**Term 3 – Essay Discussion – Market Failures**

**Essay Question 1**

**(a) Explain how, according to economists, the market seeks to allocate resources to address the problem of scarcity. [10]**

Introduction

* Definition of the problem of scarcity
* State that the market seeks to allocate resources through the use of the price mechanism which will solve the three fundamental economic problems in the process of resource allocation

The problem of scarcity exists in every economy as the economy faces the issue of too many wants in the economic reality that there are limited resources. As a result, it is essential that an economy conducts resource allocation to ensure that the problem of scarcity can be resolved. In a market economy, this is done through the use of the price mechanism which will solve the three fundamental economic problems; what and how much to produce, how to produce and for whom to produce in order to resolve the problem of scarcity in the process of resource allocation.

Main Body

1. **Explain the price or market mechanism**

The market mechanism focuses on the use of the market forces of demand and supply to allocate resources so to attain social optimization where there is maximization of net social benefit gain without incurring any deadweight loss. While the market demand reflects the consumers' willingness and ability to purchase, the market supply reflects the producers' willingness and ability to produce. In this price mechanism, the equilibrium price and output level is attained whereby the market demand is equal to the market supply when the demand curve intersects the supply curve.

1. **Explain how the price mechanism solve the three fundamental economic problems so as to solve the problem of scarcity**
   * + In the process of resource allocation, the market mechanism for price mechanism is adopted to solve the three fundamental economic problems of what to produce, how to produce and for whom to produce.
       - * For what to produce, the price mechanism would reflect the choice of consumers through the price signal which will rise if there is a rise in demand for the good.
         * For the method of production or how to produce, the firm will have the method of production on price indication of the factor and product market, abiding to the rule of profit maximisation.
         * Lastly, for the allocation of the good and services or for whom to produce, the price signal for the consumer market will reflect the consumers’ purchasing power that will determine the allocation.
2. **Evaluate whether the resource allocation is considered efficient**

The price mechanism has conducted efficient resource allocation when it is able to achieve maximization of net social benefit gain, implying that there is maximization of welfare in the industry. This occurs when there is no welfare loss as both consumer and producer surplus are maximized. However, if the market experiences the occurrence of externalities (either positive or negative), imperfect market condition, absence of public goods or unequal distribution of income, it will lead to inefficient resource allocation where there is welfare loss that will undermine the maximization of net social benefit gain or the absence of public goods which will lead to the **complete loss of welfare**, indicating efficient allocation of resources.

Conclusion

In sum, it can be noted that the market mechanism is able to solve the problem of scarcity through the process of resource allocation but such a market mechanism is not effective when the market mechanism fails.

**Essay Question 2**

**(b) Discuss if government intervention in the free market will worsen, instead of solving the problem associated with merit good. [15]**

Introduction

Main Body

1. **Explain how market failures will occur in the problem of merit goods like education**

Due to the presence of positive externalities in the production and consumption of merit goods like education services, external benefit such as the benefit of more productive workers will arise. However, the individuals will not consider this external benefit in their consumption or production and this will lead to a condition of under-production or under-consumption when there is no government intervention and the society fails to reap the benefit whereby the market equilibrium is lower than the social equilibrium, thus contributing to deadweight loss (DWL); welfare loss to society which is seen in term of the value of external benefit the society fails to reap.

Cost/

Benefit

DWL

SMC

SMB = PMB + EMB

P0

PMB

Qty of Education Services

QS

QM

As seen from the diagram, the market equilibrium is at Qm where PMB is equal to PMC where there is no consideration of the positive externality. However, the presence of positive externalities will create external marginal benefit that will raise the PMB to SMB(PMB + EMB), causing the market equilibrium of the production education services to be set at Qm which is lower than the social equilibrium level of production education services at Qs where SMB=SMC. Consequently, the value of deadweight loss will arise between Qm and Qs if there is no government regulation.

