



JURONG JUNIOR COLLEGE

**2015 JC2 ECONOMICS 9732 (H2)
PAPER 2**

PRELIMINARY EXAMINATION

ANSWER BOOKLET

H2 Econs Paper 2 Essays Mark Schemes

- 1 Dining options are often varied, ranging from high-end fine dining to the quick and cheap options in hawker centres.

Discuss the effects of falling rental costs and economic recession on the markets for fine dining and hawker food. [25]

Knowledge, Application, Understanding and Analysis		
L3	For a well-developed explanation of how falling rental costs and economic recession could affect the price and quantity of fine dining and hawker food, with application of elasticity concepts.	15 - 21
L2	<p>For an under-developed answer that gives an explanation of how falling rental costs and economic recession will affect the price and quantity of fine dining and hawker food.</p> <p><u>Max 12m</u> for a developed answer that synthesizes the demand and supply factors with justifications, linking to price and quantity of fine dining and hawker food. No application of PED and PES.</p> <p><u>Max 14m</u> for a developed answer that applies PED and PES concepts to analyze the impact of falling rental costs and economic recession on price and quantity. No analysis of simultaneous shifts of demand and supply curves.</p>	9 - 14
L1	For a smattering of valid points, or an answer that shows descriptive knowledge of how falling rental costs and economic recession affect the demand and supply of fine dining and hawker food.	1 - 8
Evaluation		
E2	For an evaluative assessment based on economic analysis, e.g. depends on severity of recession and other factors such as degree of competition.	3 - 4
E1	For an unexplained assessment or one that is not supported by economic analysis.	1 - 2

**Acceptable for students to argue that hawker food is a necessity.*

Introduction

Falling rental costs and an economic recession will affect the supply and demand for fine dining and hawker food respectively. However, the impacts differ based on the income elasticity of demand, and price elasticity of demand and supply of each of the goods.

Body

Analysis of demand and supply factors

A decrease in rental costs leads to a fall in cost of production of fine dining and hawker food. As a result, the profit margin of producing these two goods will increase, thus increasing the incentive of producers to supply these two goods. Hence, the supply of both fine dining and hawker food will increase.

On the other hand, an economic recession will lead to a different impact on hawker food and fine dining based on their income elasticity of demand (YED). Income elasticity of demand measures the responsiveness of the demand for a good to a given change in the level of income, *ceteris paribus*. Hawker food is widely deemed to be of lower quality and is considered to be an inferior good ($YED < 0$). An economic recession causes incomes to fall. As a result, consumers switch to inferior goods, and the demand for hawker food rises. However, fine dining is considered to be a luxury good ($YED > 1$). As such, during an economic recession when income and purchasing power falls, the demand for fine dining will fall more than proportionately to income.

Synthesize demand and supply factors

[Note: any reasonable argument other than those listed below is accepted]

According to the above analysis, there will be an increase in demand and supply of hawker food. The increase in demand for cheap food options like hawker food during a recession is expected to be very significant as workers are retrenched and many people experience a fall in income. However, the increase in supply of hawker food due to falling rental costs may be less significant as hawkers require a license to operate. Although falling rental costs increases their profit margin and incentive to supply, the number of licenses is regulated by the government. As such, the resultant increase in supply is not as significant.

As such, falling rental costs and an economic recession will lead to a rightward shift of the supply curve from S_1 to S_2 , and a larger rightward shift of the demand curve from D_1 to D_2 respectively, as shown in Figure 1. There will be an overall increase in equilibrium price from P_1 to P_2 and an increase in quantity from Q_1 to Q_2 . There will be increase in revenue from $(P_1 \times Q_1)$ to $(P_2 \times Q_2)$ for sellers of hawker food while consumers' expenditure on hawker food will increase by the same amount.

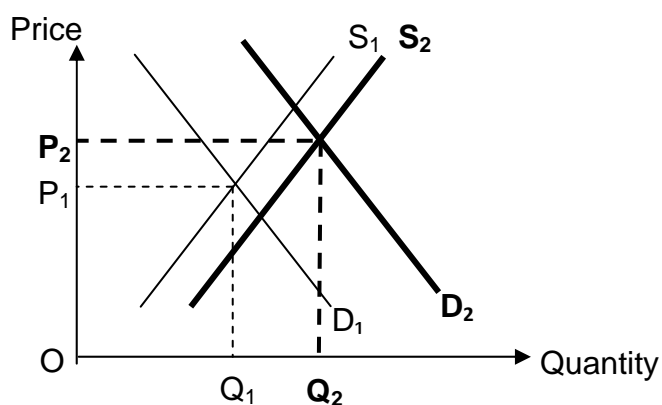


Figure 1: Market for hawker food

With regard to fine dining, falling rental costs and an economic recession will lead to an increase in supply and a fall in demand respectively. The fall in demand is expected to be very significant as fine dining is a luxury good and demand will fall more than proportionately to the fall in income. On the other hand, the increase in supply will be less significant as rental costs take up only a proportion of the total costs of running a restaurant (which include labour costs and cost of ingredients), leading to a limited fall in cost of production.

Combining the two effects, the increase in supply of fine dining is shown as a rightward shift of the supply curve from S_1 to S_2 , while the more significant fall in demand is illustrated by the larger leftward shift of the demand curve from D_1 to D_2 , as shown in Figure 2. There will be an overall fall in equilibrium price of fine dining from P_1 to P_2 and a fall in quantity from Q_1 to Q_2 . There will be fall in revenue from $(P_1 \times Q_1)$ to $(P_2 \times Q_2)$ for producers of fine dining while consumers' expenditure on fine dining will decrease by the same amount.

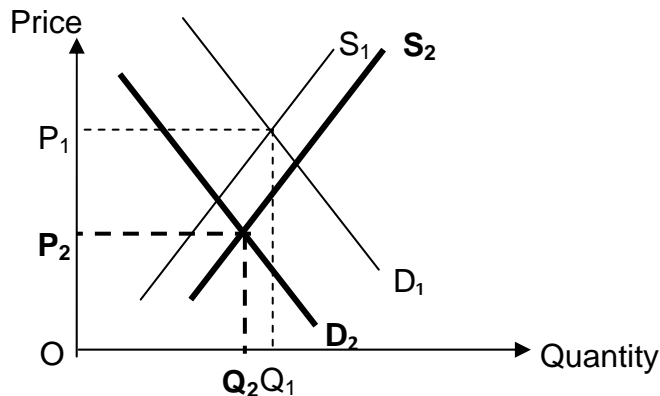


Figure 2: Market for fine dining

Extent of impact of falling rental costs - Apply PED

[Note: any reasonable justification of PED and PES values is accepted]

The concepts of price elasticity of demand and supply are required to examine the **extent** of the impact on price and quantity of falling rental costs and an economic recession on the two goods.

Price elasticity of demand (PED) is defined as the responsiveness of quantity demanded of a good to a given change in the price of the good itself, *ceteris paribus*. Fine dining is expected to have a price elastic demand ($PED > 1$) as it takes up a large proportion of income, as illustrated by D_e in Figure 3. On the other hand, hawker food is expected to have a price inelastic demand ($PED < 1$) since hawker food takes up a small proportion of income, as represented by D_i .

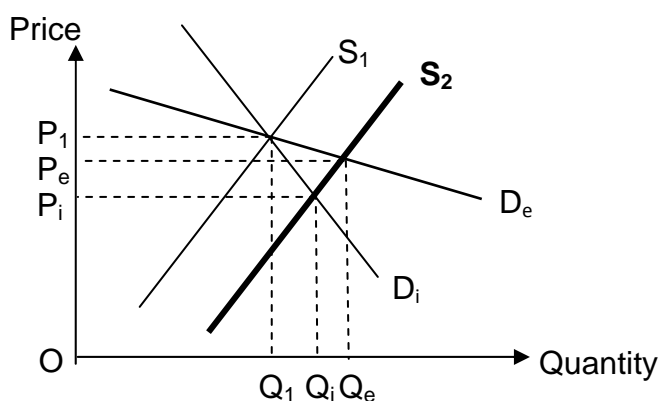


Figure 3: Increase in supply

When there is a fall in rental costs, the supply of both hawker food and fine dining will increase, as shown by the rightward shift of the supply curve from S_1 to S_2 in Figure 3. However, there will be a less significant fall in the price of fine dining from P_1 to P_e compared to from P_1 to P_i for hawker food. There will also be a more significant increase in the quantity of fine dining from Q_1 to Q_e compared to from Q_1 to Q_i for hawker food. Given the fall in price, TR for hawker food will decrease while the TR for fine dining will increase.

Extent of impact of economic recession - Apply PES

With regard to the extent of the impact on price and quantity due to the economic recession, we need to examine the price elasticity of supply values of hawker food and fine dining. Price elasticity of supply (PES) is defined as the responsiveness of quantity supplied of a good to a given change in the **price of the good itself**, *ceteris paribus*. The supply of fine dining is expected to be price inelastic ($PES < 1$) due to factor immobility. For example, it is difficult to increase the production of fine dining in response to a rise in

price as it is difficult to find chefs that have the technique and skill for producing high quality dishes. Certain ingredients may also be unique and difficult to obtain.

As a result, the supply of fine dining is indicated by S_i in Figure 4. The economic recession and resultant fall in income is expected to cause a decrease in demand for fine dining, since it is a normal good. This is represented by the leftward shift of the demand curve from D_1 to D_2 .

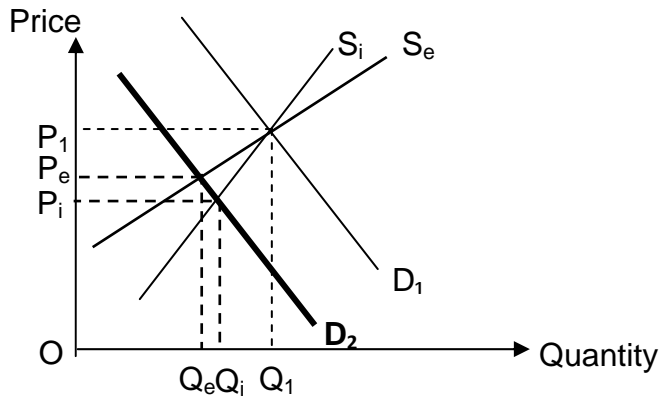


Figure 4: Fall in demand for fine dining

The fall in demand will produce a more significant fall in price of fine dining from P_1 to P_i compared to the fall in price from P_1 to P_e for a good with price elastic supply (S_e). In addition, there will be a less significant decrease in quantity of fine dining from Q_1 to Q_i compared to the fall in quantity from Q_1 to Q_e of a good with price elastic supply (S_e).

On the other hand, the economic recession will lead to an increase in demand for inferior goods such as hawker food. The supply of hawker food is expected to be price elastic ($PES > 1$) because of factor mobility – it is relatively easy to set up another stall due to the less stringent training required to cook the dishes, and the ease of obtaining ingredients.

