MARKET STRUCTURES

A market is an arrangement / medium that brings together buyers and sellers for consideration of a transaction.

Market structure refers to the characteristics of a market which determine the behavior / performance of a firm.

Markets are broadly categorized into two:

(a) Perfect market
(b) Imperfect market

A perfect market is a market where there are many buyers and sellers of a homogenous commodity/ product. In this case no individual buyer or seller can influence the demand, supply or even the price.

While

Imperfect market refers to a market where there are differentiated products sold and buyers or sellers can influence the demand, supply and the price.

The forms/types of market structures include:

1. Perfect competition
2. Monopoly
3. Monopolistic competition
4. Oligopoly market

Factors to consider when classifying market structures

1. ***The number of firms in the market***. Where there are many firms, it is either perfect competition or monopolistic competition. Where there are few firms, it is oligopoly. Where there is one firm it is monopoly.
2. ***Nature of the product/ degree of product differentiation***. Where the goods are homogeneous ,it is perfect competition. Where goods are differentiated, it is either monopolistic competition or imperfect oligopoly.
3. ***Freedom of entry and exit in the industry***. Free entry and exit implies perfect competition and monopolistic competition. Limited entry implies oligopoly. Blocked entry into the industry implies monopoly.
4. ***Level of advertisement***. Where there is more/ persuasive advertisement, it is either oligopoly or monopolistic competition. Where there is no advertisement, is it perfect competition.
5. ***Level of profits and longrun equilibrium***. Where normal profits are earned in the longrun , it is either perfect or monopolistic competition. Where abnormal profits are earned in the longrun, it is either monopoly or oligopoly.

6. ***Level of government intervention in the market system***. Where there is no government intervention , it is monopoly or monopolistic competition or oligopoly. Where there no government intervention , it is perfect competition.
7. ***Availability of information about market situations***. Where there is perfect knowledge about market conditions (such as price and quantity), there is perfect competition. Where there is limited or even no information about the market conditions, it is monopoly or monopolistic competition or oligopoly.

Characteristic	Perfect competition	Monopoly	Monopolistic competition	Oligopoly
Number of firms	Very many	One	Many	Few
Nature of product	Homogeneous	One product	Differentiated	Homogeneous/ differentiated
Demand curve	Perfectly elastic	Inelastic	Fairly elastic	Kinked
Entry and exit	Free	Blocked	Free	Limited
Profitability in the longrun	Normal	Abnormal	Normal	Abnormal
Level of advertisement	No advertisement	Informative	High/ persuasive	High/ persuasive

PERFECT COMPETITION

Refers to a market where there are many buyers and many sellers dealing in homogeneous product.

Features / characteristics of firms under perfect competition

1. There are many buyers and sellers in the market. Therefore no single seller or buyer can influence the total supply, total demand or price of the commodity.
2. There is free entry and exit of firms in the market. Any firm with capital/ hoping to make profits is free to join without barriers and free to leave if they are making losses.
3. The products are homogeneous / identical in all ways (regarding colour, quality and packaging) and hence no consumer can prefer the products of one firm to that of another.
4. The price of the product is determined by the forces of demand and supply in the market. The producers/ firms are price takers and none of them can influence price in the market.
5. There is no government intervention in the market such as through regulations, tariffs, pricing, subsidies etc
6. The demand curve is perfectly elastic due to the high degree of competition in the market/ because of the existence of many firms producing homogeneous products.
7. Firms aim at maximizing profits and hence determine output at a point where marginal cost (MC) equals marginal revenue (MR).
8. There are no transport costs because the buyers and sellers are in close contact / one place. This also implies that the firms under perfect competition must charge the same price , since they do not incur any cost of this form.

9. Perfect knowledge about the market conditions for both buyers and sellers. They know the nature of commodities , where they are found and prices.
10. Perfect mobility of factors of production. Factors freely move to any desirable position where they are needed, from one firm to another (inefficient firm to the efficient one).
11. There is no persuasive advertisement since the firms are producing a homogeneous product. (However, there may be informative advertisement).
12. Firms under perfect competition earn abnormal profits in the short run and normal profits in the longrun. This is because the abnormal profits in the short run attract more producers to enter the industry.

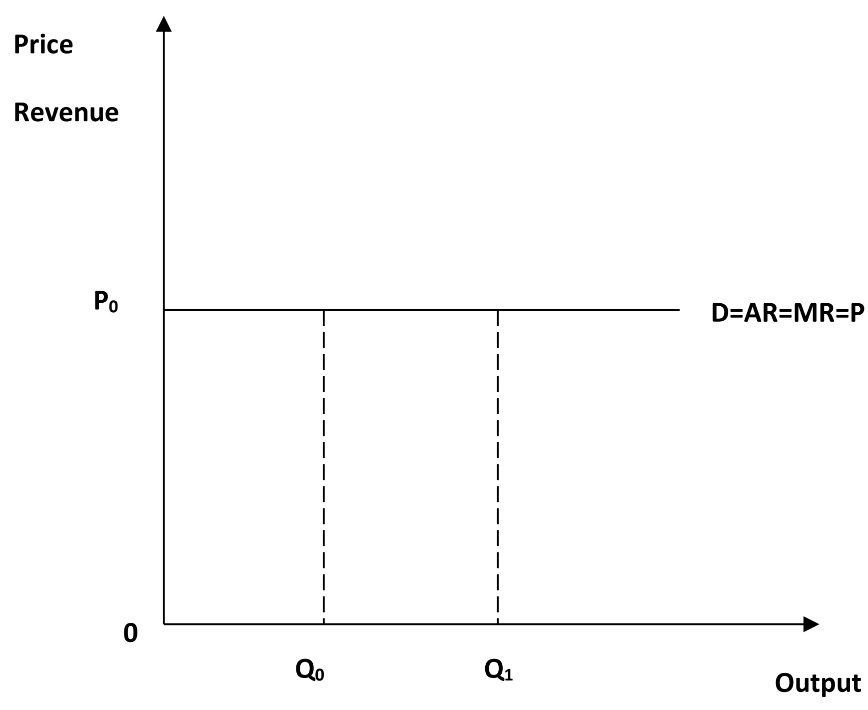
Note: There is a difference between perfect competition and pure competition.

