

SERANGOON JUNIOR COLLEGE
2016 JC2 H2 ECONOMICS PRELIMINARY EXAMINATION
PAPER 2 SUGGESTED ANSWERS

Question 1

In recent years, the number of online food delivery companies is increasing. Some restaurants have partnered these delivery companies as an additional way to grow revenues as they grapple with rising rentals and a manpower crunch. Others however have been affected by this competition.

With reference to the above developments, discuss the impact on the sales revenue of online food delivery companies and different types of restaurants. [25]

Introduction

Definition:

- Demand and supply in the free market will determine the equilibrium price and output. Hence, changes in the demand and supply will impact the market equilibrium which in turn will affect the sales revenue of producers. Sales revenue (TR) of producers is calculated by multiplying the price by the quantity sold in the free market.

Direction:

- With rising number of online food delivery companies, this will lead to a rise in the supply of online food delivery service and its impact on sales revenue will depend on the price elasticity of demand. On the other hand, the sales revenues of different types of restaurants will be affected differently as a result of the above developments depending on whether the restaurants have partnered with these online food delivery companies. The extent of the change in the firms' revenue in the markets is affected by the different elasticities of demand and supply.

Body

1. Online food delivery companies

P1: A rise in SS of online food delivery companies could lead to a rise in total revenue on food delivery companies.

Online food delivery services have been expanding in recent years in Singapore. This can be seen by rising number of online food delivery companies in the market. This could be due to advancement in technology which reduces the cost of setting up online food delivery companies, thus there is a rise of supply of online food delivery companies. With rising number of online food delivery companies, this leads to a rise in the supply of online food delivery service and it is illustrated by a rightward of supply curve to the right from S_0 to S_1 as shown in figure 1.

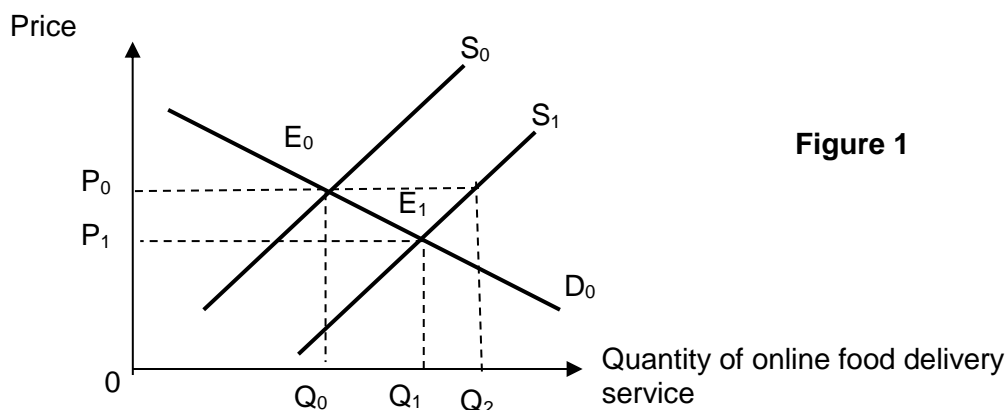


Figure 1

Demand for food delivery service of a particular firm is likely to be price elastic as there are many other substitutes available. Therefore any fall in price of online food delivery service would lead to a more than proportionate rise in quantity demanded, *ceteris paribus*, thus total revenue of online food delivery is likely to rise.

The original equilibrium price is at P_0 and the quantity is at Q_0 , with the original market equilibrium at E_0 . When supply increases, there will be surplus at price P_0 which will lead to a downward pressure on price. Eventually, a new market equilibrium E_1 is reached. At this point, total revenue of the online food delivery company has increased.

2. Restaurant meals

P2: Rising rentals and manpower crunch will lead to a fall in total revenues of restaurants, *ceteris paribus*.

The amount of a good that producers are willing to supply depends very much on the costs of production. In Singapore, due to rising land scarcity, rental has been increasing considerably over the years. In addition, manpower crunch is a major concern faced by many restaurant owners in Singapore as ageing workers retire. Hence, there will be a significant rise in cost of operating a restaurant, thus supply of restaurant meals will fall which is illustrated by leftward shift of the supply curve from S_0 to S_1 as shown in figure 2.

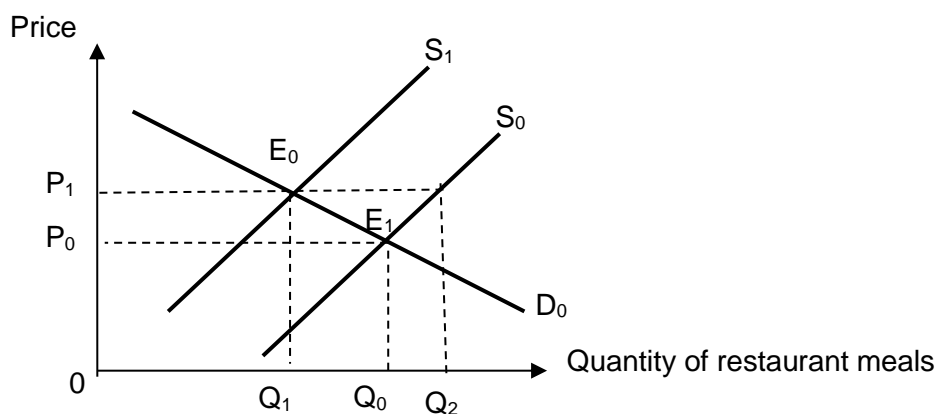


Figure 2

Demand for restaurant meals is likely to be price elastic as there are many other substitutes such as hawker food and home cooked meals. Therefore any rise in price of restaurant meals would lead to a more than proportionate fall in quantity demanded, *ceteris paribus*.

The original equilibrium price is at P_0 and the quantity is at Q_0 , with the original market equilibrium at E_0 . When supply of restaurant meals falls, there will be a shortage at price P_0 . This will lead to an upward pressure on price. Eventually, a new market equilibrium E_1 is reached. Hence, when there is an increase in cost of production, *ceteris paribus*, the total revenue for all restaurants will fall.