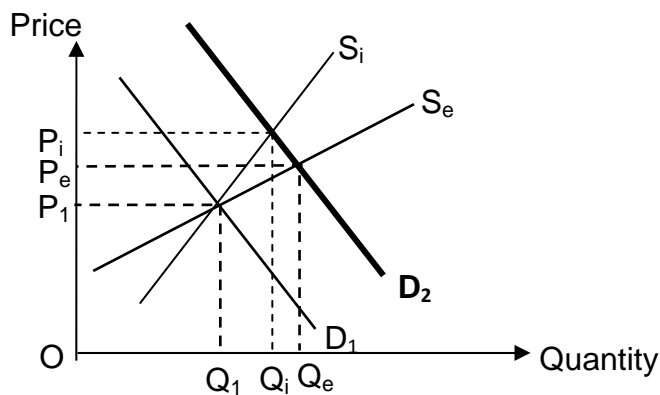


Figure 5: Increase in demand for hawker

The supply of hawker food is indicated by S_e in Figure 5. The increase in demand due to economic recession is represented by the rightward shift of the demand curve from D_1 to D_2 . The increase in demand will produce a less significant increase in price of hawker food from P_1 to P_e compared to the increase in price from P_1 to P_i for a good with price inelastic supply (S_i). In addition, there will be a more significant increase in quantity of hawker food from Q_1 to Q_e compared to the increase in quantity from Q_1 to Q_i of a good with price inelastic supply (S_i).

Conclusion and evaluation

Justification 1:

Overall, the impact on the market due to falling rental costs and economic recession depends on the nature of the good and the proportion of costs represented by rentals. The analysis indicates that the combined effect of an economic recession and falling rental costs will lead to a fall in price and quantity of fine dining, but a rise in price and quantity of hawker food. However, factors such as the severity of the recession could also impact the outcome. For example, a mild recession would lead to only a small

increase in the demand for hawker food, in which case the impact of falling rental costs could exert a greater effect, leading to an overall fall in price.

Further justification:

Moreover, firm's strategies may also matter – while the analysis indicates an overall increase in the price of hawker food, individual hawkers may refrain from increasing their price to maintain their competitiveness relative to competing stalls. Fine dining restaurants may also change their menu to less luxurious options to prevent a large decline in the demand for their good in the event of a prolonged recession, thereby preventing such a sharp decrease in their price.

- 2 a) Explain the relevance of barriers to entry to a firm's decisions on price and output. [12]
- b) Assess whether profit-maximising firms should adopt the strategy of mergers and acquisitions. [13]

Part (a)

Knowledge, Application, Understanding and Analysis		
L3	Well-developed analysis of how barriers to entry influence decisions on price and output for all relevant market structures.	9 - 12
L2	<p>Undeveloped explanation of barriers to entry and its impact on market power, with under-developed analysis of how barriers to entry influence price and output decisions in the relevant market structures.</p> <p>Max <u>6m</u> for well-developed explanation of how barriers to entry affects price and output decisions in one market structure.</p> <p>Max <u>8m</u> if the answer does not explain the adjustment to the long-run equilibrium in a market structure with no/low barriers to entry.</p>	6 - 8
L1	A smattering of valid points	1 - 5

Part (b)

Knowledge, Application, Understanding and Analysis		
L3	<p>Well-developed analysis of the benefits and costs associated with mergers and acquisitions.</p> <p>Max <u>7m</u> for answers without application to real world examples.</p>	7 - 9
L2	<p>Under-developed explanation of the benefits and costs associated with mergers and acquisitions.</p> <p>Max <u>5m</u> for a one-sided answer that only explains the benefits or the costs associated with mergers and acquisitions.</p>	5 - 6
L1	Descriptive knowledge of what mergers and acquisitions are. A smattering of valid points.	1 - 4
Evaluation		
E2	For an evaluative assessment based on economic analysis, e.g. depends on the nature of the good or ability to reap internal economies of scale.	3 - 4
E1	For an unexplained assessment or one that is not supported by economic analysis.	1 - 2

**Acceptable to argue that firms should not adopt the strategy of mergers and acquisitions as there are other strategies to maximise profits.*

Part (a)

Introduction: define BTE

Barriers to entry are obstacles that hinder the entry of new firms into the industry, which can be artificially created or natural. Differing levels of barriers lead to differing degrees to which firms can influence the price and output of their goods and services. Monopoly and oligopoly market structures arise due to high barriers to entry. Firms in a monopolistically competitive market structure face low barriers to entry while firms in a perfectly competitive market face no barriers to entry.

Body

Explain how high BTE affects price and output decisions

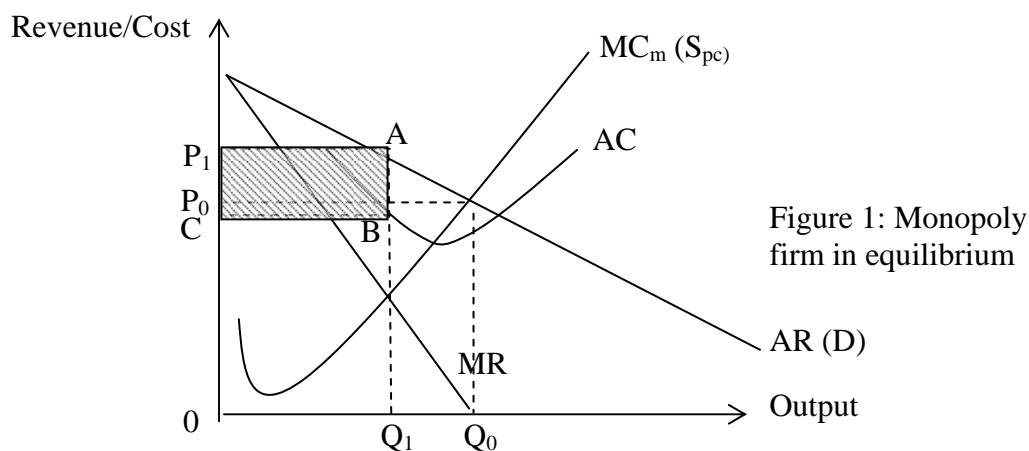
Using a monopoly firm as an example, we can illustrate the impact of high barriers to entry on price and output. A monopoly is a market structure in which a single firm produces a unique product, which has no close substitutes. Barriers to entry in a monopoly include artificial barriers to entry, for example patent rights or copyrights issued by the government. There may also be natural barriers to entry, such as the ability to reap internal economies of scale. For instance, Singapore Power is a monopoly due to its high start-up costs of setting up and maintaining the power grid. As such, it is able to reap significant internal economies of scale by producing at a large output, thereby producing at a very low average cost and selling at a low price that cannot be matched by a new entrant producing at a lower output and higher average cost.

Monopoly power implies that the demand curve of the firm is downward sloping, since the firm has the ability to set either the price or the quantity. The demand curve is also relatively price inelastic since the good produced has no close substitutes.

Consider a monopolist making supernormal profits in the short run. Referring to Figure 1, the profit-maximising firm will determine its price and output using the profit-maximizing condition where marginal cost equals marginal revenue ($MC=MR$), such that output is at OQ_1 and price is at OP_1 .

The total revenue is shown by area OP_1AQ_1 and total cost is given by area $OCBQ_1$. Hence, the monopolist makes supernormal profits of area CP_1AB . Due to the existence of barriers to entry, there will not be entry of new firms into the market even though the firm is making supernormal profits. As such, the monopolist can maintain the price of its goods at OP_1 in both the short run and long run and continue to earn supernormal profits even in the long run.

Comparing directly against a perfectly competitive industry, in which prices are determined where market demand cuts supply, i.e. at P_0 as shown in Figure 1, the monopoly price is higher at P_1 . Also, the monopoly output is lower at Q_1 compared to Q_0 , assuming the cost of production is the same under both market structures.



Explain how low barriers to entry influence price and output decisions

In contrast, a perfectly competitive market is one where barriers to entry do not exist. A perfectly competitive market also has the characteristics of many buyers and sellers, homogeneous product, perfect knowledge and perfect factor mobility. Due to the absence of barriers to entry, there are many

small firms in the industry. Each seller produces a very insignificant share of the entire market supply such that changes in a firm's output level has no impact on the market supply. Since buyers and sellers cannot influence market demand and supply, then each firm is a price taker.

Referring to Figure 2b below, the equilibrium price in a perfectly competitive market is OP_1 in the short run, determined by the industry demand and supply curves. Each firm will take this market price as given. Hence, the lack of barriers to entry causes firms to have no control over the market price.

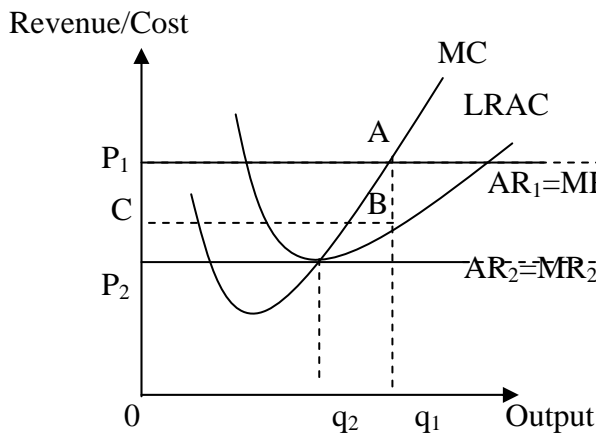


Figure 2a: PC Firm

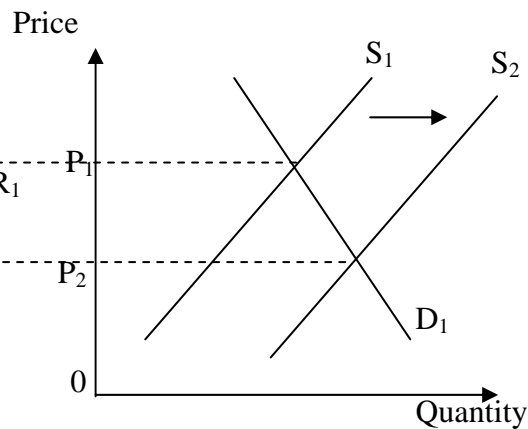


Figure 2b: PC industry

Since the market price is OP_1 and each firm is a price taker, the demand curve faced by each firm is a perfectly price elastic and horizontal demand curve as shown in Figure 2a. In addition, since each additional unit is sold at the same price of OP_1 , average revenue (AR)=MR. Each firm will hence produce at profit maximizing output of Oq_1 where $MC=MR$ at price OP_1 . At this price and quantity, each firm is making supernormal profits as shown by area CP_1AB .

In the long run, due to the lack of barriers to entry, new firms will be attracted to join the industry in response to the supernormal profits, leading to an increase in the number of producers and increasing the market supply. This shifts the industry supply curve rightwards. As long as firms make supernormal profits, more firms will enter and the market supply curve will keep shifting to the right. This causes the market price to keep falling. As firms are price takers, their prices will also fall accordingly, and the output produced by each firm will fall as more firms enter the market.

Eventually, when the industry supply curve shifts from S_1 to S_2 , reducing the market price to OP_2 , all existing firms earn only normal profits and produce at the minimum point of the long run average cost (LRAC) curve. The entry of new firms stops and the supply curve will not shift rightwards anymore. Thus, each price taking perfectly competitive firm that is profit-maximising will price its goods at the new market price of P_2 and earn only normal profits in the long run. All this is due to the absence of barriers to entry.