(a) ***Perfect competition*** –refers to a market situation where there are many buyers and sellers of a homogeneous product. In this case no individual buyer or seller can influence the demand, supply or even price in the market.

(b) ***Pure competition***—refers to a market situation where there are many buyers and sellers of a homogeneous product except that there is no perfect knowledge of the market and no perfect mobility of factors of production.

Demand curve and average revenue curve of a firm under prefect competition

The demand curve is perfectly elastic because of the high degree of competition in the market (i.e. many firms producing homogeneous products and there is perfect knowledge). All firms are therefore price takers since the price is determined by the industry (forces of demand and supply)

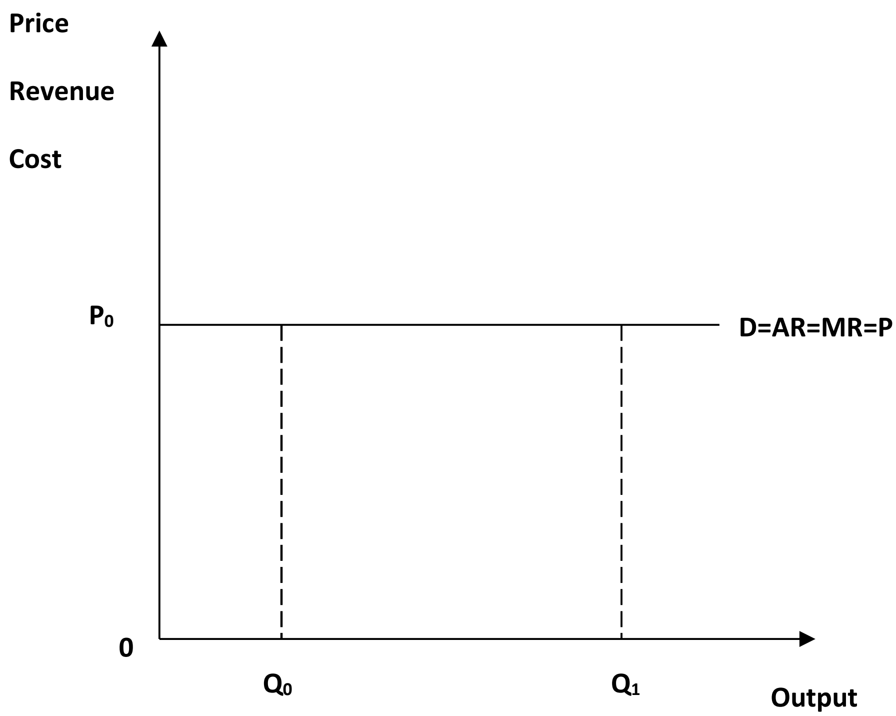


In perfect competition, marginal revenue (MR) is equal to average revenue (AR) because any additional output is sold at the same price and therefore all additional revenue is uniform at all levels of output. (The sale of an additional unit of output brings in the same amount of revenue as that brought in by each unit sold).

Qn. Explain the relationship between average revenue and marginal revenue of a perfectly competitive firm (4mks)

Note: The necessary and sufficient condition for profit maximization under perfect competition

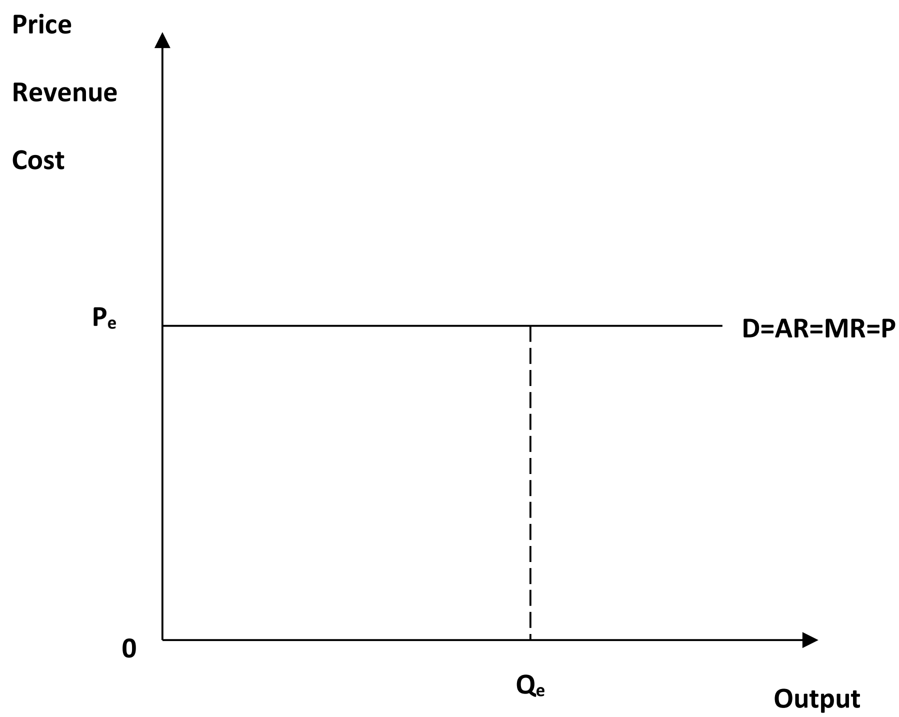
The necessary condition is that a firm maximizes profits where marginal cost is equal to marginal revenue. However, the sufficient condition is that MC should be equal to MR at that at the highest level of output.



