**Market Structure II - Areas of Discussion**

## 1. why firms under market imperfect condition cannot attain allocative efficiency and production efficiency?

The firms will not be able to attain allocative efficiency as the firms focuses on profit maximization which is at a production level where the marginal cost is equal to the marginal revenue and this is below the social efficiency level of production where the production level is where the price is equal to marginal cost. This is so as the downward sloping demand curve due to the market power of the firms will contribute to the difference of the production in the SR.

Similarly, the firms are unlikely to produce at the optimal capacity of production whereby the average cost of production is lowest as the firms are usually producing at the excess capacity of production.

All the firms in different market structures will attain production efficiency in LR as the LRAC is at the minimum level of production for that production level

SRAC

SRAC

LRAC

SRAC

SR🡪production efficiency = optimal capacity

∴Excess capacity means firms has no production efficiency

**2. Aims of the Firms**

Different notion of how production equilibrium can be attained besides profit maximization

The production equilibrium attained by the firm is based on the following notions:

a) Profit maximization - seek to attain the highest net profit and produces at the level of production where MC=MR

b) Revenue maximization- seek to attain the highest revenue to increase the cash-flow for the firm by producing the production level where MR=0

c) Growth maximization - seek to produce at the level of production where the production level is largest that the firm can sell and produce at least with normal profit. The main purpose is to increase the market share.

d) Cost Minimization - seek to produce at the minimum level of average cost and in doing so, the firm attains production efficiency where by the production is the optimal capacity.

e) Allocative and production efficiency - seek to produce at the level of production where P+MC as there will be no deadweight loss, implying maximization of welfare while production efficiency is at the level where production is at minimum AC.

**3. Explain how production equilibrium will differ for firms under perfect and imperfect market condition**

The production equilibrium attained by the firm in both types of market structures are based on profit maximization where production level is at the level where MC=MR

However, there are differences:

a) For firms under perfect competition, the MC must not be just equal to MR as for the firm under imperfect market conditions but MC must also cut MR from below

b) At the production level, the price level set for the firm in the perfect market is determined by the industry and the firm will abide to the price level while the price level is determined by the firm in the imperfect market

c) This implies that factors affecting the changes in demand and supply in the industry will influence the price level for firms in the perfect market competition while the degree of market power which determines the elasticity of the MR and AR will determine the price level for the firms in the imperfect market structure

d) At this production equilibrium, the firm in the perfect market structure can attain more production and allocative efficiency while the firm in the imperfect market structure cannot attain both productive and allocative efficiency as the firm in the imperfect market structure will produce at the level where there is excess capacity where the profit maximization attained at MC=MR (SR only).

e) Draw the diagram for production equilibrium in PC market and MC market

* Identify the production equilibrium 🡪 state where P, Q will be for the two types of market structure

**4. Key factors in the classification of different market structures**

a) Perfect Competition

-Many buyers and sellers

-Perfect market information – while buyers and sellers can have information about the price and output level transacted

b) Monopoly

-Complete market share – supply only provided by one firm

-higher degree of barriers to entry

-Practice of Price Discrimination

-Exclusive Property Rights

c) Oligopoly

-High Concentration Market Share - 50% of market share dominated by top few firms in the industry

-High degree of mutual interdependency – price rigidity/reactionary behaviours in the market seen in terms of mergers

-High degree of barriers to entry

-Practice of Price Discrimination

-Economies of Scale

-Exclude patent rights

d) Monopolistic Competition

-Lack of significant market shares – many small firms

-Imperfect market information

-Product differentiation – advertising and branding activities

**5. Evaluation of the efficiency of the production under different market structure**

a) Production Efficiency (SR)

Only firms in the perfect market competition can produce at production efficient level while the firm under imperfect market condition will not produce at production efficiency as the production level at profit –maximised level is at the excess capacity level due to the downward sloping MR and AR contributed by the market power. All firms in different market structure can attain production efficiency in LR.