1. **Explain the main form of intervention that the government can adopt to solve the market failures due to the presence of merit goods**

(Briefly – just state why these measures can solve the market failures – such as subsidies, direct provision, rules and regulation)

### Direct Provision by Government

* + - The government will provide the level of production of merit good as at the social efficient level.
    - Example: General Academic education in Singapore

### Public Education

* + - The use of promotion and campaigns to influence consumer and producers’ behaviours – E.g. Lifelong education

### The Use of Rules and Regulation

* + - The use of rules to enforce consumption such that positive externalities will be reaped.
    - Example: the introduction of the compulsory primary school education legislation

1. **Explain why government intervention will solve the problem with merit good**

* The government intervention will ensure that production and consumption will be set at the social optimal level to reap the external benefit so as to maximise the net social benefit gain.
* Government intervention through public education and rules and regulation will make consumers and producers more aware of the external benefit as there is more information available.
* Individuals and private producers will not or are unable to consider the external benefit contributed by negative externalities. Government intervention in the form of direct provision and rules and regulation will enforce the consumption at social optimal level and reduce the hindrances for not consuming at this level.

1. **Explain why government intervention will not create more problems**

* High cost of financing for government intervention will create more problems as the total cost of production and consumption will outweigh the total net social benefit gain, undermining the net social benefit gain.
* High cost of financing will also create public debts which may undermine the government’s capacity to conduct its administration. This will increase the tax burden of the country and deplete future earnings.
* Complexity in the provision and regulation of merit goods will lead to negative effects which will generate more negative externalities in the production and consumption of merit goods.
* E.g. Provision of training may induce higher level of job-hopping as workers with better skills are highly demanded, thus destabilizing the labour market.
* Excessive government intervention may undermine the efficiency of production and consumption of the merit goods as the government may not be able to raise productivity of the production, leading to higher cost of production which will undermine the maximisation of net social benefit gain. Private sector will not be able to function more efficiently towards the production and consumption of merit goods if there is too much regulation, which prevents the private sector form gaining the advantage of price mechanism in resource allocation.

Conclusion

In sum, government intervention is often advocated to regulate the production and consumption of merit good as it will ensure the optimization of resource allocation but there are circumstances that may create more problems for the economy.

**Essay Question 3**

**Economists like to think at the margin: they consider the incremental benefits versus the incremental cost in every decision they make.**

**(a) Explain how “thinking at the margin” aids decision-making for consumers and producers. [8]**

Structure

* Explanation on the meaning of ‘thinking at the margin’ – implying the use of marginal principle in conducting decision-making for production and consumption
* State how the marginal principle is conducted in the consumption decision while marginal principle of profit maximisation is adopted in the decision-making on production

Introduction

The notion of ‘thinking at the margin’ in aiding decision-making for consumption and production refers to the use of the marginal principle based on cost and benefit analysis for consumption and the principle of profit maximisation for production. These two concepts based the marginal principle will maximise the welfare of the consumers and profit for the producers.

Main Body

1. **Explain how the concept of the cost and benefit analysis based in marginal principle to maximise the welfare for consumption**

Based on cost and benefit analysis, which adopts the marginal principle, the consumers will maximise their consumption with the use of price mechanism, where the market forces of demand and supply will determine the production and consumption at the price and output level that will determine the maximum level of net social benefit gain.

The consumers’ wants and ability to consume is based on the marginal principle, represented by the demand curve, which represents the private marginal benefit (PMB), will have diminishing marginal benefit as consumption increases. As for the producers’ desire for profits and capacity for production will be represented by the supply curve, which represents the private marginal cost (PMC). As long as the marginal private benefit exceed the marginal private cost, the consumption will continue until the marginal private benefit and marginal private cost and unequal private cost equals where the demand curve will intersect the supply, which would determine the price and output level. Above this level, marginal private cost is greater than the marginal private benefit, and there will be additional net loss. Thus, consumption based on the marginal principle will be set at the level where there is maximisation of net social benefit gain.

S0 (PMC)

P

P0

D0 (PMB)

Qty

Q0

**Diagram 1**

As seen from Diagram 1, the consumption and production level will be set at the level where the quantity is at Q0 and price level is at P0­.

1. **Explain how the notion of profit maximisation was based on the marginal principle is conducted to attain maximisation of profit for the firm, arising to an imperfect market condition**

As for the producers, they will base their production on the notion of profit maximisation, which is based on the marginal principle. Firms will set their production level at the quantity where the marginal revenue (additional revenue attained from additional product) is equal to the marginal cost (additional cost incurred from additional product). Therefore, the firms will then be able to gain from the maximum profit but the profit level will also depend on the value of the total cost.