Point B is the profit maximizing level of output (MC=MR) where both conditions are satisfied (and it pays the firm to increase / expand output upto that level since MR is still greater than MC).

Profit maximization of a firm under perfect competition in the short run

A firm under perfect competition is in equilibrium / maximizes profits at a point where marginal cost equals marginal revenue



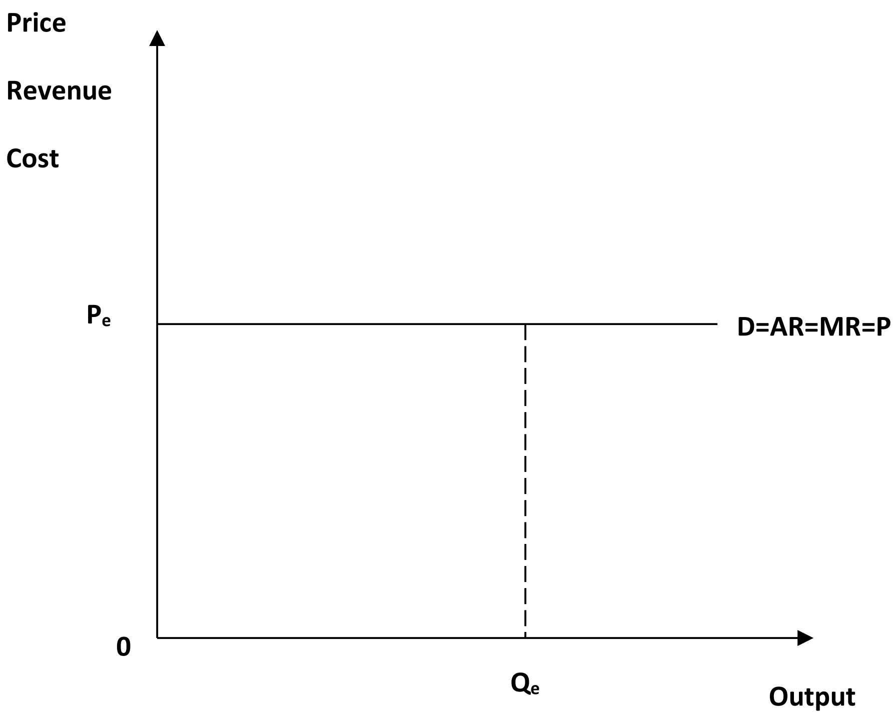
Output OQ_e is determined at point X where marginal cost (MC)= marginal revenue (MR)

Price OP_e is determined at point X where the output line meets the demand curve (AR curve)

The firm earns abnormal profits in the shortrun since the average revenue is greater than average cost, indicated by the shaded area CP_eXY.

A firm making losses in the short run

A firm under perfect competition is in equilibrium at a point where marginal cost (MC) equals marginal revenue (MR)



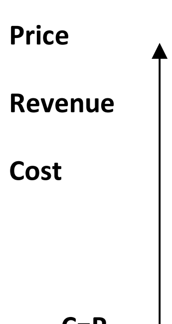
Output OQ_e is determined at point X where marginal cost (MC)= marginal revenue (MR)

Price OP_e is determined at point X where the output line meets the demand curve (AR curve)

The firm incurs losses in the since the average cost is greater than average revenue, indicated by the shaded area P_eCZX.

Longrun equilibrium of a firm under perfect competition (profit maximization of firm under perfect competition in the longrun)

A perfectly competitive firm is in equilibrium at a point where marginal cost (MC) equals marginal revenue (MR)



Qe

Output OQ_e is determined at point Z where marginal cost (MC)= marginal revenue (MR)

Price OP_e is determined at point Z where the output line meets the demand curve (AR curve) and the AC curve is tangent to the AR curve.

In the longrun the perfectly competitive firm earns normal profits where the average cost equals average revenue (AC=AR).

Since there is free entry and exit of firms, in the longrun firms are attracted by the abnormal profits enjoyed in the shrotrun to join the market. Still the existing firms will expand plant capacity/ sizes and prices fall, hence a fall in profits until when firms earn normal profits.

[Alternatively , as firms seek to expand firm capacity and as new firms join the industry; pressure emerges on the resource base/ increase in demand for factors of production and the costs incurred on factors of production increase , which increases the AC until when the firms normal profits]

Breakeven point and shut down point of a firm

Illustration

Where A is the breakeven point where AR=AC

Bis the shut down point where AR=AVC

Breakeven point is a point where a firm is earning normal profits where average revenue is equal to average cost. The average revenue curve is tangent to the average cost curve at its lowest point. (The firm is able to cover both the variable and fixed costs using all its total revenue).

Shut down point of firm is where a firm covers only average variable costs (AR=AVC)

OR Shut down point is a point below which a firm cannot cover its average variable costs.

Reasons why a firm continues to operate when it fails to cover costs of production (when making losses)

1. The firm may still be an infant one and hopes to make profits in the future.
2. The firm may be covering its variable costs such as purchasing raw materials , payment of labour in the short run with hope that fixed costs will be covered in the long run.
3. In case the firm has invested in many fixed assets which can not easily be dismantled or changed in the short run.
4. The firm may be hoping to change management, techniques of production and marketing strategies in the near future and earn profits in future.
5. Expectation of merging with other prosperous firms, so as to realize profits.