Conclusion

In conclusion, barriers to entry reduce competition in the industry, enabling firms like a monopolist to price its goods higher than firms facing no barriers to entry, like a firm in a PC market. Moreover, in the long run, the barriers to entry enable a monopoly to maintain its high price and continue to earn supernormal profits, while a perfectly competitive firm earning supernormal profits in the short run will need to price its goods at a new and lower market price in the long run due to the entry of new firms.

Part (b)

Introduction:

Define mergers & acquisitions

Mergers and acquisitions are strategies to enable a firm to grow in size. A merger is the combination of two companies to form a larger company. Different types of mergers include: (i) horizontal mergers, where two or more firms in the same industry and stage of production merge (e.g. DBS merging with POSB in 1998); (ii) vertical mergers, where two firms in the same industry but at different stages of production merge (e.g. a car manufacturer merging with a steel manufacturer); or (iii) conglomerate merger, where firms in different industries merge to form one company (e.g. General Electric, which comprises many businesses such as telecommunications and finance). Acquisitions are takeovers where a larger firm buys up at least 50 percent of the shares of a smaller firm.

Body

Thesis: Profit-maximizing firms should engage in mergers and acquisitions

Profit-maximizing firms aim to maximise revenue and minimise costs. Hence they should engage in mergers and acquisitions due to the revenue and cost benefits.

Revenue benefits include allowing a firm to **increase its market share**, thereby increasing demand for its product and allowing it to earn higher revenue. This is especially true for horizontal mergers between companies in the same industry and stage of production, for example the acquisition of Overseas Union Bank Limited (OUB) by UOB which increased its pool of clients. The increase in market share also tends to **reduce competition**, causing the demand for a firm's product to become less price elastic. If demand becomes price inelastic, the firm could raise its price to increase total revenue, as quantity demanded for its good would decrease less than proportionately to the rise in price.

Mergers and acquisitions also help a firm to **diversify its products**, thereby capturing a wider range of consumers with different tastes and needs, and also becoming less vulnerable to changes in demand for its products. For instance, Facebook acquired mobile messaging service WhatsApp in 2014, thereby ensuring a continued source of revenue even as Facebook declines in popularity. Also, the acquisition of WhatsApp adds a revenue stream from China as Facebook is blocked in China whereas WhatsApp is permitted to operate there.

Cross-border mergers or acquisitions of firms in other countries could provide a firm with an easier avenue for **access to foreign markets** as foreign firms would have better knowledge of market conditions and distribution channels overseas. For example, the acquisition of Asia-Pacific Breweries by the Dutch brewer Heineken allowed it to expand into the fast-growing Asian market by improving its access to distribution channels in Asia.

Larger firms might also be more able to **attract international talents** or have more funds to **engage in R&D**, thereby coming up with better quality products to increase revenue, or more cost efficient production methods to help to increase profit margins for the firm.

Aside from revenue benefits, firms could also reap cost benefits from mergers and acquisitions, such as **reaping internal economies of scale**. For example, UOB could reap managerial economies of scale by practising functional specialization as its accounting and finance departments could now oversee a larger scale of operations, thereby reducing the unit cost of its output. It could also reap marketing economies of scale by spreading the costs of advertising its products over a larger output. This cost benefit is particularly large for firms where the minimum efficient scale sets in at a large output, as illustrated in Figure 3. As the firm's output expands from Q_1 to Q_2 , the average cost of output falls from C_1 to C_2 .

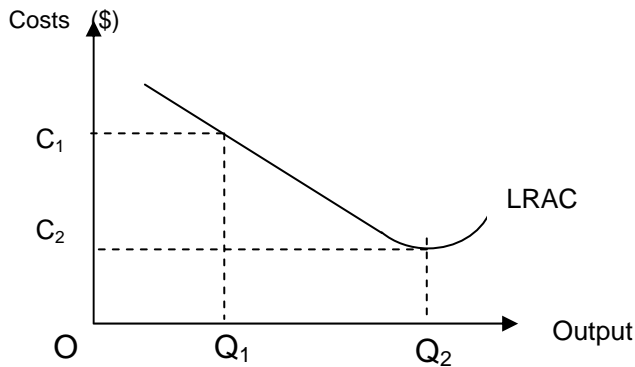


Figure 3

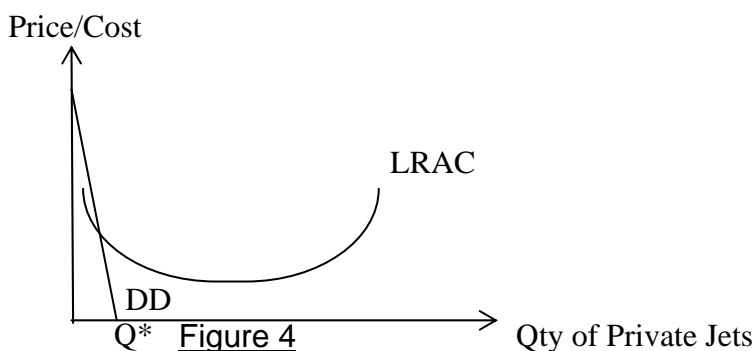
Vertical mergers also help in **cost reduction** as they allow firms to carry out their production with less disruption through better control of the supply of raw materials. For instance, a vertical merger of a car manufacturer with a steel manufacturer would reduce the costs of renewing contracts with steel suppliers.

Anti-thesis: Profit-maximizing firms should not engage in mergers and acquisitions

However, not all firms should engage in mergers and acquisitions as there are several disadvantages associated with this strategy.

Firstly, large firms are not beneficial where **personalised services** are required. For example, hair salons and clinics may choose to remain small in order to provide personalized services to their clients. Moreover, smaller firms are more **nimble** and more able to quickly adapt to changes in market conditions or consumer patterns. For example, the market for home interior design is highly susceptible to changes in income of consumers as it is considered a luxury good, which consumers can do without if they have lower income. Therefore, the demand for home interior design varies greatly according to economic conditions. Hence, firms might choose to remain small as the gain in revenue from expansion is not certain, and the firm would need to adapt quickly to changes in market conditions by changing its offerings of designs and materials.

Moreover, the gain from certain types of mergers like vertical mergers may not be significant if the market size is **small**. The gain from a vertical merger with a firm at a previous stage of production is the benefit of being able to ensure a constant supply of raw materials. For example, a car manufacturer faces a large market demand and produces a large output, and therefore needs to ensure few disruptions to the supply of its raw materials like steel. Therefore, it is likely to engage in a vertical merger with a steel producer. However, the market for other vehicles like private jets may be very small in comparison to that for cars.



From Figure 4, the private jet manufacturer will not be able to expand its output beyond the maximum quantity demanded of Q^* , even though MES is reached at a large output. Therefore, a private jet manufacturer has less need to ensure a constant supply of raw materials due to its small output, and it will gain less from a vertical merger with a steel producer, compared to a car manufacturer.

In addition, a firm may not be able to reap cost benefits from mergers and acquisitions if **internal diseconomies of scale set in at a small output**. In this case, a small firm will be much more cost

efficient than a large one. From Figure 5, a firm producing at output Q_2 will have a higher average cost of production of C_2 compared to a firm producing at a smaller output of Q_1 with average cost C_1 .

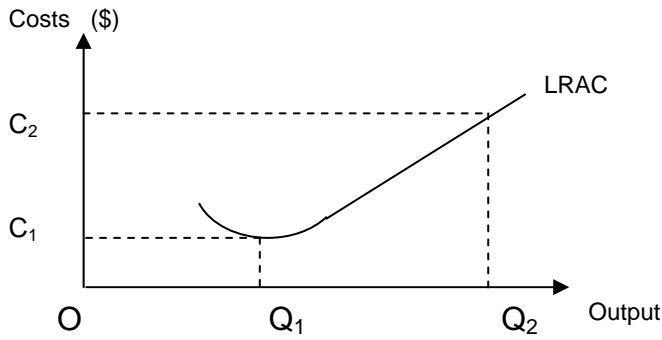


Figure 5

In some cases, the merged firm might become so big that internal diseconomies of scale start to set in. Internal managerial diseconomies of scale may set in due to the difficulty of coordinating between larger departments, or the difficulty of managing complex distribution channels. These problems are likely to occur in conglomerate mergers where each acquired firm runs a different business in a different market, which makes it difficult to manage the conglomerate.

Conclusion and evaluation

Stand and Justification:

Overall, the decision of whether to engage in mergers and acquisitions depends on the relative costs and benefits of this strategy. Mergers and acquisitions are likely to be useful for firms that can reap extensive internal economies of scale, and who face large market demand for their product like smartphones. Firms that face uncertain market conditions or that sell products requiring personalized attention like hairdressing should remain small instead.

Justification 2:

With the increasing trend towards globalization, and an increase in foreign competition, there may be a greater need for firms to merge to gain greater market share and resources in order to remain competitive. For instance, a merger may provide a greater source of funding for research and development to create better and more competitive products.

Justification 3:

The decision of whether to engage in mergers and acquisitions also depends on the type of merger being considered. Conglomerate mergers run a higher risk of incurring internal diseconomies of scale due to the difficulty of managing and coordinating the production of different goods and services and reacting to conditions in different markets. Hence, the decision of whether to engage in such a strategy depends on the firm's ability to manage a larger and more complex scale of operations.

- 3 Many working parents enrol their children in childcare centres for supervision during the day. In Singapore, parents are eligible for a basic subsidy of \$300 per child for childcare services. In contrast, in the United States, childcare subsidies are not given.

(a) Explain how the price mechanism allocates resources efficiently in a free market. [10]

(b) Assess the economic case for the two different approaches towards childcare services in Singapore and United States. [15]

Knowledge, Application, Understanding and Analysis		
L3	For an answer that shows a well-developed explanation of how the price mechanism allocates resources efficiently in a free market.	7-10
L2	For an answer that shows an under-developed explanation of how the price mechanism allocates resources efficiently in a free market.	4-6
L1	For an answer that shows descriptive knowledge of how the price mechanism allocates resources efficiently in a free market and /or a smattering of valid points.	1-3

Knowledge, Application, Understanding and Analysis		
L3	Well-developed analysis of how the consumption of childcare services results in positive externalities and why the government intervenes in the market in Singapore but not in US.	9-11
L2	For an answer that shows an under-developed explanation of how the consumption of childcare services results in positive externalities and why the government intervenes in the market in Singapore but not in US. OR Well-developed analysis of how the consumption of childcare services in Singapore results in positive externalities and why the government intervenes in the market in Singapore without the analysis on US. [6 marks] Maximum of 8m if the difference in MEB is not explained.	6-8
L1	For an answer that shows descriptive knowledge of how the consumption of childcare services results in positive externalities and why the government intervenes in the market in Singapore but not in US. Very limited or no attempt to use relevant economic concepts.	1-5
Evaluation		
E2	For a reasoned assessment on why the Singapore government should subsidise childcare services but not US.	3-4
E1	Unreasoned judgement on why the Singapore government should subsidise childcare services but not US.	1-2

a) Explain how the price mechanism allocates resources efficiently in a free market. [10]

Introduction

One of the key microeconomic objectives of the government is to achieve efficient allocation of resources. Faced with the problem of scarcity where there are unlimited wants but limited resources, the market economy uses the price mechanism to allocate its scarce resources. The price mechanism works automatically to allocate resources efficiently based on demand and supply forces to address the problem of scarcity, and the end result is that resources are efficiently allocated and, hence the society's welfare is maximised. This is attained when the amount of resources allocated to production is such that marginal social benefit (MSB) equals marginal social cost (MSC).