P3: There will be a rise in demand for restaurants in partnership with online food delivery companies.

As mentioned in the preamble, some restaurants have partnered with online food delivery companies as an additional way to grow revenues. When there are more firms provide online food delivery service, the price of such service falls, this will lead to a rise in quantity demanded for online food delivery service, *ceteris paribus*. Since restaurant meals and food delivery service are complement ($XED < 0$), a fall in price of online food delivery will lead to a higher demand for those restaurant who partner with the online food delivery companies. This is illustrated by a rightward shift of demand curve from D_0 to D_1 as shown in figure 3.

P4: With a rise in demand for and fall in supply of those restaurants who have chosen to partner with online food delivery companies, total revenues on these restaurants is indeterminate.

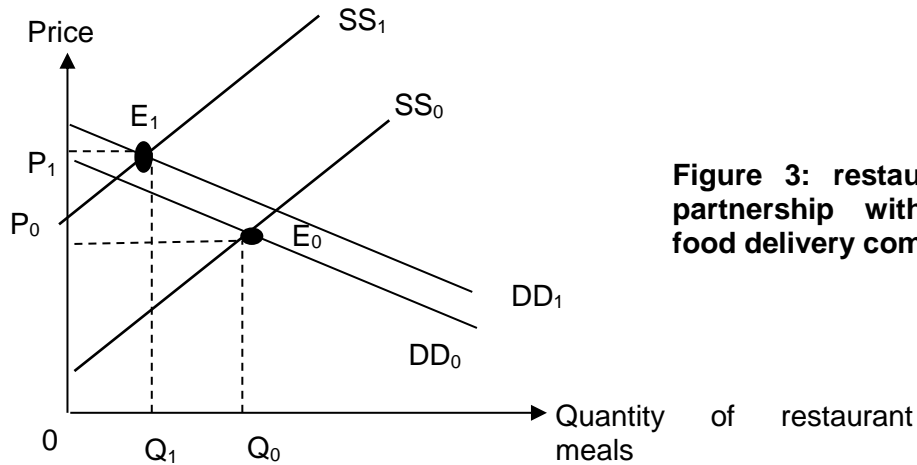


Figure 3: restaurants in partnership with online food delivery companies

In the context that rental and wages form a large proportion of a restaurant's total operating cost, thus the rise in rental and wages could lead to a significant rise in its operating cost, therefore the fall in supply is likely to outweigh the rise demand as shown in figure 3 → thus the fall in TR due to significant fall in supply is likely to be more than the rise in total revenue, thus overall sales revenue could still fall from $0P_0E_0Q_0$ to $0P_1E_1Q_1$ but to a smaller extent as compared to those restaurants who did not tap into this new development.

Evaluation: extent of impact on sales revenues for different restaurants

However, the sales revenue for some restaurants could rise if they are able to overcome the problem of manpower crunch such as using technology to replace workers.

P5: A fall in price of online food delivery service would lead to a fall in demand for those restaurants not in partnership with online food delivery companies.

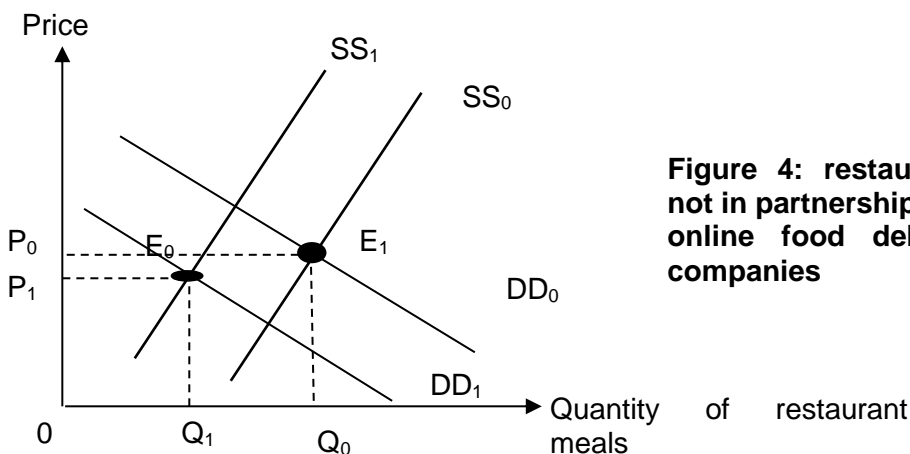


Figure 4: restaurants not in partnership with online food delivery companies

A fall in price of online food delivery service → rise in quantity demanded for such service, ceteris paribus → since restaurants that partner with online food delivery companies are close substitutes with those who don't provide online food delivery service → fall in demand for restaurant meals who do not engage in online food delivery service from DD_0 to DD_1 as shown in Figure 3. Coupled with fall in supply due to rising cost of production as explained above, equilibrium price falls from $0P_0$ to $0P_1$ and equilibrium quantity falls significantly from $0Q_0$ to $0Q_1$.

$0Q_1 \rightarrow$ overall, fall in total revenue for those restaurants who do not tap into this development from Area $0P_0E_0Q_0$ to Area $0P_1E_1Q_1$

Conclusion

In conclusion, the above development has led to a rise in total revenue for online food delivery companies whereas the impact on revenues for different types of restaurant is indeterminate. It depends on whether restaurant owners able to tap onto the existing and new technologies to transform their business model.

L3	<ul style="list-style-type: none"> For a detailed analysis of the impact of the mentioned factors on the revenue of online food delivery companies and different types of restaurants Good application of both PED and CED to determine the impact of sales revenues on the different markets. Well-drawn demand and supply diagrams to support clear analysis and made reference in the write-up.
L2	<ul style="list-style-type: none"> Some analysis of the impact of the mentioned factors on sales revenues on online food delivery companies and at least 1 type of restaurant but analysis may not be rigorous Demand and supply diagrams drawn to support analysis but reference may not be consistent. Good application of at least 1 elasticity concept to discuss the extent to which sales revenues change.
L1	<ul style="list-style-type: none"> For a descriptive response with some relevant points. Limited economic analysis.
E2	<ul style="list-style-type: none"> Evaluative judgement supported by appropriate analysis for the combined effect of the factors for different types of restaurants Assess the extent of impact of sales revenues using relevant elasticity concepts.
E1	<ul style="list-style-type: none"> Unexplained judgement OR limited or weak evaluative comments.