6. Fear of losing its reputation / good image among the public/ population when it closes. The firm may not want to lose its customers.
7. Fear of losing suppliers of raw materials.
8. The firm may be government owned/ aided , being subsidized by the government to provide essential goods and services to the public (at affordable prices).
9. The objective of the firm may not be profit maximization but provision of employment opportunities especially to family members.
10. The firm may be hoping to secure a loan from a financial institution so as to expand and make profits.
11. The firm may be a subsidiary / branch of another profit making firm. Therefore the losses may be compensated by profits from the sister firm(s).
12. Where the firm expects new markets for its products and new sources of raw materials.
13. The firm may be fearing accelerated depreciation of capital goods in case it closes.
14. Fear of losing its skilled labour/ specialized workers to other firms.

Advantages of perfect competition

1. Perfect competition results into efficiency in production and full utilization of resources. Every firm produces at the minimum point of the AC curve and thus there is no excess capacity in production.
2. There is production of more output since there are many firms and hence no shortages in the market.
3. Leads to production of better quality output. This is due to high degree of competition in the industry.
4. There is limited consumer exploitation / it ensures stable prices in the market. This is because the products are homogeneous and firms are price takers.
5. Perfect competition results into fair / equitable distribution of income. This is because there are many firms/ sellers which employ many people.
6. The abnormal profits earned in the short run facilitate the expansion of the firm through ploughing back/ re-investing.
7. It promotes research, innovations and inventions; due to the abnormal profits in the short run.
8. There are reduced costs of production because there are no advertisement costs, and the products are homogeneous.
9. Creates more employment opportunities due to the large number of firms in the industry.

Disadvantages of perfect competition

1. Results into unemployment in the long run , due to the inefficient firms being kicked out of production.
2. Product homogeneity leads to limited variety of choice to consumers.
3. The low profits received in the longrun limit research and hence make the expansion of the firm difficult.
4. Reduces the profit margin of producers especially where the market is small. This is a disincentive to entrepreneurship.

5. Results into quick depletion of some resources. This is due to the need to produce more output so as to maximize profits and the presence of many producers.
6. Results into income inequality in the industry since some producers are outcompeted (where some producers produce more than others).
7. Monopoly tendencies may arise due to unregulated competition. Those firms which withstand the competition develop into monopolists and thus the disadvantages of monopoly such as overcharging consumers.
8. The market structure has got unrealistic assumptions and thus does not exist in the real world such as assuming no government intervention, no transport costs.

How to derive the supply curve of a firm under perfect competition

The supply curve is equivalent to that part / portion of the marginal cost (MC) curve which lies above the average variable cost (AVC) curve, that is from point C upwards. It indicates the different quantities a firm is willing to put on the market at various prices.

Illustration

Under perfect competition, the supply curve starts from point C which is the shut down point upwards.

MONOPOLY

Monopoly is a market situation where there is only one seller and many buyers of a single commodity which has no close substitute.

Types of monopoly

1. **Pure/ absolute/ perfect monopoly**
   This is a market situation where there is one seller and many buyers of a product which has no substitute at all and entry of new firms is completely blocked.
2. **Simple/ imperfect monopoly**
   This is a market situation where there is one seller / a single producer of a product which has limited close substitutes. This is a more realistic monopoly.
3. **Natural monopoly**
   This is a monopoly situation that arises from the ownership of specific natural resources (raw materials) by a producer or an individual having unique talents; making it hard for other firms to join the industry.
4. **Statutory monopoly**
   This is a situation where a firm gains monopoly power because of state laws / act of parliament that prevents other firms from engaging in a similar activity in the country (from producing a similar commodity).
5. **Partial monopoly**
   This is a monopoly situation which exists when a firm is a sole distributor of a particular brand of a product due to product differentiation.
6. **Collective/ collusive monopoly**
   This is a monopoly situation where firms producing similar products decide to come together in an agreement (like a cartel) to fix quotas/ output to market and price for output to limit entry of other firms.
7. **Discriminating monopoly**
   This is a monopoly situation where a single producer sells his product at different prices to different consumers due to reasons not associated with the cost of production.
8. **Bi-lateral monopoly**
   Refers to a market situation where there is a single seller and a single buyer of a (*single*) commodity.
9. **Monopsony**
   This is a market situation where there are many producers/ sellers but only one buyer of a product in the market.

Characteristics/ features of monopoly

1. There is a single producer/ seller and many buyers of a commodity.

   (Under monopoly the firm is the same as the industry)

2. The commodity has no close substitutes.
3. Entry of new firms is blocked.
4. Monopolists are price makers and therefore influence price in the market (can determine price or output or both).
5. The demand curve of a monopoly firm is highly inelastic due to the absence of close substitutes.
6. Firms aim at profit maximization and profits are determined at a point where MC=MR.

7. There is no persuasive advertisement for the commodity under monopoly since the firm/ producer is alone in the industry.
8. A monopoly firm produces at excess capacity (less than full capacity).