Body

The price mechanism works to resolve the basic economic problem of **what, how much, how and for whom to produce**. The basic principle underlying the price mechanism is that goods and services are provided through the market and that consumers and producers act in their self-interest. Consumers in the **pursuit of self-interest** will cast their dollar votes to show their preferences for the types and quantities of goods and services they prefer. Consumers influence producers' decisions on **what to produce** based on their demand preferences. Demand refers to the willingness and ability of consumers to purchase a particular good or service at various prices over a period of time, *ceteris paribus*. The amount they are willing and able to pay is determined by the additional satisfaction they derived from consuming an additional unit of the good or service. This is represented by the demand curve which is also the marginal private benefit (MPB) curve of the consumers. Assuming that there is an absence of externalities, $MPB=MSB$.

Producers who are profit maximisers will receive the price signal from consumers. Producers will decide on **how to produce** by comparing the relative prices of factors of production to achieve the lowest cost. The supply of a good is the amount of the good or service that producers are willing and able to offer for sale at various prices over a period of time, *ceteris paribus*. Producers' decision to supply is based on the extra cost incur in producing an extra unit of the good or service. Hence, the producer's supply curve is also the marginal private cost (MPC) curve. Assuming that there are no externalities, $MPC=MSC$.

The price thus acts as a signal which consumers send to producers indicating their demand for a good or service and producers will allocate resources among competing needs to the production of the goods most desired by consumers, backed by their ability to pay. In this way, the price mechanism plays the allocative and rationing function. Prices perform a signalling function. Market prices will adjust to reflect where resources are required and where they are not.

The intersection of the demand ($D=MPB=MSB$) and supply ($S=MPC=MSC$) curves in Figure 1 leads to the attainment of an equilibrium price at P_e and quantity at Q_e . At this price at P_e , consumers decide what and how much to buy and producers decide on what and how to produce based on price signals. At equilibrium price P_e , quantity demanded is equal to quantity supplied. As **$MSC=MSB$, resources are efficiently allocated.**

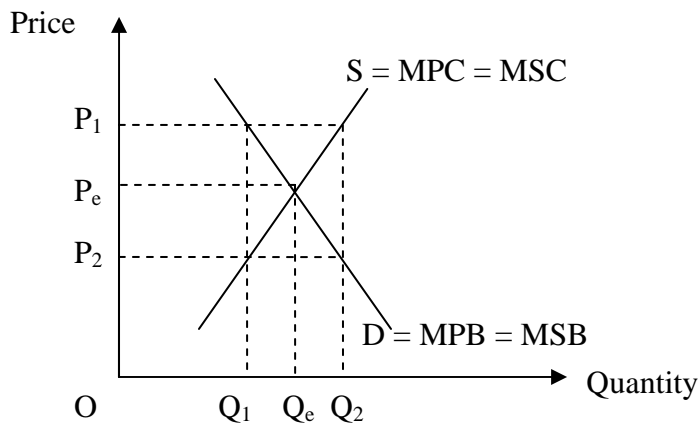


Figure 1

At price P_2 , quantity demanded Q_2 is more than quantity supplied Q_1 . Thus, there will be an upward pressure on prices as there is a shortage of the good. Producers channel resources to produce more of the good, until Q_e is reached at price P_e . At price P_1 , quantity demanded Q_1 is less than quantity supplied Q_2 . Thus, the price falls as there is a surplus of the good. Producers will divert resources away from the good, producing less, until Q_e is reached at price P_e . The adjustment process of the price mechanism will ensure that Q_e is reached and resources are allocated efficiently. The price mechanism works to determine what and how much to produce.

The price mechanism determines how to produce through relative price signals too. Firms produce goods by combining resources in the least costly way. Firms will substitute the relatively cheaper factor to replace the more expensive factor. For example, if the relative price of farm land increases, farmers will use more labour and tractors to work the land more intensively.

Conclusion

The pursuit of self-interest allows the **price mechanism to allocate resources efficiently in a free market**. But in reality, the presence of externalities, failure to provide public goods, imperfectly competitive market, imperfect information and immobility of factors of production will limit the working of the price mechanism.

(b) Assess the economic case for the two different approaches towards childcare services in Singapore and United States. [15]

Introduction

Efficient allocation of resources is attained when the amount of resources allocated to production is such that marginal social benefit (MSB) equals marginal social cost (MSC), i.e. **$MSB = MSC$** . When this occurs, allocative efficiency is achieved. **Allocative efficiency** is achieved when it is impossible to change the allocation of resources to make someone better off without making someone else worse off. In the case when free market fails due to the existence of externalities in the consumption of a good or service, the government often has to intervene to ensure a more efficient allocation of resources. For example, government intervention might be needed to correct the problem of underconsumption of childcare services.

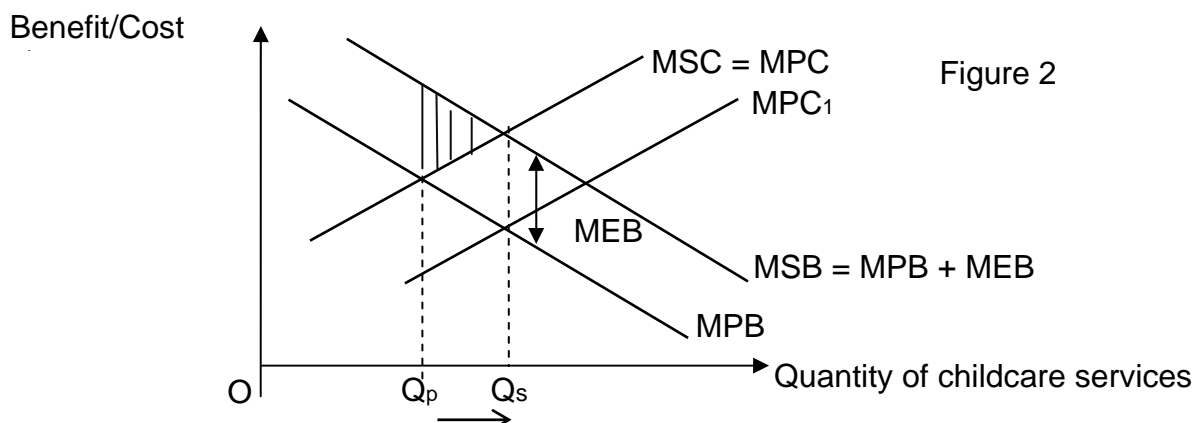
Explain how the consumption of childcare services results in positive externalities

Figure 2 illustrates the situation when the consumption of childcare services leads to positive externalities. Positive externality is the benefit **to third party who is not directly involved in the production or consumption of a good and such benefits are not reflected in the price of the product**. The marginal private benefit to the parents consuming childcare services is them being able to work and able to **work without worrying for the safety of their children** for every additional unit of childcare services consumed. The marginal private cost to the parents will be **the cost of childcare services** for every additional unit of childcare services consumed.

External benefits refer to the increase in the quantity of labour **as more women are able to re-enter the labour force hence contributing to potential growth as productive capacity increases**. Companies also benefit as there is less disruption to their work processes when the female employees rejoin the company after their maternity leave. **Marginal social benefit (MSB)** is the additional social benefit from the last unit of a good consumed, $MSB = MPB + MEB$ where MEB is the marginal external benefits.

Due to the presence of positive externality, which is shown by the **marginal external benefit (MEB)** at a particular level of output, marginal social benefit (MSB) will be **greater** than marginal private benefit (MPB), i.e. **$MSB > MPB$** . There is a **divergence of MPB and MSB**. This means that the benefits of consumption to society include not just the benefits to the consumer but also the benefits to others enjoying the positive spillover effects, shown as MEB. Assume that $MPC = MSC$. Since consumers will only consider their private benefit and cost while ignoring the benefits to third parties, they will consume at the level **OQ_p** where **$MPB = MPC$** . However, the **socially optimal level** of output occurs at **OQ_s** where **$MSC = MSB$** .

Since Q_p is **less** than Q_s , it means that the price mechanism on its own cannot achieve an optimal allocation of resources. There is **underconsumption** of the good. Between Q_p and Q_s , the social benefit of an additional unit of childcare services consumed is higher than the social cost, resulting in **welfare loss** equivalent to the shaded area. Hence, market failure occurs in the consumption of childcare services and government intervention, such as subsidies, might be required to bring about an efficient allocation of resources.



How subsidies correct market failure

In the case of Singapore, subsidies are given by the government. The government can give **subsidies** per unit, equivalent to the **marginal external benefits** at Q_s , to childcare providers so that childcare services are available to the parents at a lower cost. Subsidies help to **lower the cost of production** for the childcare services and this will lead to a lower cost of childcare services when producers pass on the cost savings. As seen in Figure 2, the **marginal private cost (MPC) will fall and shift to the right to MPC_1** . The level of consumption of childcare services will **increase from Q_p to Q_s** , which is the socially optimal level of consumption.

Aside from intervening to achieve efficient allocation of resources, the government might also intervene on grounds of equity. The childcare service subsidy is to help parents defray some of the cost of the fees and to ensure affordability and accessibility of childcare services for all Singaporeans.

Explain the difference in the level of intervention in Singapore and US childcare services

Difference in MEB

The cost of childcare services is often cited as a major barrier for women to re-enter the labour force in Singapore. Due to her small labour force as a result of her small population, it is essential that Singapore increases its quantity of labour so as to better utilize workers to fill up the various vacancies in the economy. Hence in Singapore, the **marginal external benefits** of consuming childcare services allowing parents to re-enter the labour force is high and significant.

In contrast, in the case of US, the government may chose not to intervene in the childcare services market as the **positive externalities are perceived to be negligible**. Big economies like USA have an abundance of labour due to their large population. This results in a greater supply of readily available workers and hence the marginal external benefits of consuming childcare services allowing parents to re-enter the labour force might not be that significant. Hence, government intervention might not be necessary.

Difference in economic priorities

As Singapore is a small economy with labour as one of her main resources, one of the government's priorities is to allow mothers to re-enter the labour force so as to increase the size of the labour force. This will result in an increase in productive capacity and long run aggregate supply, leading to potential growth. Coupled with rising AD, Singapore will then be able to achieve sustained economic growth.

In contrast, the US government might have other more pressing economic priorities. The US government may be more focussed on stimulating the economy through fiscal stimulus and building of infrastructure so as to resolve the slow growth in recent years. Intervention in the childcare services market might incur **huge opportunity cost** as the funds could be used for other more pressing needs.

Budget Position

In the US the ability to intervene in the childcare services market is further limited by their large fiscal deficit. With their rising national debt, the cost of intervention is high as giving subsidies means an increase in government expenditure, hence incurring a larger debt. An increasing national debt will result in a burden for the future generations. In contrast, in Singapore, the prudence of the government has enabled her to accumulate reserves and run a budget surplus for most of the years. Hence, the government has a greater ability to provide subsidies for childcare services.