Question 2

- (a) Explain how the price mechanism addresses the problem of scarcity. [10]
- (b) To what extent should Singapore rely solely on the price mechanism to achieve its microeconomic goals? [15]

PART A

Introduction

Scarcity arises because there are limited resources but unlimited human wants. Price mechanism is a system whereby market forces of demand and supply determine prices which then act as signals to firms to allocate scarce resources.

Body

P1: In a free market economy without govt intervention, the price mechanism tackles scarcity what and how much to produce.

To tackle the problem of scarcity, price mechanism works automatically to allocate scarce resources based on demand and supply forces. Goods and services are provided through the market where consumers and producers act in their self-interest. To maximise their satisfaction, consumers will signal their demand by offering a price they are willing and able to pay for each additional unit. This price is determined **marginal private benefit**. Profit maximising producers in turn, will produce the quantity they are willing and able to supply based on the price consumers offered to them. Its decision to supply is based on the **marginal private cost** of producing an extra unit

Market equilibrium is determined at point E where demand equals supply or where **MPB(DD) = MPC(SS)**. At equilibrium pt E, quantity demanded equals quantity supplied thus solves the problem of scarcity. Assuming there are no externalities & market imperfections, equilibrium output Q_e is also the socially optimal output level that maximises society's welfare. As $MSC = MSB$, resources are efficiently allocated & price mechanism addresses the problem of scarcity.

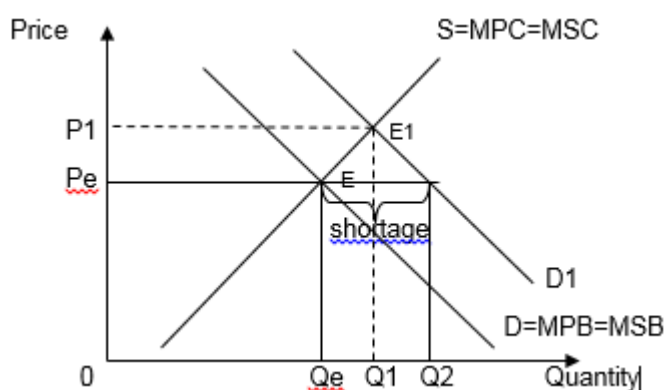


Fig 1: Determination of equilibrium price & quantity

P2: The price mechanism also helps to tackle scarcity by deciding how and for whom to produce

Due to the competitive environment, firms produce goods by combining scarce resources in the least costly way. Price mechanism enables producers to compare prices of inputs to decide **how to produce** at the lowest cost. Prices of inputs depend on demand & supply and firms substitute cheaper inputs to replace more expensive ones.

Consumers differ in their dollar votes or willingness & ability to pay due to differences in income & preferences. Consumers who are willing & able to pay more will exert a greater influence on resource allocation. Profit driven producers will channel scarce resources into production of the goods desired by consumers, backed by ability to pay.

Conclusion

Through its allocative, rationing & signalling functions, price mechanism addresses scarcity to ensure efficient allocation of resources. However in reality, presence of externalities, zero production of public goods, inequity etc limit its ability to maximise society's welfare.

L3	<ul style="list-style-type: none"> Good understanding of <u>how</u> PM tackles scarcity based on self interest (using $MPB=MPC$ approach & diagram). Showed clear links to what, how much, how & for whom to produce so as to address scarcity
L2	<ul style="list-style-type: none"> Sufficient understanding of <u>how</u> PM tackles scarcity <u>but weak link</u> to the 4 questions
L1	<ul style="list-style-type: none"> Smattering of ideas/ little understanding of the role of PM with some reference to 1 or 2 of the 4 basic questions <u>without 'HOW' analysis</u>.

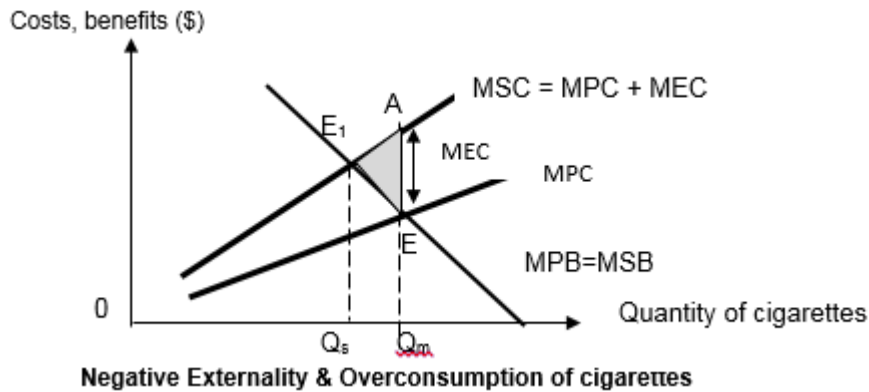
PART B **Introduction**

Price mechanism can help to achieve the microeconomic goals of efficiency in resource allocation and income equity provided the assumptions of perfect competition and absence of externalities are made. However in reality, this is not possible thus in Singapore, varying degrees of government intervention is needed rather than relying solely on the price mechanism.

Body

P1: For demerit goods with negative externalities, Singapore cannot rely on the price mechanism.