Factors that give rise to monopoly

(Causes / sources of monopoly)

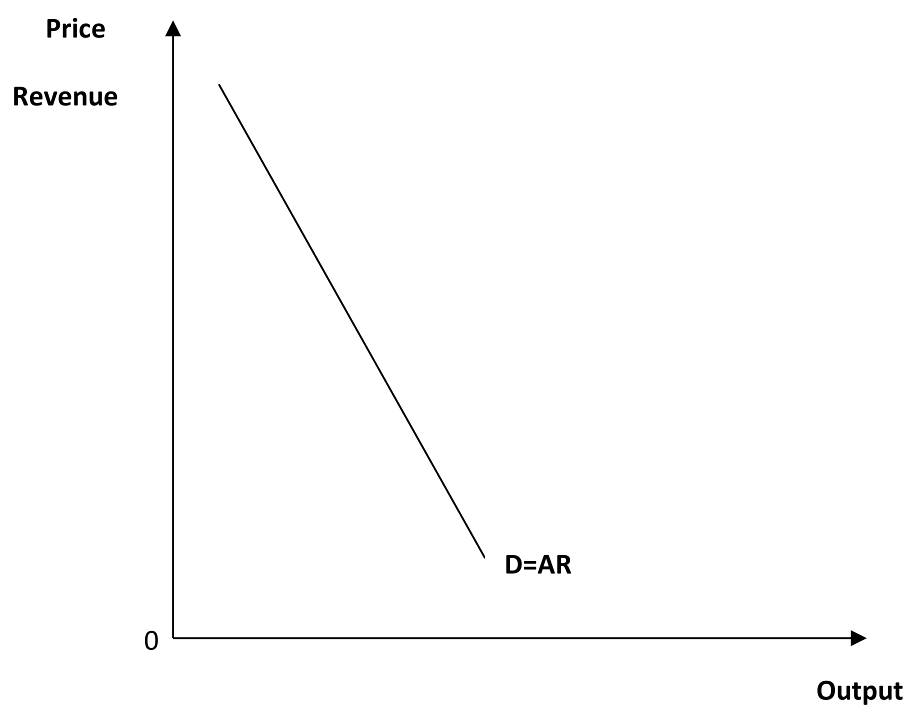
1. ***Long distance between producers***. In this case a given producer of a commodity in a given area/ locality enjoys monopoly power because the other competing producers are very far away. (This gives rise to spatial monopoly)
2. ***Existence of patent rights to innovations and copyrights to special products***. A patent right is a license given by the state/ government to a producer (inventor or innovator of a new product or technique of production) to protect him against those who may wish to produce the same product without permission. (The producer is given monopoly power for a certain period of time such as copy right to authors of text books, musicians etc).
3. ***Large initial capital requirements***. A firm that is able to raise the required capital to carryout production becomes the sole producer of a commodity, since other firms cannot raise the capital.
4. ***Small size of the market***, not allowing many firms to operate***.*** The small market does not allow the emergence of new producers/ firms to enter such as production; leaving the old firm to be a monopolist.
5. *Natural monopoly due to* ***ownership or control of strategic resources/ raw materials***. One firm owns the only resource required in the production of a given commodity , and thus other firms are prevented from engaging in such production.
6. ***Merging of firms and takeovers***. Merging involves two or more firms engaged in production of a given commodity joining to become one bigger firm. Takeovers involve one firm buying the assets of another firm to enjoy monopoly power.
7. ***Protectionism in international trade leading sheltered monopoly / use of foreign trade restrictions.*** The government imposes foreign trade barriers (like tariffs, quotas, total ban etc) to discourage / prevent importation of the commodity, and hence allowing domestic producers to enjoy monopoly power.
8. ***Formation of cartels and common marketing policies.*** The firms come into an agreement to make pricing and output policies, hence creating a monopoly situation.
9. ***Limit pricing policies***. Limit pricing is a policy adopted by firms intended to discourage new firms from joining the industry by charging very low prices for their output, so that the intending firms find the current prices unattractive.
10. ***Long periods of apprenticeship/ training required***. At the end of the long training period, the individual becomes a monopolist of knowledge in that area since many people are reluctant to train for long periods.
11. ***Exclusive personal talents (uniqueness in talent)***. Individuals become specialists and sole suppliers of a service because of their unique talents or natural abilities such as musicians, designers –hence enjoying monopoly position.

12. ***Product differentiation***. The firm makes its product to appear different from those of other firms such as through packaging , branding, designs , colour among others. The firm monopolizes a particular brand. *(Brand loyalty by consumers enables the firm to gain control over the market of its brand hence establishing monopoly power).*
13. ****Economies of scale enjoyed by large firms.*** Economies of scale may not permit small firms from entering the industry and compete favourably thereby enabling the one existing large firm to enjoy monopoly power.

The demand curve of a monopolist

The demand curve for a monopolist is equal to the average revenue curve as the case in all market structures. The demand curve is downward sloping and inelastic because of the absence of close substitutes.

The monopolist is a price maker i.e. he has the ability to determine the price at which to sell his output. However, a monopolist can either set the price or output but not both.



The monopolist can charge high price by producing less or charge low price by producing more.

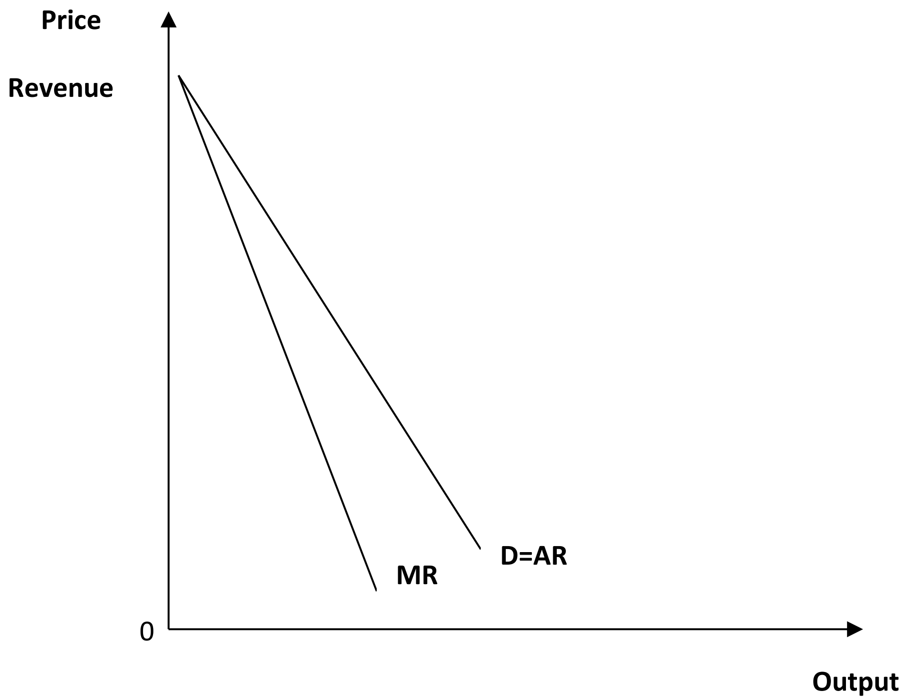
Marginal revenue curve and average revenue curve of a monopolistic firm