Conclusion and Evaluation

Stand and Justification: In conclusion, whether the government intervenes and the extent of intervention in a market depends on the perceived marginal external benefits by the government, economic priorities and budget position which differ for different economies. It is likely that the Singapore government perceives the marginal external benefits from the consumption of childcare services to be high while the US government perceives it to be low, thus resulting in the Singapore government giving subsidies for childcare services while the US government chooses not to intervene.

Justification 2: Government failure

However, it should be noted that government intervention might result in government failure due to red tape and imperfect information. The government may also not know the correct amount to subsidise to bring output to the socially optimal level. Although the socially optimal level of output may not be attained due to limitations of implementing measures such as inability to assess the level of MEB or lack of government expertise, government intervention usually ensures a more efficient allocation of resources and results in an output level that is closer to the socially optimal level.

4(a) Explain how economists compare the economic performance of different countries. [10]

- (b) Discuss the extent to which trade-offs between different macroeconomic objectives may occur when a country seeks to improve its economic performance. [15]

Knowledge, Application, Understanding and Analysis		
L3	For an answer that shows a well-developed explanation of how macroeconomic indicators can be used to compare the economic performance of different countries. (4 objectives excluding ER would be sufficient to get the top marks.)	7-10
L2	For an answer that shows under-developed explanation of how macroeconomic indicators can be used to compare the economic performance of different countries.	4-6
L1	For an answer that shows descriptive knowledge of how macroeconomic indicators can be used to compare the economic performance of different countries.	1-3

Knowledge, Application, Understanding and Analysis		
L3	Well-developed explanation of how trade-offs between different macroeconomic objectives can occur when a country seeks to improve its economic performance + extent of the trade-offs	9-11
L2	Under-developed explanation of how trade-offs between different macroeconomic objectives can occur when a country seeks to improve its economic performance Max 6m for a one sided answer. Max 8m if the pursuit of only 1 macroeconomic objective is discussed in the answer.	6-8
L1	Descriptive knowledge of how trade-offs between different macroeconomic objectives can occur when a country seeks to improve its economic performance.	1-5
Evaluation		
E2	For an evaluative assessment that is based on economic analysis. (e.g.: extent of trade-offs depends on nature of economy, policies implemented etc.)	3-4
E1	For an unexplained assessment or one that is not supported by economic analysis.	1-2

a.

Introduction

The economic performance of a country can be measured by the 5 macroeconomic objectives. The macroeconomic objectives include internal price stability, sustained economic growth, full employment, satisfactory balance of payments and a stable exchange rate. The comparison of the performance of different countries can be assessed by comparing the macroeconomic indicators across countries.

Body

Economic growth

A country is said to have performed better if it has a higher real Gross Domestic Product (GDP) per capita growth rate. A higher real GDP per capita growth would mean that there is a faster increase in the level of income of the people which leads to higher quantitative standard of living as more goods and services can be purchased and consumed.

Gross Domestic Product (GDP) shows the total value, before deduction of depreciation, of goods and services produced by all residing within the geographical boundary of a country during a specific period of time. By comparing GDP over a period of time, we can estimate whether the economy is growing, stagnant or declining. Compared to GDP, real GDP per capita has been adjusted for inflation and population size.

The rate of economic growth is usually measured by the annual percentage change in the real GDP per capita. Growth must be measured in real terms because it is the change in the quantity of goods and services that we are measuring and not the change in the nominal value.

$$\text{Economic Growth} = \frac{\text{Period 2 Real GDP per capita} - \text{Period 1 Real GDP per capita}}{\text{Period 1 Real GDP per capita}} \times 100\%$$

Internal price stability

Inflation can be defined as a sustained increase in the general price level in the economy and is measured using the consumer price index (CPI). The CPI measures the cost of buying some fixed basket of consumer goods and services of a typical household, relative to the costs in a specified base year. Inflation rate measures the percentage change in general price level over 2 consecutive years.

$$\text{Inflation rate} = \frac{\text{CPI in current year} - \text{CPI in previous year}}{\text{CPI in previous year}} \times 100\%$$

In comparing the economic performance of countries in terms of internal price stability, the performance of the country with lower and more stable inflation rates is better than one with high and erratic inflation rates. This is because when the price level rises, the internal value of money falls as fewer things can be purchased with the same amount of money. In addition, high and unanticipated inflation rates will lead to other internal and external macroeconomic problems such as a balance of payments deficit. In addition, high and erratic inflation rates would discourage investment due to the uncertainty which would in turn affect economic growth.

Full employment

When comparing the macroeconomic performance across countries in terms of unemployment, the country with the lower the unemployment rate is deemed to have performed better. Unemployed refers to people in the labour force who are of working age, available for work and actively searching for a job but cannot find one. Labour force refers to people of working age who are employed or unemployed. Unemployment rate is measured as the percentage of the labour force that is unemployed.

$$\text{Unemployment rate} = \frac{\text{Number of unemployed}}{\text{Labour force}} \times 100\%$$

A higher unemployment rate in the country would mean a loss of income of the people in general and thus, a fall in their standard of living. If the situation persists, it may lead to a loss of self-esteem and depression of the unemployed, resulting in social problems. Unemployment also leads to wastage of scarce resources as the economy is producing below its productive capacity.

Balance of payments

When comparing the macroeconomic performance across countries in terms of balance of payments, a country is deemed to have performed better if it has a larger surplus or a smaller deficit. The balance of payments records the monetary transactions between a country and the rest of the world in a given period of time. The balance of payments includes the current account and the capital account. A balance of payments deficit from the current account may occur when the value of exports of goods and services is less than the value of imports of goods and services while a balance of payments deficit from the capital account may occur when there is a net outflow of short term and long term capital.

When a satisfactory balance of payments is not attained, it could imply a lower demand for the country's exports which can lead to an economic slowdown and higher unemployment rate. A persistent BOP deficit would also mean that the foreign reserves are being depleted or the country has to resort to external borrowing. However, a current account deficit may be due to industrialisation and the economy needs to import a large amount of raw materials and machinery. As import expenditure depends on national income, an economy enjoying economic growth will also experience an increase in import expenditure. Thus, a current account deficit may also indicate a good performance of the domestic economy. Hence it is also important to look at the cause of the deficit or surplus.

A balance of payments deficit in the capital account due to the short term capital account deficit may be a reflection of certain economic fundamental weaknesses in the economy which deters inflow of hot money. On the other hand, a long-term capital account deficit due to a lack of FDI inflow would mean lower economic growth and employment rate for the economy.

Stable exchange rate

When comparing the macroeconomic performance across countries in terms of exchange rate, a country is deemed to have performed better if her currency is gradually strengthening over a period of time. A country with erratic movements in her exchange rate or a persistent weakening in her exchange rate will be deemed as one who is performing poorly. The exchange rate of a country's currency (also called the external value of a currency) is the amount of foreign currency that can be exchanged for one unit of the national currency. It is actually the price of one currency in terms of another currency.

A rapid depreciation of the currency could imply a loss in export competitiveness or capital flight due to the loss of confidence by speculators in the currency. A volatile exchange rate tends to create uncertainty for trade and investment which is undesirable.

Conclusion

In conclusion, all 5 macroeconomic objectives should be taken into consideration when comparing the economic performance across countries. It is also useful to compare the change in the indicators over time rather than just looking at a particular year.

b. **Introduction**

The macroeconomic objectives of the government are sustained economic growth (EG), full employment, price stability and healthy balance of payments (BOP). While the government would like to achieve all of the above macroeconomic objectives, it is sometimes difficult to achieve them simultaneously as they are conflicting in nature. Hence, governments tend to prioritise their objectives and achieving high economic growth is often at the top of their list. This is because economic growth can bring about higher disposable income and standard of living. The higher demand and optimistic business outlook will further fuel investment that keeps unemployment rate low. To bring about actual EG, the government can use fiscal or monetary stimulus to boost the domestic demand when the economy's AD is weak.

Body: Thesis

Conflict 1: Economic growth and full employment achieved through fiscal stimulus versus low inflation

When an economy experiences rapid growth through the use of fiscal or monetary stimulus, it will eventually be accompanied by demand-pull inflation as AD moves closer to the full employment level of national income unless measures are taken to bring about potential economic growth. High inflation rate discourages savings and investments, which retard economic growth. It also erodes the country's export competitiveness.

As shown in Figure 1, as AD increases from AD_1 to AD_2 , more resources have to be employed in order to increase production causing resources to become scarcer, thus pushing their prices up. This in turn increases the price of goods and services from P_1 to P_2 . An example would be the case of China where her stellar economic growth performance for the past few years has resulted in pressures on the general price level to rise and is a concern to the Chinese government. Hence, if growth is too rapid, the economy is likely to overheat. Thus the pursuit of growth through the use of expansionary fiscal policy might result in inflation.

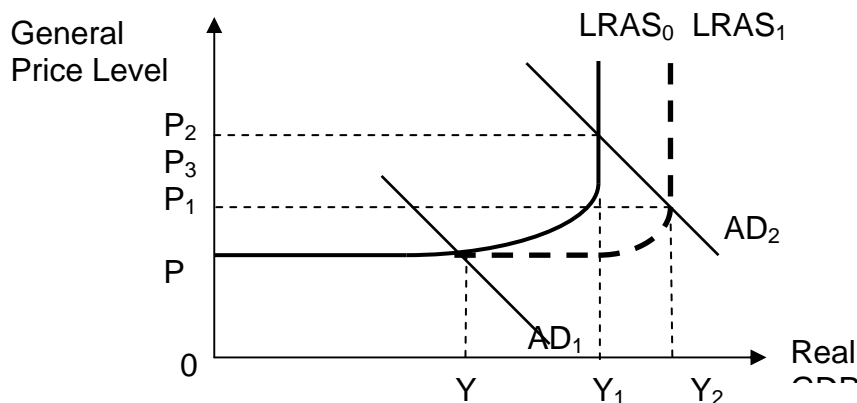


Fig 1: Rising AD and Rising

Extent

The extent of the conflict would be more severe if the fiscal stimulus is not carefully calibrated and is too excessive, causing a large increase in AD and thus a large increase in GPL. The conflict would also be more serious if the economy is near full employment as any fiscal stimulus would impact the GPL significantly.

Conflict 2: Economic growth and full employment achieved through fiscal stimulus versus healthy BOP

Another source of conflict of using fiscal or monetary stimulus to stimulate economic growth is between economic growth and healthy BOP. Assuming that the stimulus is successful and an economy enjoys economic growth and higher national income, the increase in purchasing power and consumption will lead to a greater demand for imports. This is especially so for import-reliant countries like Singapore. Ceteris paribus, higher import expenditure will decrease net exports and cause the current account to worsen. Unless the capital account throws up a huge surplus to offset this, it might lead to a balance of payments deficit. A persistent deficit can cause a country to run down its foreign reserves or borrow heavily, resulting in a heavy burden on future generations.

Extent

This conflict between economic growth and healthy BOP is more serious for countries with a high marginal propensity to import (MPM). For example, Singapore lacks natural resources and has to import raw materials, intermediate goods and finished goods, resulting in a high MPM. Thus an increase in income will lead to a large increase in import expenditure and affect her BOP significantly.