Cigarettes are demerit goods with external costs. Left to the price mechanism, there will be overconsumption leading to inefficiency in resource allocation. Smoking gives rise to marginal external cost (MEC) for third party passive smokers. Assuming no positive externality, MPB is thus equal to MSB. However, with negative externality, there is a divergence between MPC and MSC. Smokers only consider their private benefits and costs but ignore the external cost. They consume up to where $MPB=MPC$ resulting in Q_m market equilibrium level. However, socially optimal level is at Q_s when $MSB=MSC$ where the full cost and benefit to society are taken into account. Since $Q_m > Q_s$, there is an overconsumption of cigarettes by $Q_m - Q_s$ amount. $E1AE$ is the total deadweight loss to society if consumption is left to price mechanism



Evaluation

As smokers tend to over-value hence over consume cigarettes due to information failure, it is obvious Singapore will not and cannot rely on the price mechanism to bring about efficient resource allocation. There is much government's involvement in this market to discourage smoking due to the adverse consequences on the health.

P2: For public goods, Singapore definitely cannot rely on price mechanism.

E/E2a: explain characteristics of public good

Due to its characteristics of non excludability and non-rivalry in consumption, there is zero production of public goods like street lighting. Non-rivalry in consumption means a person's consumption of it does not diminish the amount available to others. Non-excludability in consumption means it is not possible or too costly to prevent non-payers from consuming it. This leads to the free rider problem where people can enjoy the good without paying for it. This gives rise to concealed demand. Since no one is willing to pay for it, firms will not produce because there is no profit.

Given the above 2 characteristics, profit motivated producers will not want to produce, thus complete market failure results. In this case, it is obvious Singapore cannot depend on price mechanism at all to achieve its efficiency in resource allocation goal.

Evaluation

Government intervention is absolutely necessary as the absence of such essential goods and services could threaten the nation's survival (defence).

P3: Singapore will also not rely solely on price mechanism to achieve income equity.

Equitable income distribution occurs when there is less unequal income distribution such that most people can afford basic necessities. For price mechanism to work well and thereafter achieve microeconomic goals, it assumes firms operate in perfectly competitive markets. However in the real world, market imperfections prevail. In many countries, the presence of dominant firms with their high entry barriers enable them to restrict output to keep price high. Thus they can earn supernormal profits at the expense of consumers who are largely from other income groups, including the poor. This leads to a widening income gap which compromises the goal of income equity.

Evaluation:

However in Singapore, the likelihood of dominant firms contributing to a widening income gap is quite low because of the country's openness to international competition. Instead in a highly globalised economy like Singapore, it is globalisation that is the likely cause.

P4: Lastly, Singapore continues to rely largely on the price mechanism to produce private goods & services which do not give rise to externalities

The nature of some goods and services makes it unnecessary & inefficient for government in Singapore to intervene in the market. For many commercially traded private products (eg. electronic goods, household items, fruits, clothes etc), the quantities exchanged are best left to the market forces. There is no need for government intervention since market demand & supply forces will interact to find their equilibrium prices & quantities.

Conclusion: When market dominance and market failures exist, Singapore to a large extent, will not rely completely on the price mechanism to achieve the microeconomic goals. Instead it implements appropriate measures to reduce the limitations of the price mechanism though it acknowledges that there is a possibility of government failure due to problems such as imperfect information.

L3	Detailed analysis of why PM makes micro goals unattainable in Spore (1) for public goods & goods with externalities (demerit OR merit gds/svs) + (2) when market dominance exists Brief explanation for Spore's continued reliance on PM for private goods without externalities End points are clearly linked to respective microeconomic goals
L2	Adequate analysis (covered at least 2 sources of market failure, 1 of which has to be preferably market dominance) End points are <u>not always linked</u> to respective microeconomic goals
L1	Limited analysis with little/ no link between market failure & micro goals. Showed weak grasp of key contents, conceptual errors, many gaps in analysis
EV 2	For evaluative comments on the extent of Spore's reliance on PM to achieve microeconomic goals (based on some guidelines)
EV 1	For an unsubstantiated statement regarding the extent of Spore's reliance on PM to achieve its microeconomic goals

Question 3

- (a) Explain the factors that affect the price and output decision of a firm in an oligopoly industry. [10]
- (b) Discuss whether problems arising from market dominance can be alleviated by globalisation. [15]

Part A

Introduction

Oligopoly is a market structure in which a few large but interdependent firms control a large part of the industry's output, selling products that are either homogeneous or differentiated, with high barriers to entry and exit in the industry and imperfect knowledge in the market. An example of such a market structure would be the telecommunications service industry, which currently consists of M1, Starhub and Singtel.

The price and output set by oligopoly firms is then dependent on the firm's stand on profit-maximisation. In addition, due to mutual interdependence between firms, the action of one firm will have significant effect on others.

Body

P1: High barriers to entry and profit-maximising objective will influence price and output.

The high barriers to entry prevent new firms from entering the market. Hence, the oligopoly firm is faced with relatively less competition and has a downward sloping demand curve as seen in Figure 1 below.

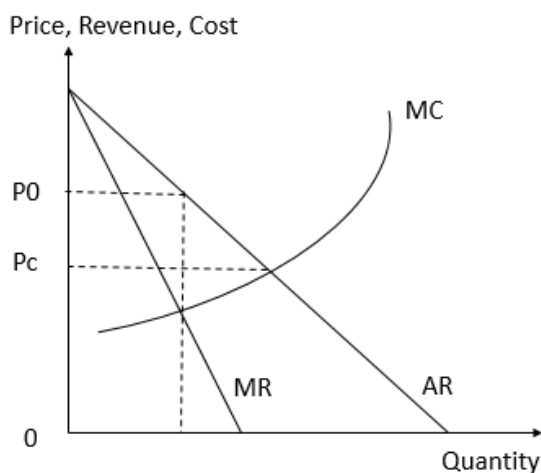


Figure 1

If the oligopoly firm chooses to profit-maximise, it will produce at the output level $0Q_0$ where $MC=MR$ and MC is rising. At the profit-maximising output level $0Q_0$, the firm charges a price $0P_0$. Therefore, profit-maximising oligopoly firms are able to restrict output and charge higher prices than the perfectly competitive market price of $0P_c$.

P2: In addition, oligopoly firms are mutually interdependent.