Conclusion

In sum, the notion of marginal principle is able to help the consumers and producers gain from the maximisation of welfare and profit respectively.

**Essay Question 3**

**Economists like to think at the margin: they consider the incremental benefits versus the incremental cost in every decision they make.**

**(b) Discuss the extent to which “thinking at the margin” would lead to the efficient allocation of resources. [17]**

Structure

* Explain the notion of efficient allocation of resources
* Explain why the mechanism of cost and benefit analysis based on marginal principle will lead to inefficient allocation of resources
* Explain why the market mechanism may be effective with partial degree of adjustment through taxation which will lead to efficient allocation of resources

Introduction

The notion of efficient resource allocation refers to the market equilibrium, when there is maximisation of net social benefit gain by the industry. As stated in part (a), this can be attained when the consumers and producers adjust their respective consumption and production decisions based on the marginal principle. However, there are certain economic condition whereby maximisation of the welfare by consumers and producers will not occur and this is may lead to the condition of market failure.

Main Body

Market failure occurs when the market mechanism based on “thinking at the margin” fails to maximise the net social benefit gain for the society, implying that the industry is unable to conduct efficient resource allocation. This will occur when there is an absence of public goods, presence of externalities (either positive or negative), imperfect market condition and unequal distribution of income.

**1. Explain the four different scenarios on how market failure occurs**

Given the nature of **public goods**, private producers are unwilling to produce them as private firms cannot charge the consumers due to the problem of free-ridership, since public goods are non-excludable and non-rival in production and consumption. Consequently, in the absence of the provision of public goods, there will be complete market failure as consumers are unable to attain any welfare without the consumption of public goods.

As for the presence of **market imperfection and market power**, firms will produce at an allocative inefficient level and the underproduction will give rise to welfare loss. Under the notion of profit maximisation, firms will produce at the production level where the marginal cost of equal to the marginal revenue, thus production level is below the social optimum level. Furthermore, the market power firms possess under imperfect market condition where the downward-sloping demand curve will contribute to the difference of the production level. Consequently, there will be allocative inefficiency causing the industry to incur deadweight loss.

The presence of **externalities,** seen in term of merit and demerit goods, will give rise to deadweight loss and result in market failure when there is no government intervention. For **merit goods**, the presence of positive externalities will create positive benefit that lead to the divergence of the private marginal benefit and social marginal benefit. This will lead to the condition of under-production which will incur deadweight loss. As for **demerit goods**, the presence of negative externalities will create external cost that lead to the divergence of the private marginal cost and social marginal cost. This will lead to the condition of over-production and thus, causes deadweight loss.

The presence of **inequality of distribution of income** will mean that the net social benefit gain will be unevenly distributed. This will undermine the interest of the poor as they will receive lesser benefit than the rich from the production of the good despite the presence of maximization of net social benefit gain. Therefore, the uneven distribution of net social benefit gain will result in market failure.

However, the concept of marginal principle will still be able to work with some alternation through the implementation of taxation and subsidies where marginal principle can still be applied.

**2. Explain how taxation will reduce over-production and consumption to social optimal level**

The use of taxation will internalize the external cost as part of the cost of production by raising the price of the goods and thus reduce the market equilibrium to the socially efficient level. In the course, the deadweight loss is eradicated and maximization of net social benefit gain is attained.

**3. Explain how subsidies can raise production and consumption to social optimal level**

Subsidies are given to consumers which will increase their disposable income and purchasing power of the consumers. Consequently, the industries can reap the external benefit and prevent the occurrence of deadweight loss, enabling the economy to attain social efficient level of production.

Subsidies given to producers will decrease the cost of production and increase the supply of the goods. Consequently, this will increase the quantity demanded and the industry can attain social efficient level of production and consumption and thus, eradicates the deadweight loss.

**4. Explain why marginal principle can never lead to efficient allocation of resources even with market-based regulation**

1. The consumption of goods is price-inelastic and the imposition of taxation will not deter consumption to social optimal level. Furthermore, it is difficult for the economy to estimate the external marginal cost to derive the optimal tax.
2. The absence of public good can be based on the provision of market principle and thus, the marginal principle cannot be applied.
3. Imperfect market condition such as market dominance and immobility of resources need non-market intervention to correct as this regulation involves the adjustment of economic and production structures and market mechanism based on the marginal principle is not effective in solving the complexity
4. The problem of market failures due to unequal distribution of income cannot be resolved by the market mechanism based as marginal principle as if the market mechanism is the cause of the market failure that will contribute to unequal distribution of net social benefit gain.