Conflict 3: Economic growth achieved through economic restructuring versus structural unemployment

When an economy seeks to improve her growth through economic restructuring to develop new growth sectors, structural unemployment will result. Many workers retrenched from the sunset industries do not have the necessary skills and training to switch to jobs in the sunrise industries. This mismatch of skills between the workers and the job requirements will result in structural unemployment. Thus, it can be seen that structural unemployment occurs even when employment in some industries expand while others contract, as those retrenched or unemployed do not have the skills required in expanding industries. Such unemployment is prevalent in many countries, especially developed countries.

Extent

This conflict between economic growth and healthy employment is more serious for countries with a lower skilled labour force. When the labour is lowly skilled, they are less mobile and hence, less able to move across different industries. It is also harder for them to be retrained or pick up new skills due to the lack of fundamental knowledge or certain basic training.

Conflict 4: Low inflation through appreciation versus healthy BOP

A country might seek to achieve low inflation by appreciating the currency. A strengthening currency will cause exports to become relatively more expensive in terms of foreign currency and imports to be cheaper in domestic currency. Assuming that the Marshall Lerner condition holds where the sum of the price elasticity of demand for exports and imports is more than 1, an appreciation will lead to a fall in $X-M$, AD and thus GPL, curbing demand-pull inflation. Cheaper imports also reduce imported inflation. The fall in price of imported raw materials helps to reduce COP and cost-push inflation. However the fall in $X-M$ due to the appreciation will lead to a worsening balance of trade which may lead to a deficit in the BOP.

Extent

The conflict between low inflation and healthy BOP depends on how much the currency is allowed to appreciate. For countries like Singapore where the currency is under a managed float regime, the appreciation is more gradual, hence the adverse impact on BOP might not be that serious.

Anti-thesis: Trade-off will not occur if appropriate policies are implemented

Conflict 1

The conflict of economic growth and full employment versus low inflation can be avoided. The government can adopt appropriate supply-side (SS) policies to enhance the productive capacity of the economy. This can be achieved through skilful economic management by providing training and education to improve labour productivity, incentives for R&D and accumulation of capital stock through investment. As shown in Figure 1, an increase in LRAS from $LRAS_0$ to $LRAS_1$ will help to lower the general price level from P_2 to P_3 . Therefore, it is possible to enjoy sustainable growth that is non-inflationary if FP is used together with SSP.

Conflict 2

The conflict of economic growth and full employment with a healthy BOP can also be avoided if a country is able to promote strong growth in the export sector, perhaps through making its prices more competitive or improving its quality and marketing techniques. This can be done through SSP by providing incentives for firms to engage in R&D to find more efficient methods of production or improve the quality of their product.

Conflict 3

The conflict of economic growth and structural unemployment can be reduced with appropriate government measures to channel more support and help to the lower skilled workers. SSP such as subsidising skills retraining and upgrading of skills can help the structurally unemployed find employment in sunrise industries.

Conflict 4

The conflict of low inflation (through appreciation) and healthy BOP can be avoided by SSP. For example, incentives for R&D that encourages the firms to find ways to lower the cost of production can mitigate the rise in export prices due to a strong currency. In addition, a strong currency may be a reflection of strong economic fundamentals and performance of the country, thereby attracting more hot money into the country. This will improve the capital account of the BOP and if it is sufficient to offset the deficit in the BOT, the conflict might not occur.

Conclusion and Evaluation

Stand and Justification

The extent to which trade-offs between different macroeconomic objectives may occur when a country seeks to improve its economic performance will be very much dependent on the nature of the economy and whether the government has put in place proper policies to resolve or mitigate the conflicts. For example, when using fiscal stimulus to pursue economic growth, the type of government spending is important as it can also have supply-side effects if the spending is focused on increasing the level of productivity. In Singapore for example, fiscal policy is used mainly for its supply-side effects where spending on education, R&D and infrastructure serves to increase productivity and LRAS and thus lower inflation and improve BOP.

Justification 2

Though governments aim to resolve the conflicts between macroeconomic objectives, sometimes it might be necessary to bear with the trade-offs. For example, during a recession, when the major concern to the government is to stimulate growth and employment, the government might be prepared to bear with a short-term worsening of the BOP as they try to try to increase income which can lead to a rise in import expenditure.

- 5a. Explain why governments aim to achieve internal and external price stability. [10]
- 5b. Assess the relative effectiveness of monetary policy and fiscal policy in achieving economic growth in different economies. [15]

Knowledge, Application, Understanding and Analysis		
L3	Well-developed analysis of the consequences of failing to achieve internal and external price stability.	7-10
L2	Under-developed explanation of the consequences of failing to achieve internal and external price stability. OR Max 5 m for well-developed explanation of the consequences of failing to achieve either internal or external price stability.	4-6
L1	For a descriptive knowledge of the consequences of failing to achieve internal and external price stability.	1-3

Knowledge, Application, Understanding and Analysis		
L3	Well-developed analysis of the relative effectiveness of monetary policy and fiscal policy in achieving economic growth in different economies with examples.	9-11
L2	For an answer that shows an under-developed explanation on the relative effectiveness of monetary policy and fiscal policy in achieving economic growth in different economies. Or Max 8m for a well-developed analysis of the effectiveness of monetary policy and fiscal policy in achieving economic growth between different economies without comparison between FP and MP in a country.	6-8
L1	For an answer that shows descriptive knowledge of the relative effectiveness of monetary policy and fiscal policy in achieving economic growth in different economies. OR No comparison is made between policies/countries.	1-5
Evaluation		
E2	For a reasoned assessment on the effectiveness of monetary policy and fiscal policy in achieving economic growth in different economies.	3-4
E1	Unreasoned judgement on the effectiveness of monetary policy and fiscal policy in achieving economic growth in different economies.	1-2

5a. Explain why governments aim to achieve internal and external price stability. [10]

Introduction

Internal price stability refers to a situation when there is zero or small rise or fall in the general price level. Pursuing internal price stability is important as inflation or deflation can lead to adverse internal and external consequences on the economy. External price stability refers to the country having a stable market exchange rate. A stable exchange rate facilitates trade and investment. In contrast, exchange rate instability, in terms of a rapidly depreciating currency, can result in a rise in imported inflation, or in the case of a rapidly appreciating currency, a reduction in the competitiveness of the country's exports.

Body

Internal effects of unstable internal prices: Investment, employment and growth

By attaining internal price stability, the economy could avoid the costs of inflation or deflation. This essay focuses on the costs of inflation. Inflation affects economic growth, balance of payments and employment levels in a country. When an economy is below full employment and is experiencing mild demand-pull inflation where excessive aggregate demand exceeds aggregate supply near or at full employment, the rate of increase in price is faster than that of cost which leads to rising profit levels. The increase in profitability thus induces producers to be more willing to invest and expand the line of production. This can lead to an increase in investment, thus leading to higher employment and growth. However when there is cost-push inflation which is caused by rising cost of production in the economy that is not due to excess demand, the rise in cost is more rapid than the rise in price. Hence producers are likely to put off any investment. Most importantly, in a high inflation rate environment, interest rates tend to be high to compensate savers for the loss of real savings. Producers hence are reluctant to borrow at high nominal interest rates as few investments give such high rates of return to make the project viable. Hence high inflation rates can reduce the level of investment due to the high cost of borrowing as reflected by the high nominal interest rates.

In addition, when inflation rate is moving in an erratic and unpredictable manner, businessmen will hesitate to commit themselves to long-term deals because of greater uncertainties and risks involved. Thus they will be less willing to take risks and invest, especially in long-term projects. This leads to a fall in investment. Without long-term deals, business investments fall and thus economic growth might fall.

Internal effects of unstable internal prices: Redistribution effect

Also, inflation results in redistribution of income as some people will be made better off while others are made worse off. This can be socially upsetting especially when the majority of people are worse off. When there is inflation, fixed income earners lose and producers gain during unanticipated inflation. Fixed income earners include employees whose salaries are fixed by contract, pensioners and landlords who continue to receive contracted rent. The purchasing power of the fixed-income earners decreases because they have to pay more for a product. Conversely, producers gain because they are making higher profits as price may rise faster than cost. Unless the fixed income earner can get wage increases as fast as the rate of inflation, he is worse off in real terms. Lenders will lose and borrowers gain during unanticipated inflation. Borrowers gain because the real values of their debts are reduced by the price increase. This is because although the sum that is repaid in nominal terms is what has been agreed, its purchasing power is much less. In contrast, lenders end up getting back a sum worth much less than agreed in real terms.

External effects of unstable internal prices: Balance of payments

Also if a country's inflation rate is relatively higher than its trading partners, her exports will be relatively more expensive and therefore less competitive. If the demand for the country's exports is price elastic, this will lead to a more than proportionate fall in quantity demanded leading to a fall in export earnings. On the other hand, her imports will be relatively cheaper than home-produced goods and thus demand for imports increases and her import expenditure will rise. Hence net exports fall which worsens the current account and may lead to a worsening of the balance of payments and a fall in foreign reserves if it is persistent.

Impacts of unstable external prices

When a country is experiencing external price instability in the form of a rapidly depreciating currency, it will affect its balance of payments, economic growth and employment in the country.

When a currency depreciates in a country, this will lead to the prices of exports becoming cheaper in terms of foreign currency and the prices of imports becoming more expensive in terms of local currency. Assuming that Marshall Lerner condition holds, i.e. the sum of price elasticity of demand for imports and exports is greater than one, this will lead to an improvement in net exports. Increase in net exports will lead to a rise in AD and thus general price level if the economy is **near or at full employment**. The increase in AD increases competition for scarce resources, thereby leading to increased prices of factor inputs and hence price of output, resulting in **demand-pull inflation**.

With the relatively more expensive imports, imported inflation in the country worsens. The rising cost of imported inputs for industries will also worsen cost push inflation. This is more serious in a country such as Singapore where she is heavily dependent on imports for most of her foodstuffs, raw materials and fuel.

The rapid depreciation of a currency may also bring about uncertainty due to the fear of future depreciation and this loss of confidence in the currency can cause speculative capital flight out of the country, thereby worsening the country's capital account. In addition, if a country has a huge external debt, a depreciation of the currency will increase the burden of servicing the debt which is in foreign currency.

On the other hand, when the country is facing a rapidly appreciating currency, the country's export becomes relatively more expensive in terms of foreign currency, while its imports become relatively cheaper in terms of domestic currency. Assuming that Marshall-Lerner condition holds where the sum of the price elasticity of demand for exports and imports is more than 1, this will lead to a fall in net exports, resulting in a fall in AD and thus multiple fall in NY via the multiplier effect. The fall in income and production will lead to a fall in demand for labour and thus unemployment increases. A rapidly appreciating currency may lead to the cost of investment to be relatively higher in terms of foreign currency and this may deter foreign investors from investing in a country which is detrimental to her economic growth.

Conclusion

In conclusion, the consequences of failing to achieve internal and external price stability are mainly detrimental to a country, hence governments aim to achieve internal and external price stability. The government will implement appropriate policies to bring about internal and external price stability to facilitate the government to achieve the other macroeconomic objectives.

5b. Assess the relative effectiveness of monetary policy and fiscal policy [15] in achieving economic growth in different economies.