P2a: Firms in a non-collusive oligopoly have no explicit agreement amongst themselves to co-operate to limit competition. The kinked demand curve theory is one of the models that is used to explain how firms behave in a non-collusive oligopoly. In this model we assume that

Introduction

Globalisation refers to the process of continuing integration of countries in the world where national markets become increasingly interlinked. This means greater mobility of goods and services, capital, labour and technological know-how amongst countries.

High entry barriers have given rise to markets that are dominated by just one firm (monopoly like postal service) or several large firms (oligopoly like petroleum industry) which enjoy huge monopoly power which the power to influence price or output.

Market dominance can result in allocative and productive inefficiency which in turn result in economic inefficiency and market failure. The large profits that dominant firms make also result in inequity. These problems can be alleviated by globalisation to a certain extent.

Body

Thesis

P1: Globalisation can help alleviate the problem of allocative inefficiency caused by market dominance.

Allocative Efficiency is attained when society produces the right type and right amount of goods and services from society's point of view and hence society's welfare is maximised. This situation is attained when $P=MC$ for the last unit of output produced. The monopolist's significant degree of market power and his profit-maximising behaviour allows it to charge $P>MC$, resulting in a deadweight loss to society.

Globalisation can help remove some barriers to entry such as the substantial economies of scale as trade opens up the huge external global markets for firms allowing them to produce at a higher output level. This reduces the market power of the dominant firm as consumers now have got other alternatives from abroad to turn to such. This results in a fall in demand for the monopolist, causing the average revenue curve to shift leftwards. Prices charged by the monopolist would be reduced, hence leading to lesser deadweight loss

P2: The rise in competition due to globalisation could also encourage firms with market power to achieve productive efficiency and dynamic efficiency.

Due to market dominance, the firm may incur higher costs of production due to X-inefficiency, because as the dominant firm and with barriers to entry, there is no competitive pressure on profits. Thus, cost control can become lax. Also, while the dominant firm is said to have the incentive and ability to engage in R&D, he could at times lack the incentive do so. This is because of the complacency brought about by the absence of competition as dominant firms are protected by barriers to entry. In such a case, consumers may be faced with a limited variety of goods and hence less choice for the consumers.

Rise in trade due to globalisation will increase the level of competition for dominant firms. As a result, there is now more competition in these industries, increasing the pressure on incumbent dominant firms to achieve greater efficiency in production so as to keep unit cost of production low and maintain profit levels. Hence, the problem of productive inefficiency is alleviated. Dominant firms will also have greater impetus to engage in R&D in order to improve on the quality of their goods and services in order to stay competitive thus resulting in dynamic efficiency.

Evaluation:

The increased flow of technology and high tech capital goods into the country will further enhance dynamic efficiency as firms are now able to tap on these high tech machineries and production methods to further improve on the quality of their goods and services which will improve the welfare of the consumers.

Anti-thesis

P3: The rise in competition due to globalisation could also however worsen the problem of inequity in income distribution caused by market dominance.

Due to high barriers to entry, dominant firms can make huge supernormal profits, especially if they have strong market power. This may lead to inequitable income distribution, and be considered unfair by the small, competitive firms and low income earners. Monopoly firms earn supernormal profits at the expense smaller firms. Hence, there is a widening income gap between owners of the different factors of production.

The greater flow of labour allows the dominant firm to hire foreign labour with lower wage rates and replace low-skilled labour in the home country. In this way average cost of production for the dominant firm is reduced and the extent of its supernormal profits will grow, thus worsening the income inequity between capitalists and entrepreneurs, and labourers.

Evaluation:

The rise in flow of technology due to globalisation, in both advanced and developing economies, creates greater demands for those with higher skills. To the extent that technological change favours those with higher skills and exacerbates the “skills gap”.

Conclusion

Overall, globalisation is able to alleviate the problems caused and increase consumer welfare as seen in cases whereby consumers are able to enjoy more types of goods and services at far lower prices due to trade and specialisation as a result of globalisation. However, it might give rise to other forms of income inequity due to the changes in demand of labour of different skills. There is therefore a need for the government to implement policies such as re-training to tackle the problems that may arise.

L3	<ul style="list-style-type: none"> - Thorough explanation of the efficiency (allocative efficiency, productive efficiency) AND equity problems caused by market dominance - For a clear and well elaborated consideration how globalisation can and cannot address the above problems.
L2	<ul style="list-style-type: none"> - Some explanation of the efficiency and/or equity problems caused by market dominance
L1	<ul style="list-style-type: none"> - Smattering of points with little elaboration - An answer that shows some knowledge, e.g unexplained listing of impact of globalisation on economic efficiency.
E2	<ul style="list-style-type: none"> - For an evaluative discussion of how globalisation can alleviate the problems caused by market dominance given the conditions or policies that are in place to further enhance the effects of globalisation.
E1	<ul style="list-style-type: none"> - For an unexplained assessment, or one that is not supported by analysis – mere mention that society has more to gain than lose due to globalisation

Question 4

With economic growth, many countries have seen their living standards improve. As a result, many have equated economic growth to improvement in standard of living.

Discuss whether economic growth should be the top priority in a country's pursuit of higher living standards. [25]

Introduction

The standard of living refers to the level of material and non-material well-being of an individual or household. Material standard of living refers to the amount of goods and services that an average citizen can consume over a period of time, usually a year while non-material living standard can be defined as the quality of life and measurements usually include stress levels, amount of leisure and the state of environment.

Although the pursuit of sustained economic growth can lead to an improvement in SOL, it might not be the top priority as there are other factors such as income distribution and environmental concerns that could affect a country living standards.

Body

P1: Sustained economic growth can bring about higher living standards

Economic growth can refer to actual growth or potential growth and achieving both actual and potential growth will allow for sustained economic growth. This means that there is an increase in the country's real GDP over time with little or no increase in the general price level. At the same time employment levels are likely to be kept low with the increase in output given that labour is a derived demand. Therefore when there is sustained economic growth there will be an increase in real income. This means that people's purchasing power has increased. Hence, they are able to buy and enjoy more goods and services, leading to a rise in their material standard of living.