The average revenue and marginal revenue curves of a firm under monopoly are downward sloping from left to right, but the MR curve lies below the AR curve.

The MR curve is downward sloping because when more output is supplied in the market, the price falls. Therefore extra revenue received (MR) from the additional output reduces as more units of output are sold.

The MR curve lies below the AR curve, because the rule is that when the average is falling, the margin (extra) is below that average.

Illustration



Output, Price and profit determination of a firm under monopoly in the shortrun

A firm under monopoly is in equilibrium at a point where marginal cost (MC) equals marginal revenue (MR)

Output OQ_e is determined at point Z where marginal cost (MC)= marginal revenue (MR)

Price OP_e is determined by extending the output line to meet the demand curve (AR curve) at point X.

In the shortrun the firm under monopoly earns abnormal profits where the average revenue is greater than average cost (AR>AC) indicated by the shaded area CP_eXY.

A Monopoly firm making losses in the shortrun

A firm under monopoly is in equilibrium at a point where marginal cost equals marginal revenue

Output OQ_e is determined at point Z where marginal cost (MC)= marginal revenue (MR)

Price OP_e is determined by extending the output line to meet the demand curve (AR curve) at point X.

A firm incurs losses firm where the average revenue is less than average cost (AR<AC) indicated by the shaded area PeCYX.

Equilibrium position / Profit maximization of a firm under monopoly in the longrun

Also in the longrun the monopolistic firm produces the level of output where MC=MR, and he continues making abnormal profits so long as entry of new firms is still blocked.

(Therefore the equilibrium position remains, only that we indicate that it is in the longrun, LMC, LAC)

[When a firm makes abnormal profits in the shortrun, other firms would wish to join the industry but due to blocked entry, they cannot. A monopolist will remain the sole firm and will adjust plant size depending on the market demand. If the demand is a small, he will produce at excess capacity (falling part of the AC curve), but is the demand is high, he may expand production and produce at optimum]

Note: A monopolist has no supply curve since he is the only / sole controller of all output and there is no unique relationship between market price and quantity supplied (the shortrun is the same as the longrun).

He can sell the commodity at different prices to different consumers (discriminating monopoly).

Price discrimination ('parallel pricing')

Refers to a situation where a producer/ monopolist sells the same commodity to different consumers at different prices for reasons not associated with the cost of production.

Note: Price discrimination is not based on differences in cost of production, since the cost of production is the same. Is mainly practiced by a monopolist because of the influence over the market, and the major objective is to increase revenue.

Forms/ basis of price discrimination

1. Discrimination according to income level of individuals.
   Lower prices are charged to the poor people and higher prices to the rich people for the same goods (such as by private doctors, lawyers).
2. Discrimination according to age of the individual.
   Usually the adults are charged higher prices and the young charged less such as in theatres, playing fields.
3. Discrimination according to sex of the individual.
   Usually the females pay less than the males for certain services such as in entertainment centres.
4. Geographical discrimination.
   Buyers in a given area are made to pay higher prices that those buyers in other areas for example buyers in rural areas compared to urban buyers.
5. According to time of service.
   This involves charging different prices at different times or different seasons such as new novels are more expensive than later publications , latest music albums etc. weekend music festivals are more expensive than during week days.
6. According to the nature of the product.
   Branded goods are charged higher prices than unbranded goods of the same type. Higher prices are charged on travelers in first class and low prices charged on other classes in a train, plane, ship etc

7. According to the use of the product.
   This involves charging different prices according to the way the product is used. For example electricity where domestic users pay higher prices than industrial users. *(For certain services, high prices are charged for the first units and less for the proceeding units).*

Degree of price discrimination

……………………………………….

Conditions necessary for success of /effective price discrimination

1. The seller must be a monopolist / there must be a single firm in the market (so that there is no competition with other sellers).

2. There should be geographical separation of the market into sub-markets (so that he can sell in one sub-market at a lower price and in another at a high price).
3. The cost of separating the market by the producer must be low. Otherwise, the seller may not make profits and benefit from price discrimination.
4. The cost of transferring the product from one sub-market to another by the consumer must be high. *(This may be facilitated by big geographical distance or traffic barriers).*
5. There should be no close substitute to the commodity so that buyers have no alternative but to buy that commodity.
6. Elasticity of demand should be different in the different sub-markets. A high price is charged where the demand is inelastic and a low price charged in the market with elastic demand.
7. The marginal revenue in both markets should be the same (the extra income after selling should be the same).
8. The consumer should be ignorant about prices charged in different markets (about market conditions). *(The consumer should be ignorant about the existence of other cheaper markets).*
9. Absence of government intervention in the market such as through price controls.
10. Where the commodities are sold on special order and direct services; such that consumers are not aware of the prices paid by other consumers.