Conclusion

In sum, the market mechanism based on the marginal principle is effective in attaining efficient allocation of resources as it is based on the maximisation of net social benefit. However, there are certain non-market conditions which will prevent the marginal principle from working towards the maximisation of net social benefit gain.

**Essay Question 4 (Imperfect market condition/ Solutions)**

**(a) Explain why market dominance lead to market failure. [10]**

Introduction

Market dominance refers to the extent of a firm’s control of the market. With market power, the profit maximising firms will produce at a sub-optimal level. This creates a DWL in the economy where P is not equal to MC. Market dominance reflects the imperfection of the market. This can lead to market failure because the monopolist’s behaviour is always to maximise profits and exploit consumers. Also, the society may suffer from the firm’s inability to produce at a social optimum level, failing to take into account the externalities involved.

Main Body

1. **How market dominance can lead to market failure**
   1. As firms consolidate power in the market, their market power is seen in the downward sloping demand curve. As firms gain more power in the market, the demand curve becomes more price–inelastic.
   2. Firms will maximise profits at MC = MR which is not at the social optimum of P = MC.
   3. DWL will be incurred by the society and this will undermine social optimization of resources.

Price

Quantity

DWL

AC

AR

MR

PE

PM

QM

QE

1. **Evaluate the reason for firm’s unwillingness to produce at socially optimal level**
   1. Rational for firms to be profit maximising
   2. If firms charge at P=MC, they will make a loss and unable to sustain their business
2. **Situations where market dominance will not lead to market failure**
   1. Natural Monopoly: Operate as monopoly to achieve EOS and high start up capital deters entry and firms require support to be in the business
   2. Monopoly will produce at MC and loss is subsidized by the government

**Essay Question 4**

**(b) Discuss the view that the Singapore government should always intervene in correcting the above market failure. [15]**

Introduction

Market failure can be corrected by the government intervention through the implementation of tax, subsidies, price controls and regulations. Although government intervention can be a solution to market failure, there are possible disadvantages associated with these actions

Main Body

1. **Explain how government can solve market failure due to market imperfection**
   1. Price control regulation to solve for monopoly dominance. Government set P=MC for the industry, fixed cost of production is paid for by government.

* **Evaluation**

Forceful regulation may cause firms to make losses which are not covered by the government subsidy. In the long run, loss will cause firms to foreclose. A foreclosure of firms will deprive Singaporeans from a greater variety of products. Government must also reserve funds to subsidise the firms in the industry. The success of the policy depends on the subsidy provided by the government that follows the price cap. If government do not have the funds to pay for the subsidies, firms will foreclose and entrants will not enter the market.

* 1. Anti monopoly law to forbid monopoly from forming
* **Evaluation**

There are areas in the economy that requires an efficient monopoly to operate in. For example, power supply companies have a large enough market share in order to operate efficiently. Also the deterrence of market power accumulation is only as good as the ability on the part of government to enforce it. The success of this policy depends on the enforceability of anti-trust laws and flexibility in the areas of application.

* 1. Taxes to increase cost of production for suppliers, they will reduce supply to the socially desired level
* **Evaluation**

Tax increases are often undesired policies. Singapore is dependent on MNCs relocating locally. If corporate tax increases, investments will be affected as foreign firms will not enter. The government must be sensitive when imposing taxes. Certain industries can be targeted or other alternative measures can be taken to reduce production of less demerit goods.

1. **The limitations of government interference (Cons)**
   1. Distortion that arise because of intervention

* 2 wrongs doesn’t make one right
* E.g. Imposition of taxes discourages workers from working hard.
* Abuse of government policies to gain votes
  1. Information asymmetry
* Lack of information on the part of government causes the incorrect policy decision.
* Hard to assess the impact of the policies
  1. Bureaucracy and inefficiencies of government
* The government may themselves be inefficient due to administrative paths and costs
  1. Time lags
* Time lags from the implementation of policies to act effect may render them to be less effectiveness.