b) Allocative efficiency

Due to the presence of market power which contributes to the downward-sloping MR and AR, the production level based on profit maximization level will not achieve allocative efficiency as the price does not equal to marginal cost. Consequently, there will be welfare loss in which is the value of deadweight loss.

c) Capacity in reaping economies of scale

For firms in the perfect market condition, these firms are too small to reap extensive amount of economies of scale. Similarly, firms in the monopolistic competition are unable to reap extensive economies of scale. Firms under all types of market structure can reap EOS.

d) Dynamic Efficiency (Oligopoly and Monopoly only)

Firms which have a large scale of production will be able to attain high degree of dynamic efficiency, which can be achieved through the capacity to conduct R&D, allowing grater innovation and efficiency while small firm in the perfect market competition and monopolistic competition will not be able to do so.

**Qn: MC is the most inefficient market structure?**

**Why is this the most common form of market structure?**

* Low barriers to entry (low level of technology)
* Low start-up costs
* Advantages of small firms (niche market dd, personal preferences)

## 6. Advantages and Disadvantages of Large Firms like Monopoly and Oligopoly

Disadvantages of a large firm to the society

1. Consumer exploitation - charge higher price and produce at lower output as the firm has market control and domination
2. Incur increasing COP efficiency as the firm fails to gain production at production efficiency (Production = min AC)
3. Fail to produce at allocative efficiency. As a result the firm will incur deadweight loss leading to loss of consumer surplus and welfare
4. Lack of competition will impede the organization from the pursuit of innovation, degrade the quality of product and reduce product variety and consequently, decrease consumer satisfaction
5. Negative effects of price discrimination - higher price

Advantages of a large firm to the society

1. May pass the cost saving to the consumer in the form of lower price
2. Provide greater assurance of product quality as the firm have better machinery and technology
3. Positive effects of price discrimination — able to produce goods that are not possible to produce under single pricing when the firm exert monopoly power and practise PD
4. Greater stability for the economy as the company has the resources to withstand economic downturns and will not likely to fail, leading to massive unemployment.
5. Ensure the supply of critical resource for the economy to ensure the smooth and efficient production and distribution of goods and services. This will lead to a higher level of economic growth and standard of living as seen in turn of the supply of infrastructural development.

**🞹7. How the government regulate the monopoly?**

* Legislation– the use of law to prohibit the formation of monopoly as seen in Anti-trust law (US) and Competition Act (Singapore)
* Nationalization – the government take over the production of the goods and services as it will able to reap the advantages of large scale production and ensure the absence of exploitation by the monopoly.
* Taxation– the government can introduce lump-sum tax or variable tax to eradicate the supernormal profit on an unit basis or fixed portion basis.
* Price Regulation - the government can introduce marginal cost pricing or average cost pricing to ensure that the firm will produce at allocative efficient level or normal profit to reduce consumer exploitation and yet enabling the industry to attain large scale production.

**Reasons for merger of firms**

1. To reap EOS
2. To gain shares — increase revenue and greater market exposure
3. to increase market power
* product innovation through R & D
* increase price competitiveness
* to create barriers of entry
* overcome stiff and fierce competition

**Reasons for the government to regulate merger**

1. The problems of retrenchment
2. Consumer exploitation
3. The degradation of the quality of product
4. Effects of price discrimination
5. Impact on the smaller firms - affecting the fairness of competition
6. Impact on the stability of the economy

**7. Questions for Discussion**

**7.1 Perfect Competition**

a) Explain why firms cannot operate under perfect market competition (10)

b) Discuss whether this model of market structure (PC market) is most appropriate to explain the behaviours of the firm in the computer industry (12)

c) Factors that determine the market to be classified as a perfect competition. (CSQ)

**7.2 Monopoly**

a) Between monopoly and the oligopolistic form of market structure, there is greater preference for the presence of an oligopolistic form of market structure. (15)

b) Explain how the intellectual property rights will affect the firm’s pricing and output and profit level

c) Discuss the advantages and disadvantages to introduce competition to curb a monopoly.