Guiding questions:

(a) What is meant by price discrimination? (4 mks)
(b) Explain the circumstances / conditions under which price discrimination would be successful (16 mks)

Advantages of price discrimination

1. It helps in fair distribution of income. This is because the poor are subsidized and the rich are charged highly.
2. It enables the poor/ low income earners to get essential goods and services at low prices.
3. Helps the producer to dispose off surplus products/ output, through selling at lower prices in another sub-market.
4. Producers earn higher total revenue since they charge prices to the rich. This leads to higher profits and hence higher efficiency.
5. Leads to increased output by the monopolist. This is because he sells in different sub-markets.
6. Leads to increase in employment opportunities, resulting from increased demand for the commodity in the various sub-markets. As production increases , more jobs are created.

Disadvantages of price discrimination

1. Results into consumer exploitation especially in the market where high prices are charged.
2. Reduces consumer surplus. This through charging high prices in some sub-markets.
3. Sometimes commodities in the low price market are of low quality. This reduces the standard of living of individuals.
4. It worsens the problem of income inequality since some groups of buyers pay higher prices for the commodities which are sold to others at lower prices.

5. Price discrimination in form dumping retards the development of industries in countries where the commodities are dumped.

Impact/ effects of monopoly on the economy

Positive effects

1. Monopoly limits the duplication of goods and services; and thus less wastage of resources (through unnecessary competition). This is because there is only one firm in the industry.
2. Results into low operational costs due to limited advertising.
3. Monopoly is a source government revenue through taxation of the abnormal profits (such as using specific and lumpsum taxes).
4. The producer/firm enjoys economies of scale such as economies of management , marketing economies. This is due to production on large scale.
5. Price discrimination is practiced under monopoly which benefits the low income earners. These pay affordable lower prices for goods.
6. Promotes research and innovations through patent rights given to the producers of certain products (or by using the abnormal profits both in the shortrun and longrun).
7. Results into provision of public utilities at cheaper prices such as water supply by government.
8. Encourages further investment through ploughing back. This is because abnormal profits are earned by a monopoly firm both in the short run and long run.
9. Creates employment to people especially state monopoly and also due to large scale operation.
10. Leads to development and growth of infant industries due to patent rights or being protected from foreign goods/ imports. (infant firms are protected from unnecessary competition).

Disadvantages of monopoly/ negative effects

1. Results into production at excess capacity in some industries. This leads to limited supply of some commodities/ under utilization of resources.
2. Limits the variety goods and services produced and thus limiting consumer choice. This is because of lack of competition in the market.
3. Results into income inequality. This is through the higher profits the employer enjoys and yet pays low wages to workers. Inequality also exists between employed and unemployed , producers and consumers who are exploited.
4. Results into production of low quality goods and services. This is because of inefficiency since there is no competition.
5. Leads to underemployment and unemployment of labour. This is because few employment opportunities are created (and production at excess capacity).
6. Monopolists exert pressure on government decisions such as taxation, subsidization. Their economic power is transformed into political power.
7. Leads to consumer exploitation, because monopolists usually charge higher prices for the commodities to maximize profits (since they are price makers).
8. Results into shortages of goods especially in periods of breakdown of industries. This is because under monopoly the firm is the same as industry.
9. Limits consumer sovereignty, because it does not give them the power to allocate resources.

Reasons for controlling monopoly

1. To minimize the production of poor quality goods and services.
2. To increase government revenue through imposing of lumpsum and specific taxes.
3. To increase the production of a wide variety of goods and services , hence improving welfare.
4. To reduce excess capacity in production and thus increase the output of goods and services.
5. To reduce income inequalities.
6. To increase employment opportunities through increased capacity utilization.
7. To reduce pressure exerted on government by monopoly firms to influence government policies such as taxation.
8. To reduce exploitation of consumers by monopoly firms to maximize profits.
9. To reduce exploitation of workers by monopoly firms through underpayment.
10. To control inconveniences caused by shortages especially in times of breakdown or stoppage in production.

Measures/ methods of controlling monopoly power

1. ***Reduction of the period of patent rights/ copyright***. This enables other firms to carry out production and adopt new production techniques.
2. ***Removal of foreign trade restrictions***. This encourages importation of commodities to compete with local monopoly firms, hence lowering of prices (lifting protectionism).
3. ***Enforcing anti-trust laws that prohibit merging of firms OR anti-monopoly laws discouraging monopoly firms.*** Government passes laws aimed at controlling monopoly such as prohibiting merging or collusion of firms.
4. ***Nationalization of the private monopoly firms by government***. Government takes over their control in order to avoid exploitation of consumers i.e. to increase output and charge reasonable price for that output.
5. ***Government setting up/ establishing rival firms*** / its own firms to compete with existing monopoly firms, hence protecting the public from monopoly exploitation.
6. ***Quality control policies set up and enforced***. This involves setting requirements to be met by monopoly firms and this protects consumers from exploitation; as they do not consume poor quality products.
7. ***Use of the quota system in production***. The government sets the minimum production / output levels to be met by monopoly firms in order to avoid shortages.
8. ***Improving the investment climate to attract new firms / investors*** and encourage competition rather than monopoly. (It also involves privatization to avoid presence of state monopoly firms). Government can also subsidize new firms so that they can compete favourably with that they can compete favourably with the existing monopolies.
9. ***Through price controls by the government***. The government fixes price for the monopoly product, and this must be below the price at which the monopolist has been selling the product. It can either be average cost pricing or marginal cost pricing.

