply-side policies would help discover areas of CA, help in the</i>

	<p><i>restructuring of the economy to gain from free trade. This also depends on the ability of the government eg. this is the current difficulty U.S and U.K have due to its budget deficit- ability to spend to aid/hasten the process of restructuring</i></p> <ul style="list-style-type: none"> - <i>Not only about small Vs large economy but also</i> <ul style="list-style-type: none"> i.) Nature/State of economy ii.) Developed Vs Developing economies
<p>Conclusion/Synthesis:</p> <p>The size of the economy is an important factor influencing an economy's ability to gain from globalisation. While it does not equate to the degree of openness, it is often tied to it. That is why economists have coined the term SOE (Small, open economies) to refer to this group of economies. The SOEs typically depend greatly on the external economy and have much to gain from it. However, it is really a multitude of factors that will influence the ability of countries to gain from globalisation and therefore whether they would choose the alternative which is to turn to protectionism. As observed, whether small or large, most economies could gain substantially from globalisation.</p>	

Mark scheme (6b)

L1 (1-5)	Listing of some benefits and costs of globalisation
L2 (6-8)	<p>Incomplete analysis (AD/AS analysis to show impact on some macro-economic goals) with some reference to size of economy</p> <p>Cap at 8 m for answers that only considered large OR small economies but with good anti-thesis</p> <p>Cap at 7 m for lopsided answers that only considered size of economy</p>
L3 (9-11)	Detailed and balanced discussion with economic analysis of the varying impact globalisation will bring in consideration of the size of the economy and at least 2 other factors.
E1 (3-4)	Ability to make a justified stand to the issue with comparison of economies
E2 (1-2)	Unsubstantiated evaluation