d) Assess whether the pricing strategy is an act of price discrimination. (CSQ)

**7.3 Oligopoly**

a) Assess the conduct of the firms in an oligopoly will affect the society.

b) Reasons for stating that the industry is an oligopoly. (CSQ)

c) Methods of competition in the oligopolistic market structure. (CSQ)

**7.4 Monopolistic Competition**

a) Reasons for stating that the market is a monopolistic competition. (CSQ)

b) Why the retail industry is usually classified as a monopolistic competition?

c) To what extent is the monopolistic competition a preferred form of market structure in comparison to oligopoly?

# Market Structure

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| --- | --- | --- | --- | --- |
| Criteria | Perfect Comp | Monopolistic Comp | Oligopoly | Monopoly |
| Characteristics (perfect market information and mobility of resources) |
| No. of firms | Many | Many | Few | One |
| Nature of Product | Homogeneous | Differentiated | Differentiated/Homogeneous | No Close Substitute |
| Freedom of entry | No barriers | Weak or no barriers | BarriersLegal Barriers* Govt exclusivity agreements
* Patents and copyright

Natural Barriers* Economies of scale 🡪 reduction in competition

Other Barriers* Brand image thru advertising
* Brand proliferation
* High start-up cost
* Control of technology
* Specialised skills
 | BarriersLegal Barriers* Govt exclusivity agreements
* Patents and copyright

Natural Barriers* Economies of scale 🡪 natural monopolies

Other Barriers* Control of essential resources
* Brand image
* High start-up costs
* Control of technology
* Specialised skills
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| Knowledge | Perfect | Imperfect | Imperfect | Imperfect |
| Price taker/ setter | Price taker- perfectly elastic demand curve | Price setter- can either set price or quantity but not both due to downward sloping demand curve | Mutual interdependenceCompetitors will match price reductions but not price increases | Price setter – can either set price or quantity but no both due to downward sloping demand curve |
| Non Price competition | No | Yes | Yes | No |
| Demand Curve | Perfectly elastic | Relatively elastic | Kinked | Relatively inelastic |

# Market Structure

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| --- | --- | --- | --- | --- |
| Criteria | Perfect Comp | Monopolistic Comp | Oligopoly | Monopoly |
| SR and LR Equilibrium (assuming firms aim to maximise profits and produce where MC=MR) |
| SR profits | SupernormalNormalSubnormal | SupernormalNormalSubnormal | SupernormalNormalSubnormal | SupernormalNormalSubnormal |
| SR Shut Down Conditions | AR < AVC | AR < AVC | AR < AVC | AR < AVC |
| LR Profits | Normal due to assumption of free entry and exit | Normal due to assumption of free entry and exit | Supernormal as there are barriers to entryNormal | Supernormal as there are barriers to entryNormal |
| LR Shut Down Condition | AR<AC | AR<AC | AR<AC | AR<AC |
| How they Compete |
| Nature of Competition | Firms cannot engage in price and non-price competition due to characteristics of perfect knowledge and homogeneous product.There engage in cost minimization – produce at minimum AC to remain in the market in the long run | Price Competition – lower price to increase TR* Psychological pricing
* Discounts/ sales

Non-price Competition* Advertising - mostly persuasive
* Free gifts, competitions, etc.
* Product differentiation – choice widened to meet tastes of consumers but may reach point of confusion
* Product development – improve of the product but lack of funds 🡪superficial development
* After-sale services e.g. free delivery, credit accounts, etc.
 | Price Competition – lower price to increase TR but other firms will follow 🡪no rise in TR and possible price way where all sellers will lose while consumers gain.* Discount pricing
* Predatory pricing
* Penetration pricing – willing to sell at a loss to penetrate market before raising prices