With sustained economic growth, government will be able to collect more tax revenue as rising income and thriving businesses will mean that more tax revenue can be collected from firms and household. In addition, government will also need to spend less on unemployment benefits as sustained economic growth also bring about lower level of unemployment. This ensure government is able used the tax revenue collected to finance expenditure on infrastructure, education, healthcare.

Evaluation:

Sustained economic growth should be a top priority because achieving it can also help support the other goals, e.g. equity in income distribution.

P2: Improvement in income distribution is also needed to bring about higher living standards for all as growth may cause inequity in income distribution.

The pursuit of economic growth could lead to a widening of income distribution as measured by the Gini coefficient. Economic growth could involve a restructuring of the economy and requires changes in production in terms of the types of goods and services produced or techniques used and skills required. Government needs to direct resources to help people displaced by restructuring. Doing so will prevent social unrest which may disrupt production and thus affecting future growth. Also, this can bring about more equal access to education, healthcare and other public services contributes greatly to improving income distribution, further giving opportunities to the poor to raise their living standards.

Evaluation:

Economic growth should not be a top priority for developed economies such as Singapore, United States and South Korea because of the state of their economy. Given that these countries are in the later stages of economic development, a smaller improvement in living standard can be achieved by placing economic growth as the top priority.

P3: Improvement in environmental standards is also needed to bring about higher living standards as economic growth may harm the environment.

Making economic growth the top priority in order to improve material SOL can ironically lead to a worsening of non-material SOL causing SOL overall to be lower. This is because sustained economic growth brought about by industrialisation involves firms using more oil, building on green field sites and creating more pollution, thus damaging the environment. For example, negative externalities such as pollution have brought harmful effects to the quality of the environment in China because it is the so-called “factory of the world”. When the health of the citizens of the country worsens, it could also bring about a slowdown of economic growth

Conclusion

The conditions from country to country will differ greatly and thus the top priority will be different for different countries. Countries will have to carefully weigh the cost and benefit based on the severity of the different issues.

L3	An answer that displays strong economic analyses and conveys good understanding of question requirements by explaining how different government goals can bring about an increase in standard of living. Good use of examples to support analysis
L2	An answer that displays some economic analyses and conveys some understanding of question requirements by explaining how different government goals can bring about an increase in standard of living Some/Limited use of examples to support analysis
L1	For an answer that briefly displays knowledge of macroeconomic objectives and living standards OR a brief and undeveloped answer. No examples given
E2	For well-substantiated opinions on whether or not economic growth needs to be the top priority to achieve improvement in standard of living
E1	For non-substantiated opinions on whether or not economic growth needs to be the top priority to achieve improvement in standard of living

Question 5

The global financial crisis of 2007-08 caused a resurgence in Keynesian demand management policies. However, Edmund Phelps, the 2006 Nobel laureate in economics, advocates that innovation – not more Keynesian fiscal stimulus – offers hope of a durable way out of the current stagnation gripping the world's most developed economies.

- (a) Explain how the AE-Income model can be used to analyse how a worldwide recession would affect the national income of a country. [10]
- (b) Discuss the view that Singapore would be better off promoting innovation instead of adopting Keynesian fiscal stimulus to drive its slowing economy. [15]

Part (a)

Introduction

The AE-Income model can be used to determine the equilibrium level of national income (NY) which is that the level at which the total value of planned output by firms (Y) is equal to the total amount of desired expenditure (AE) by the economy. There are four components of aggregate expenditure in an open economy namely: Consumption expenditure by households (C); Investment expenditure by firms (I); Government expenditure on goods and services (G) and Net Export (X-M, where X=Export and M=Import) expenditure by the foreign sector.

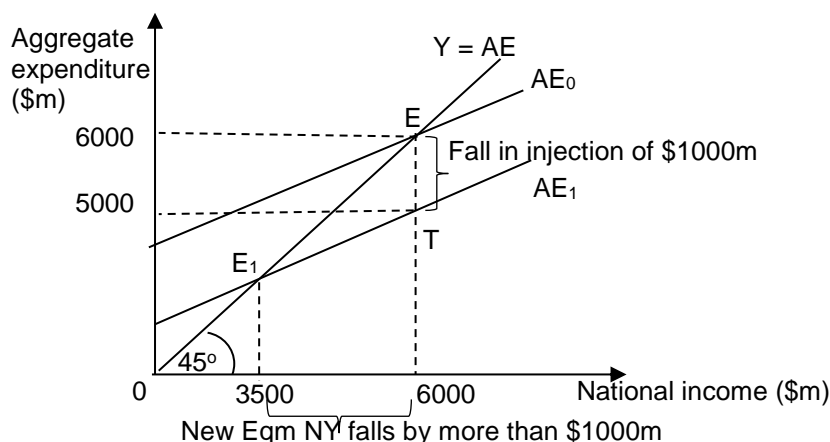
Body

P1: The worldwide recession will lead to a fall in AE of a country.

A recession refers to a fall in real GDP for 2 consecutive quarters. A worldwide recession implies falling NY globally and much pessimism. Households all over the world will respond to this fall in purchasing power by cutting back on consumption of domestic goods and services as well as imported ones assuming all are normal goods. This weakens external demand of its trading partners. For a given country, its export revenue (X) will fall. In addition, there may be a loss of investors' confidence if the recession is perceived to be severe or prolonged thus investment expenditure will also fall, hence resulting in a fall in **autonomous** injection into the circular flow which gives rise to a multiplied decrease in its NY.

P2: The fall in aggregate expenditure will lead to an initial equal fall in NY.

The economy is assumed to be initially at equilibrium point E where the equilibrium level of NY is \$6000m.



With a fall in export revenue of \$1000m, AE will fall from \$6000m to \$5000m and an downward shift of the AE curve from AE_0 to AE_1 . The immediate effect of a decrease in I by the firms of \$1000m is a fall in income of \$1000m to the resource owners that supply the exported goods to the foreign sector. This fall in expenditure therefore generates an equal decrease in wages, rents, interest and profit.