Introduction

Economic growth is the increase in real output in an economy. The economy experiences actual growth in the short run when there is a percentage annual increase in output actually produced. Potential growth is achieved when there is a percentage annual increase in the capacity of the economy to produce. A government aspires to achieve economic growth because it brings about higher disposable income and standard of living. The higher demand and optimistic business outlook will further fuel investment that keeps unemployment rate low. The stronger fiscal position of the government due to economic growth would also aid investment in social infrastructure which is crucial to the potential growth of the economy. The government can use expansionary monetary and fiscal policy to achieve economic growth. However, the effectiveness will vary across different economies.

How Expansionary Monetary Policy works

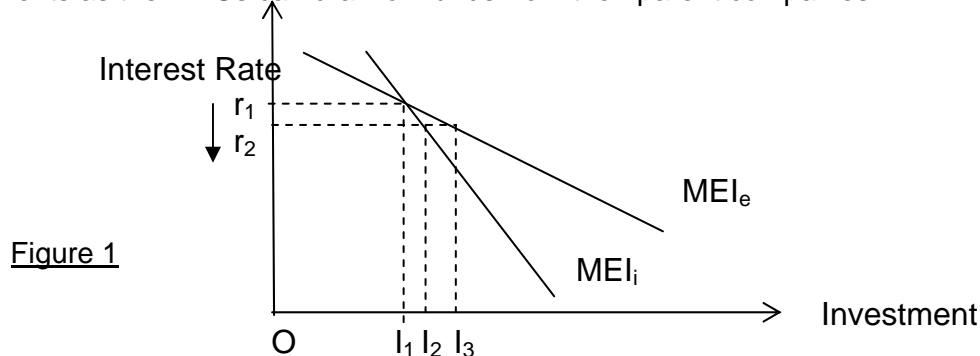
Monetary policy is a deliberate attempt by the government to regulate the economy by controlling money supply or the interest rates, or the exchange rates, thereby influencing aggregate demand and thus stabilizing the level of output or income, prices, and employment at the full employment level. **Expansionary monetary policy** can be used to promote actual growth. This involves increasing money supply and lowering interest rate. A fall in interest rates would result in a lower opportunity cost of consumption (C), giving consumers a greater incentive to consume, thus causing consumption to increase and savings to fall. In addition, lower interest rates result in lower cost of borrowing, causing consumers to borrow more, thus increasing consumption. The lower cost of borrowing means that it is now more profitable to undertake investment projects that were unprofitable at higher interest rates, hence investment (I) will increase. The increase in C and I will lead to an increase in AD, and a multiplied increase in national income via the multiplier, achieving actual growth.

Effectiveness

MEI

For countries like USA where domestic investment is significant, domestic firms have to borrow money to expand or invest, resulting in the marginal efficiency of investment (MEI) curve to be **interest elastic**. Referring to Figure 1, a fall in interest rate from r_1 to r_2 will cause a more than proportionate increase in investment from I_1 to I_3 if the MEI curve is interest elastic as shown by MEI_e . The increase in AD will be more significant so monetary policy using interest rates tends to be more effective.

For countries which depend heavily on MNCs, a fall in interest rate will not have a significant impact on investments as the MNCs can draw on funds from their parent companies.



Hence investment in such countries tends to be interest inelastic. Other factors which determine the marginal efficiency of capital (MEC), which measures the expected rate of returns from investment, such as the quality of workforce, political stability and infrastructure support are much more crucial factors. Referring to Figure 1, a fall in interest rate from r_1 to r_2 will cause a less than proportionate decrease in investment from I_1 to I_2 if the MEI curve is interest inelastic as shown by MEI_i . Hence for countries with interest elastic MEI, MP might be more effective than FP to stimulate growth while for countries with interest inelastic MEI, they might wish to explore the use of fiscal policy (FP) to stimulate growth instead.

Nature of economy

The effectiveness of MP also depends on the nature of the economy. Being the world's largest economy, USA has the ability to influence interest rate. Hence, expansionary monetary policy will be effective. However, for a small and open economy like Singapore, the economy is very open to capital flows. As a result, small changes in the difference between domestic and foreign interest rates would lead to large and quick movements of capital. This makes it difficult to target money supply in Singapore. As a small and open financial centre, Singapore needs to follow international trends in interest rate to avoid large capital flows. Too great a variation would cause instability of the exchange rate due to large capital or hot money flows. Thus, MAS does not influence market interest rate. Singapore is a price taker in terms of interest rates. Hence, monetary policy using interest rates tends to be rather ineffective to achieve economic growth in Singapore and she might have to use FP instead.

OR

Monetary Policy using exchange rate

Monetary policy can also involve the use of the exchange rate. To achieve growth, the government would need to depreciate the currency. This can be done by selling domestic currency in the forex market as the increase in supply of domestic currency will lead to a depreciation. A depreciation would make the country's exports of goods and services cheaper in foreign currency and its imports more expensive in domestic currency. Assuming that Marshall-Lerner condition holds, where the sum of the price elasticity of demand for exports and imports is more than 1, a depreciation would lead to an increase in net exports. The increase in X-M will lead to a rise in AD and a multiple rise in NY via the multiplier effect, thus achieving growth.

Effectiveness

Dependence on external demand

The effectiveness of the policy will depend on how reliant the economy is on external demand. It would be more effective for countries like China and Hong Kong where external demand is the main driver of growth. However for countries like US which are more dependent on domestic demand, using exchange rates to achieve growth might not be that effective.

Expansionary Fiscal Policy

To bring about actual growth, the government can also use expansionary fiscal policy to boost the domestic demand when the economy's AD is weak. Fiscal policy is the deliberate attempt by the government to change tax rates or the level of government expenditure in order to influence the level of aggregate demand. Expansionary fiscal policy involves increasing government expenditure (G) or reducing tax rates (T). The increase in G through more public projects such as the building of infrastructure like hospitals and transport networks will bring about an increase in demand for more labour in related industries, thereby increasing their income. Reduction in personal income tax rate would stimulate consumer spending through an increase in personal disposable income. Cuts in corporate tax rate will increase after-tax profits and thus encourage private investment. An increase in C, I and G leads to an increase in AD which will cause a multiple increase in national income (NY) due to the multiplier (k) effect. The increase in NY results in actual growth.

Effectiveness

Government's budget position

The use of expansionary fiscal policy may require the government to plan for a deficit. This is because government spending will rise but tax revenue collection may fall. This may not pose a big problem for governments like Singapore, who have accumulated budget surpluses over the years but it will be difficult for those who are in debt. For example, many of the European countries like Greece and Spain are unable to implement EFP in the midst of recession due to their huge budget deficits and high national debt. Hence they might have to use MP instead.

Crowding-out effect

For the European countries like Greece and Spain, the governments may have to resort to borrowing if they want to implement expansionary fiscal policy. There will be a financial crowding-out effect as the higher G through borrowing leads to higher interest rates as government competes with domestic producers for loanable funds. This will discourage domestic investment, hence reducing the overall increase in AD. For countries like Singapore, given the fiscal prudence of the Singapore government, she

has managed to accumulate huge reserves and thus rarely borrows from the private sector. Hence, the problem of financial crowding-out hardly exists in Singapore. Hence FP might be more effective for countries where the government does not need to borrow to increase spending. Countries which are already in debt and have to borrow to implement FP might choose to use MP instead.

Also, there may be resource crowding-out effect. If the government engages scarce resources for its spending, factors of production will be drawn away from the private sector. This will result in a shortage of factor inputs. Thus cost of production will increase, leading to lower profit margins earned. Firms in the private sector will cut down on their investment. The fall in investment may completely offset the rise in government expenditure, with the result that AD does not increase at all. The impact of fiscal policy on NY is then reduced. This is especially so for countries which lacks resources. For example, for a small country with a small labour force like Singapore, the increase in government construction projects has resulted in a shortage of construction workers for the private projects thus slowing down the increase in I by private firms. However, for large countries like US and China with abundant resources, resource crowding-out is less likely and FP would be effective.

Nature of the economy

The use of expansionary fiscal policy mainly targets C, I and G of AD which is the domestic demand. Some countries, for example, Singapore are more dependent on external demand for economic growth, where her (X-M) is around two-thirds of her GDP. Hence, fiscal policy that targets C, I and G may not be the most effective for her. The case is different for a country like the US where C is 70% of her GDP. In this case, FP would be highly effective. The use of fiscal policy to stimulate growth may be limited for countries like Singapore where the external sector plays a more important role in their economic growth. Such countries might prefer to use exchange rate instead.

Conclusion and Evaluation

Stand and Justification

The relative effectiveness of monetary policy and fiscal policy in achieving economic growth in different economies depends on many factors. The most important factor that limits the effectiveness of the policies will be the nature of the economy. For example, due to the small size of the Singapore economy and her openness to capital flows, MP will not work, hence reducing her policy choice.

Justification 2

In cases where the use of fiscal and monetary policies are limited due to the factors above, the government may wish to use alternative policies like supply side policies to bring about economic growth. Also, for countries with a small multiplier, demand management policies like FP and MP might not be highly effective, thus the government may need to focus more on supply-side policies.

Knowledge, Application, Understanding and Analysis		
L3	For a well-developed explanation of why protectionism can be justified and the benefits of free trade. Answer includes limitations of protectionism and well-developed analysis of gains from CA and free trade.	15-21
L2	For an under-developed explanation of why protectionism can be justified and the benefits of free trade <u>Max 12m</u> for a well-developed one-sided answer. (Answer either covers arguments and limitations of protectionism OR gains from CA and trade.)	9-14
L1	For a descriptive explanation of why protectionism can be justified and the benefits of free trade.	1-8
Evaluation		
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

Introduction

Based on the benefits of free trade and rising trend towards globalisation, it seems that there is no room for protectionism. However in reality, protectionism is practiced in some countries as governments perceive that it can help to achieve certain economic objectives in the short run. Some common forms of protectionism are tariffs, quotas and subsidies.

Body: Thesis - Reasons for protectionism

Protectionist measures are policies which distort market forces in order to give a competitive advantage to the domestic industry of an economy. Protectionist measures can be implemented in an attempt to protect domestic employment. For example, in the US, low end manufacturing industries face great competition from the relatively cheaper imports from China, causing an increase in unemployment. Thus, countries might call for protectionism to help save jobs in declining industries. Trade barriers can increase domestic production and employment.

As seen in Figure 1, when an import tax is imposed on a certain commodity, the domestic price for the commodity increases from OP_0 to OP_1 . This raises domestic production of the commodity from OS_0 to OS_1 at the expense of imported goods, which are reduced from S_0D_0 to S_1D_1 . The increase in home production generates employment and extra profits for the producers while the government also gains revenue from the imposition of the tariff given by the shaded area. Without protectionism, local industries may be edged out by foreign producers resulting in a fall in employment and hence quantitative standard of living.