Non-price discrimination* Advertising – persuasive in the case of differentiated oligopoly
* Product differentiation
* Product development – R&D to improve quality of good
* Services – warranties, after-sales services – free delivery, opening for longer hours, etc
* Diversification to expand into new market
 | Non-price competition* Advertising – especially where brand image is important barrierGenerally informative to increase market size
* Product development - R&D to improve quality of product – especially in contestable markets to keep their monopoly power
* Predatory pricing – reduce price to drive competitors out
* Dealing arrangement – to prevent potential competitor from getting access to raw materials and to the market
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# Market Structure

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| --- | --- | --- | --- | --- |
| Criteria | Perfect Comp | Monopolistic Comp | Oligopoly | Monopoly |
| Efficiency Considerations: Merits and Demerits |
| Productive EfficiencyFirm: MC=MR (firm produces its profit maximising output level at the lowest LRAC possible for that output level)Society: o/p at min LRAC where the most efficient plant size is used with no wastage of resources | All firms in the four market structure can attain production efficiency in long run as the average cost is at the lowest level for respective level of production. However only the firms in the perfect market structure can attain production efficiency in the SR. |
| Allocative Efficiency(assuming no externalities)Firm: P=MC where consumer’s valuation of the last unit is exactly equal to the opportunity cost of producing itSociety: DD=SS where consumer surplus and producer surplus are maximised | Firm: Yes as P=MR therefore at profit maximizing output level where MR=MC, P=MCSociety: Yes as industry produces where industry demand =industry ss | Firms & Society: No as P>MR, therefore P>MC 🡪under-allocation of resources and exploitation of consumers. | Firms & Society: No as P>MR, therefore P>MC 🡪under-allocation of resources and exploitation of consumers. |  Firms & Society: No as P>MR, therefore P>MC 🡪under-allocation of resources and exploitation of consumers unless regulated by government to undertake MC pricing  |
| Dynamic Efficiency Innovation | No- as funds are limited due to normal LR profits and perfect knowledge 🡪 lack of incentive | No- as funds are limited due to normal LR profitsYes- incentive is present due to the existence of competition | Yes- as funds are limited due to existence of LR supernormal profitsYes- incentive is present due to the existence of competition | Yes- fundsNo-incentive to innovate not present due to lack of competition 🡪 complacency unless in contestable market  |
| Economies of scale | No as firms are too small to engage in large scale production | No as firms are too small to engage in large scale production | Yes as firms can engage in large scale production | Yes as firms can engage in large scale production |
| Product Variety | No | Yes- Product differentiation and brand proliferation 🡪 product variety | Yes for differentiated oligopoly- Product differentiation and brand proliferation 🡪 product variety | No or limited |
| Advertising | No | Persuasive 🡪 allocative inefficient | Persuasive for differentiated oligopoly 🡪 allocative inefficient | Informative but may be persuasive in a contestable market. Informative advertising may be allocative efficient if the saving in time and money searching > cost of advertising |
| Income distribution | No redistribution due to LR normal profits | No redistribution due to LR normal profits | Redistribution from consumer to seller when supernormal profits are earned | Redistribution from consumer to seller when supernormal profits are earned |
| Price discrimination | No | Benefits:* Goods and services available to a larger market
* Consumers in markets with elastic demand pay lower prices 🡪 poor able to afford good and services
* Continued provision of essential services like buses and railway

Costs:* Consumer surplus is reduced to raise TR and profits for sellers 🡪 lower consumer welfare
* Consumers in markets with inelastic demand pay higher prices 🡪 these consumers subsidizing the price paid by those with elastic demand. E.g. local consumers pay higher prices to subsidize the lower prices paid by foreign consumers
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# Market Structure

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| --- | --- | --- | --- | --- |
| Criteria | Perfect Comp | Monopolistic Comp | Oligopoly | Monopoly |
| Government Regulation |
| Govt regulation | No | No | YesIf cartel is formed and oligopoly acts like a monopoly | Yes* Anti-trust laws
* Nationalisation
* AC pricing
* MC pricing
* 2-part tariff
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