P3: However, the fall in NY does not stop there.

Since factor owners now have less to spend on goods and services, assuming the marginal propensity to consume (MPC) is 0.6, they will cut spending by 0.6 of \$1000m, i.e. \$600m on domestically produced goods. They will also cut withdrawals by \$400 in the form of savings (S), taxes (T) paid to the government and expenditure on imports (M) of foreign goods. The process of decrease in NY and induced C will interact to result in a multiple decrease in NY. As the level of NY falls, so is the total amount of savings, tax and import expenditure (total withdrawals). The multiplier process is completed only when the total fall in withdrawal (W) equals to the initial fall in injection, J (in this case, exports) of \$1000m.

In the above illustration, an initial decrease in AE of \$1000m will eventually lead to a decrease in equilibrium level of NY of \$2500m where the $\Delta NY = k \times \Delta AE(\text{autonomous})$.

Conclusion

The $AE = \text{Income}$ model is commonly used to determine the impact of a change in injection(s) on the level of NY through the multiplier process and it is popular with Keynesian economists to determine the amount fiscal stimulus to be injected.

L3	<ul style="list-style-type: none"> Well-explained answer of the reverse K process and factors affecting autonomous AE during worldwide recession and linking back to the impact on NY.
L2	<ul style="list-style-type: none"> A clear explanation of how recession affects 1-2 components C, I, G, X; some understanding of K process and $AE = Y$ equilibrium.
L1	<ul style="list-style-type: none"> For an answer that has weak/no recognition of the K process or $Y = AE$ model to explain the impact of worldwide recession on national income.

Part (b)

Introduction

Innovation economics has been gaining recent popularity. The central goal of this policy is to spur higher productivity through greater innovation, and thereby greater rate of economic growth. Generally, the usefulness of fiscal stimulus to get countries out of a recession is a recognised fact but the preamble suggests that such stimulus is not effective when the economies are stagnating or slowing down.

Body

P1: Fiscal stimulus can be effective.

Fiscal stimulus involve both a rise in government spending (G) and a fall in corporate and personal income tax to encourage firms' investment (I) and household spending (C). This is because a fall in corporate tax increases post-tax profits and serve to make (I) more profitable. In the same way, a fall in personal income tax which increases disposable income will encourage C. Hence, together with a rise in C, I and G, there will be an overall rise in the AE for domestically produced goods and services leading to a shortage and unplanned disinvestment. As firms raise output, the rise in NY will cause an increase real GDP by a multiple amount.

Evaluation:

- Given the current 17% for corporate tax and 20% personal income tax are relatively competitive in the region, a further lowering of taxes may not result in a more than proportionate rise in domestic demand.
- Fiscal measures are also limited because of the small k size.

P2: Given the limitations of more fiscal stimulus, some are promoting innovation.

Innovation can be promoted using interventionist supply-side policies (SSP) aimed at research and development (R&D) to improve product quality or create new products in key sectors, eg biomedical services and other industries. SSP helps to increase the productive capacity thus increasing the aggregate supply (AS) in the long run. Fig.2 shows the shifting of AS_0 rightward to AS_1 . At P_0 , the greater output gives rise to a surplus exerting a downward pressure on price. The final equilibrium is a higher real output from Y_0 to Y_1 and therefore a rise in real GDP. The fall in general prices improve Singapore's exports competitiveness. If demand of exports is price elastic, the fall in price of exports will result in a more than proportionate rise in quantity demanded and therefore a rise in exports revenue, ceteris paribus. This will improve Singapore balance of payment current account. The rise in Y_f allows greater growth in AD without high inflation.

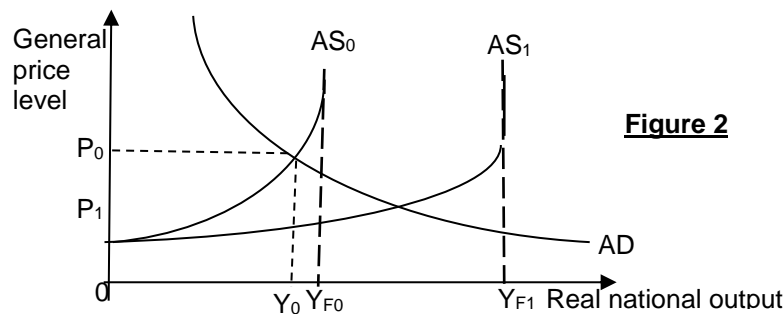


Figure 2

Evaluation:

- Supply-side policies take time to work
- Firms may be unwilling to invest in innovation because of unknown returns.

Conclusion

Fiscal stimulus is needed to reflate an economy and get it out of recession. However, the government needs to bear in the mind the small multiplier size. In the long run, innovation is necessary to maintain Singapore's competitiveness.

L3	<ul style="list-style-type: none"> • Sound explanation of eFP and its limitation • Analysis of how SSP promote 'different' innovation in terms of efficiency and product quality. • Recognition of limitations of SSP in boosting growth (antithesis).
L2	<ul style="list-style-type: none"> • Sound explanation of eFP plus limitation. • Explanation of SSP may be theoretical where innovation is merely stated and not explained.
L1	<ul style="list-style-type: none"> • Descriptive policies with little economic analysis. • Smattering of ideas.
E2	<ul style="list-style-type: none"> • Synthesis e.g recognising original intent of eFP to reflate the economy and innovation for long term competitiveness with justifications. • Use of evaluative criteria contextualised to Singapore.
E1	<ul style="list-style-type: none"> • For an unexplained synthesis such as mere stating of examples/factors not supported by economic analysis in generic context (without Sg).

Question 6

- (a) Explain what might cause a current account deficit in the balance of payments. [10]
- (b) Discuss whether Free Trade Agreements or protectionism is a more viable solution to a country's balance of payments deficit amidst a global economic gloom. [15]

Part (a)**Introduction**

The current account records the total value of exports and imports of currently produced goods and services, investment incomes and unilateral transfers. Together with the capital account, it is part of the balance of payments which is a record of a country's international transactions between its residents and those of the rest of the world over a period of time. A current account deficit occurs when payment for imports or investment income paid to abroad exceed the receipts for export on investment income received from abroad.