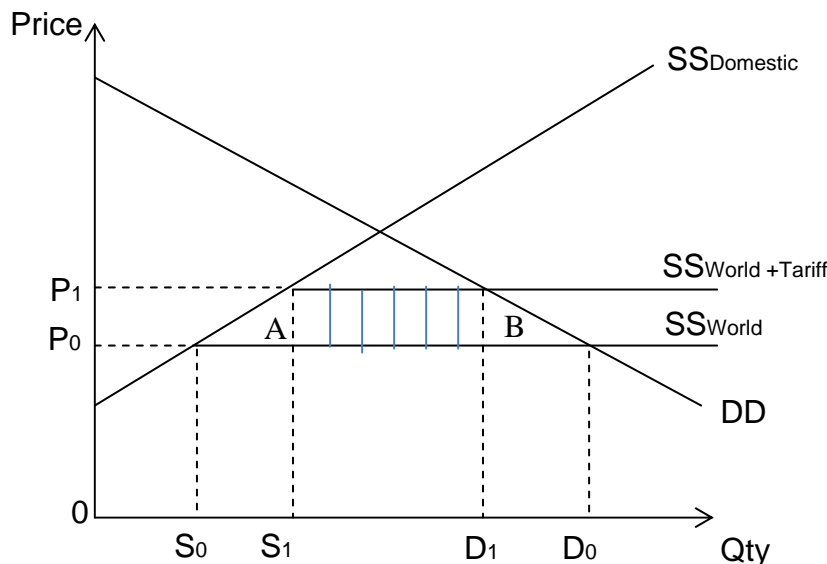


Figure1: Tariff diagram

Evaluation

However, consumers do lose in a big way as they are getting less of the product and have to pay a higher price, reducing their consumer surplus. Their loss, in fact, more than offsets the gain to producers and the government, leading to a welfare loss to the society, as seen by the triangles A and B.

In the long term, the protectionist measures would only perpetuate domestic inefficiency and lead to a misuse of resources. This is because many of the protected domestic industries suffer from wages that have risen faster than the growth of labour productivity, thus their products are less price competitive. In addition, their technological advances may have lagged behind the foreign competitors and therefore they are no longer cost efficient.

Infant industries

Countries might also resort to protectionism as the rising trend of globalisation has exposed the domestic industries to greater competition. This poses a threat to infant industries that may have a comparative advantage (CA) in an industry, but as a late comer to the market, it cannot compete with the established foreign industries. At the initial stage of operation, the industry is laden with many teething problems

unless output is expanded sufficiently to lower average costs of production. For example, workers and managers are inexperienced, and supporting infrastructure such as communications networks and development facilities are lacking. Protection from foreign competition allows the infant industry to expand and become efficient as firms gain both internal and external EOS with the development of critical masses of inputs e.g. skilled labour, capital, technologies etc. A comparative advantage is then developed for the good that this infant industry produces. Moreover, other related industries may also expand as a result of input-output relationships with the protected industry.

Without protection, the industry would never get off ground despite being potentially profitable in the long run. Thus trade restrictions are imposed for the initial period of operation until the infant industry matures and is able to compete with others by charging competitive prices.

Evaluation

While this argument is valid in the short run to produce an equal playing field, there are potential problems in the long run. Protected firms are often complacent and do not take the opportunity to develop and grow. They always remain as infants, hence permanent protection is often required. Moreover it is difficult to remove protectionist measures as pressure from various interest groups will tend to argue that continuous protection is deemed necessary.

Besides, the government may have incorrectly chosen the industries without any potential CA. For example, in the 1980s, Prime Minister of Malaysia launched the national automobile company Proton which was protected by massive subsidies, in order to help it attain EOS and other advantages enjoyed by established automobile exporters. However the EOS it sought to achieve under protectionism were never attained and Proton suffered losses from the very start and the infant industry never grew up under the trap of protectionism.

Anti-dumping

Countries might also choose to protect against dumping. Dumping occurs when an overseas firm sells its product in another country below its marginal cost of production. This causes the domestic industry to face unfair competition that results in a reduction in domestic output and employment. For example, US and European rivals have been accusing Beijing of subsidizing steel companies, offering preferential tax rates, giving access to low-priced materials, and exempting steel firms from labour and environmental rules. In 2010, the US steel industry filed an antidumping suit with American authorities against Beijing, alleging that US\$2.7 billion of pipe steel was unfairly dumped onto the American market in 2009.

Moreover, dumping is sometimes practised to force out domestic producers so as to gain a monopoly position and exploit it later by raising prices. This form of dumping is termed predatory dumping. Hence, it may be justified for the government to practice protectionism in order to protect local industries from such unfair competition in the short term.

Evaluation

However, it might be difficult to determine whether a foreign producer is selling below costs and practising predatory dumping or if it is indeed a highly efficient firm that is able to undercut domestic rivals because of lower cost, access to better technology or more efficient labour/capital.

Furthermore, there is the question of whether the strategy of dumping can be profitable in the long run. This is because once the foreign manufacturer exploits the situation by raising prices; it is likely that other competitors will do likewise; hence the gains are really short term.

To reduce Balance-of-Payments Deficit

In cases where a country is facing a BOP deficit, the government might resort to protectionism to reduce the deficit. Typical policies to reduce BOP deficit includes expenditure reducing and expenditure switching policies. In addition to reducing import expenditure, expenditure reducing policies also reduce consumer spending on the output of domestic industries, hence leading to a rise in unemployment. This results in a call for expenditure switching policies as an alternative way of reducing the deficit. If devaluation is used to correct a deficit, it can have adverse effects on the economy like imported inflation. Hence the government may resort to protectionism like tariffs and quotas to reduce import expenditure and thus improve the balance of payments.

Evaluation

Some protectionist measures such as tariffs may lead to an increase in the cost of production of industries that use the product as an input, for example in the case of a tariff on steel. This makes industries using steel as an input to experience a rise in cost of production thus making them less competitive and this includes the export-oriented industries such as cars and machinery.

Protectionist measures hurt the trading partners of the country. This is because these measures reduce imports which are the exports of trading partners. This will affect their AD and reduce economic growth of the trading partners. With a fall in income, trading partners' consumption and demand for imports will fall which leads to a fall in demand for the country's exports.

In addition, protectionism might invite retaliation from trading partners. This will in turn hurt the exports of the country. For example, when a tariff was imposed by US on solar panels from China, China retaliated by imposing tariffs on imports of poly-silicon from US, an ingredient for making solar panels.

Body: Anti-thesis: Reasons to adopt free trade

Thus it can be seen that while protectionism can reduce the imports of the industry that is being protected, it can actually bring about many negative implications for the country. This is because protectionism often does not solve the root causes of the problems faced in a country and is just a short term temporary measure. Instead, countries that adopt protectionism should adopt free trade instead due to the many benefits that it brings.

Theory of CA

The most important reason for embracing free trade is to trade according to the theory of comparative advantage (CA), which states that trade between nations is beneficial to both if there is a difference in relative opportunity cost and each specializes according to their comparative advantage. The opportunity cost of producing good X is the amount of the other good which has to be sacrificed in order to produce an additional unit of X.

The gains due to specialisation and trading according to comparative advantage can be illustrated through a numerical example. To explain the theory, assume that both countries have the same amount of resources and each devotes half of its resources to the production of each of two goods, wheat and computers. There is no transport cost, no trade barriers, perfect factor mobility and constant costs.

Table 1: Before Specialisation and Before Trade

Country	Amount of resources	1 unit of resource can produce	
		Computers	Textile
US	2	30	20
China	2	10	15
Total	4	40	35

From Table 1, we can see that using 1 unit of resource, US can produce 30 units of computer and 20 units of textile. Hence the opportunity cost of producing 1 unit of computer is $\frac{2}{3}$ unit of textile. China can produce 10 units of computer and 15 units of textile. Hence the opportunity cost of producing 1 unit of computer is $\frac{3}{2}$ unit of textile.

$$\text{US:} \quad 30C = 20T$$

$$1C = \frac{2}{3}T \quad \text{or} \quad 1T = \frac{3}{2}C$$

$$\text{China:} \quad 10C = 15T$$

$$1C = \frac{3}{2}T \quad \text{or} \quad 1T = \frac{2}{3}C$$

The opportunity cost of producing 1 unit of computer is lower for US than China. US needs to give up only $\frac{2}{3}$ units of textile compared to $\frac{3}{2}$ units of textile if China were to produce computers.

Since US has a lower opportunity cost in producing computers compared to China, US should specialise in the production of computers since it has a CA in it. Similarly, China should specialise in textile since it has a CA in it.

Table 2: After Specialisation and Before Trade

Country	Computers	Textile
US	$1.5 \times 30 = 45$	$0.5 \times 20 = 10$
China	0	$2 \times 15 = 30$
Total	45	40

Table 2 shows that US partially specialises and uses 1.5 units of resources to produce computers and 0.5 unit of resource for textile production. China uses all its resources for textile production.

After specialization, it will benefit both countries to trade with each other as long as the terms of trade lies between the 2 countries' opportunity costs. In this case, the terms of trade for 1 computer can lie between $2/3T < 1C < 3/2T$. Assume that the terms of trade is $1C = 1T$, and US exchanges 12 units of computer for 12 units of textile with China

Table 3: After Specialisation and After Trade

Country	Gun	Textile
US	$45 - 12 = 33$	$10 + 12 = 22$
China	$0 + 12 = 12$	$30 - 12 = 18$
Total	45	40

A comparison between Tables 1 and 3 shows that US has gained 3 and 2 units of computers and textile respectively. China also gains 2 units of computers and 3 units of textile after trade. It can be seen that with specialisation and trade, the world output has increased. Both US and China are now better off with an increase in consumption that is beyond what both countries can initially produce. Hence both countries can consume beyond their PPC.

The above numerical example illustrates that countries trade due to the benefits of specialisation and trading according to the theory of CA.

Other gains from trade

Besides the gains of specialization, there are other economic gains from free trade. International trade allows a country to gain access to a wider range of goods produced by other countries. This increases consumers' level of satisfaction as they get to consume a greater variety of goods or better quality goods.

International trade facilitates the transfer of technology, as trade also involves the sale of capital goods. Technological advancement is beneficial for countries, especially developing nations, as it aids their long term economic growth.

With specialisation according to its CA, countries can allocate more resources to pump up the production of goods in which they are most efficient in producing and thereby reap economies of scale (EOS). Thus reducing the average cost as output increases. This is especially beneficial for small countries as their small domestic markets prevent them from producing on a large scale.

Local producers facing competition from foreign imports will also be forced to improve the quality of their products and efficiency. It may stimulate greater research and development and the more rapid adoption of new technology to increase productivity that lowers their cost of production. This extra competition also prevents the adverse effects of having a domestic monopoly, who charges too high a price.

Lastly, trade tends to foster ties between countries, promoting cooperation and growth, which enhances world peace and brings about greater prosperity. When a country experiences growth, more jobs will be created, bringing about a higher standard of living.

Conclusion and Evaluation

Stand and Justification

In conclusion, a country that practices protectionism should adopt free trade instead. This is because protectionist measures only provide a quick fix solution to any problems that an economy may encounter but will not be able to solve the root cause of the problems. For example, trade deficit is often due to the domestic country having lost her CA. Furthermore, protectionist measures are detrimental to the country in the long run as it goes against the theory of CA and bring about a host of issues such as inefficient allocation of resources and retaliation by trading partners.

Justification 2

With the rising trend of globalisation, there is less room for protectionism. Instead, as an alternative to protectionism, a country should try to stimulate its export competitiveness by making efforts to improve the productivity and lower unit COP of domestic industries by having better training and education, infrastructure and incentives or engage in R&D to produce new or better quality products. This can also help the country to maximise the benefits from free trade when new CAs are developed for example.