Body**P1: High inflation relative to other trading partners could result in a current account deficit.**

When there is higher inflation in a country relative to its trading partners, its exports will now be relatively more expensive than those of its competitors. The fall in price competitiveness of the country's exports will result in a fall in the demand for exports and hence a fall in export earnings. At the same time, imports will be relatively cheaper than the domestically produced import substitutes. Thus, there will be a rise in demand for imports and hence import expenditure. As a result, a fall in export revenue together with a rise in import expenditure will worsen the country's current account that may result in a deficit.

P2: Lower exchange rate of trading partners could also result in a current account deficit.

When country B lowers their exchange rate, assuming demand for country A's exports is price elastic, a rise in price of exports will cause quantity demanded to fall more than proportionately, ceteris paribus, the export revenue will fall. Similarly, if country A's demand for imports is price elastic, a fall in price will cause quantity demanded to rise by more than proportionately, ceteris paribus, the import expenditure will rise. As a result, the net exports will fall. As long as the Marshall-Lerner condition holds, where the sum of price elasticity of demand for export and import is more than one, undervaluation by country B will lead to a worsening of the current account of country A that may result in a deficit.

P3: The fall in price competitiveness of exports due to structural changes in the economy could also result in a current account deficit.

The demand for specific exports and imports may change due to changes in comparative advantage, technology, availability and prices of new substitutes and tastes and preferences. If a country is slow or unable to adapt to these changes, this will result in a loss in export competitiveness of the developed countries, hence a current account deficit may occur and this deficit is likely to persist as long as the country is unable to reallocate its resources.

Conclusion

Maintaining a healthy balance of payments is one of the government's macroeconomic goals and thus there is a need for the government to implement policies to tackle the problem of a persistent current account deficit as it has negative economic consequences.

L3	Well-developed explanation on 3 causes of current account deficit
L2	Some explanation on the causes of current account deficit
L1	Undeveloped explanation on the causes of current account deficit

	Shows knowledge of current account deficit and/or identify the causes of current account deficit Understands the components in terms of goods and services and concept of import expenditure and export revenue
--	--

Part (b)

Introduction

Protectionism occurs when a government distorts market forces to give domestic producers an advantage over foreign producers via imposing barriers to trade such as tariffs, quotas and subsidies. FTA is an agreement whereby member countries agree to remove tariff and non-tariff barriers among themselves but each can retain whatever restrictions she wants for non-member countries. Whether FTA or protectionism is a more viable solution to BOP deficit will depend on the country in consideration.

Body

P1: FTA is a more viable solution than protectionism.

FTA may be able to mitigate the negative impact of the global economic uncertainty. The FTA connects member countries to major economies and new markets and enhance trade and investment flows through the removal of trade barriers and improvement to custom procedures. The access to a bigger market base afforded by the FTA will enable countries to enjoy the gains of better utilisation of resources and economies of scale. These result in greater efficiency in production and hence a fall in average cost. The rise in price competitiveness of a country's export will lead to a rise in demand for exports. Assuming that the rise in export revenue is greater than the rise in import expenditure, there will be a rise in net exports thus improving current account. Under FTA, due to the rules relaxed to allow foreigners to invest in a country, new ideas, technology and skills can be expected to flourish. This leads to an increase in foreign direct investment (FDI). Ceteris paribus, such inflow of investment will lead to an improvement in capital account.

Evaluation:

- Some countries would gain more while some would gain less depending on their relative comparative advantage.
- The FTA facilitates the inflow of FDI and also enables member countries to gain higher export revenue from producing and exporting
- The increased competition afforded by the FTA could also lead to structural unemployment.

P2: In the short term, protectionism may be more viable.

To reduce the BOP deficit, a country may impose trade barriers on imported goods. This raises the price of imports. The greater the price elasticity of demand for imports, the greater will be the fall in import expenditure. This reduces the import expenditure, ceteris paribus, thus reducing the balance of trade deficit. Assuming capital account is constant, protectionism reduces BOP deficit, hence it is justified in the short run, but not viable in the long run.

Evaluation:

- Increasing domestic consumption may not help the situation if the domestic population is small.

P3: In the long term, protectionism would be less viable because not only does it worsen the BOP deficit, it can lead to other economic problems.

Such protectionistic measures will undoubtedly harm the trade position of her major trading partners as their exports to the tariff-imposing country will fall. It is deemed to be a 'beggar-

thy-neighbour' measure. The other trading partners may retaliate by imposing trade barriers on the country's exports too which can lead to a fall in the country's export revenue. Hence, its balance of trade may not improve. In addition, the country's national incomes will fall due to the fall in its export earnings. The fall in world trade will impede recovery of the countries from the global gloom and worsens the situation, so not a viable solution.

Evaluation:

- Tariffs can result in microeconomic issues of inefficiency in the use of scarce resources and loss of consumer welfare.

Conclusion

Protectionism goes against the theory of comparative advantage and the benefits arising from free trade. Whilst there are possible benefits in the short run, the reality is that the costs will outweigh the benefits in the long run. By protecting their industries and employment in the midst of the global economic uncertainty, countries are merely passing their problem on to their trading partners who in turn may retaliate, leading to further contraction in world trade and fall in global income. Thus, FTAs should be pursued to ensure that benefits of trade are enjoyed when the global economy recovers.

L3	Good understanding of costs and benefits of protectionistic measures &/or FTA in the context of global gloom. Good use of framework on economic growth and employment. Well-explained limitations for both protectionism and FTA.
L2	Some understanding of costs and benefits of protectionistic measures &/or FTA on BOP &/or economy, and limitation for either protectionism or FTA.
L1	Smattering of points Cursory understanding of protectionistic measures &/or FTA and effects on BOP/economy
E2	For an evaluative assessment based on economic analysis. Supported stand with key economic analysis.
E1	For an unexplained assessment, or one that is not supported by analysis.