(a) ***Average cost pricing***. Refers to a policy by which the price charged by a firm is fixed (by government) at a point where average revenue is equal to average cost. The average revenue/ price is made equal to average cost and so the monopoly firm always earns normal profit.

Illustration of average cost pricing

The government fixes price for output OQ_2 at point B where AC=AR. This leads to increase in output from OQ_1 to OQ_2 and reduction in price from OP_1 to OP_2.

Qn. Explain the term average cost pricing (4mks)

Approach

- Define
- Illustrate and explain the diagram
- Show the effects

(b)Marginal cost pricing. Refers to a method of pricing where the price is fixed (by government) to be equal to the marginal cost of the output produced.

Illustration of marginal cost pricing

The government fixes the price for output at point Z where MC=AR. The effects include: a decrease in price of commodities from OP_1 to OP_2. Results into increase in the level of output produced from OQ_1 to OQ_2.

Qn. What is meant by marginal cost pricing? (4mks)

10. ***Imposing taxes on monopoly firms***. The government imposes high taxes on output produced and profits made by a monopolist. It is by imposing a lumpsum tax and specific tax.

(a)***Lumpsum tax.*** Refers to a fixed amount of tax imposed on a monopolist regardless of the level of output.

(Refers to a tax imposed on a monopoly firm as a block payment and it doesnot affect the level of output produced. The same amount of tax is paid whether output is zero or whether the firm is producing at excess capacity or at full capacity)

It is a fixed cost of production which increases the average cost and has no effect on the price of extra units of output.

Illustration of the effect of lumpsum tax on a monopolist

The effects include:

- Increases the average cost of production (AC shifts upwards).
- Reduces the profit level of the firm
- MC, output level and price remain constant.

Note: Before tax, the profits of the monopolist are represented by the shaded area C_1P_eXZ. Profits after taxation are represented by the shaded area C_2P_eXY.

(b)**Specific tax (per unit tax).** Refers to a tax imposed on a monopolist on each unit of output produced.

Therefore, as output increases, the amount of tax paid also increases. It is therefore a variable cost of a monopolist. After imposition of the specific tax, both the average cost and marginal cost curves shift upwards.

Illustration of the effect of specific tax on a monopolist

Effects include:

- Increases the average cost of production
- Increases the marginal cost of the firm
- Reduces the level of output and increases the price level
- Reduces the profit level of the firm

Note: Original profits before tax are represented by the area C_1P_1XZ. Profits after taxation are represented by the shaded area C_2P_2KY.

MONOPOLISTIC COMPETITION

This is a market structure with many buyers and sellers of differentiated products which are close but not perfect substitutes for one another.

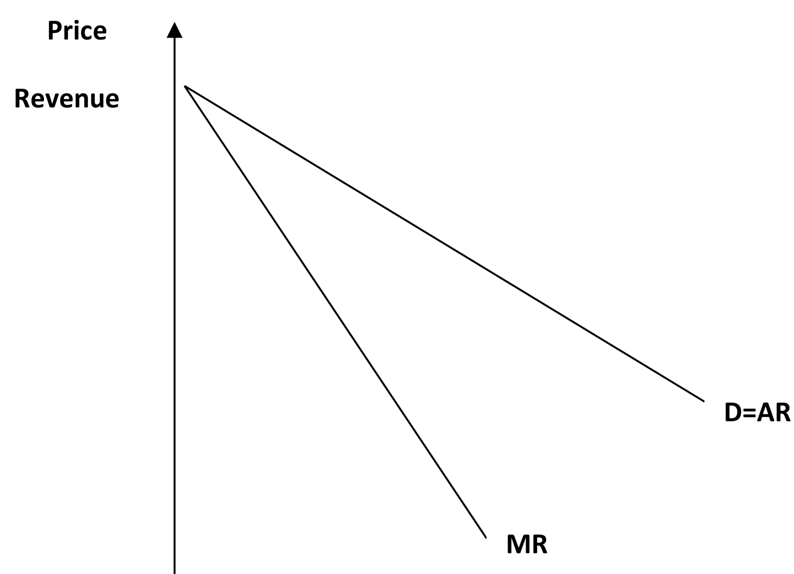
Each firm has monopoly power over its brand. For example dealers in tooth pastes , bread industry, soft drinks industry, soap industry, jelly industry, saloon services. Monopolistic competition involves elements of prefect competition and monopoly . it is the most common feature of the real world.

Features / characteristics of monopolistic competition

1. There are many buyers and sellers in the market.
2. There is freedom of entry and exit in the industry. Firms wishing to join the industry are free but they come with their own brands of products and those wishing to leave are also free.
3. Firms produce similar goods but differentiated by colour , trademark, size, packaging, trade names, quality.
   Note: Product differentiation is where a firm makes its product appear different from those of its competitors although the commodities are relatively close substitutes. This is in form of branding , trade mark, design, packaging, colour, size.
4. Firms are price makers/ have minimum influence over price because of product differentiation. Each firm has monopoly over its brand and can deviate from the average price of other firms by a relatively small amount.
5. The demand curve for the firm is fairly elastic. This is because the producers have control over their products.
6. The firms aim at profit maximization and each firm produces the level of output where MC=MR.
7. There is a high level of advertisement. There is both persuasive and informative advertisement.
8. There is a lot of market research which is essential in determining the demand for goods.
9. There is a high degree of sales promotion as the firms compete for the market such as after sales services, credit facilities.
10. The products are close but not perfect substitutes, and consumers have pledged loyalty to certain brands (brand loyalty).
11. Firms usually produce at excess capacity in the longrun. This is where the level of output is less than optimum point/ full capacity .i.e. there is underutilization of resources.
12. Firms make abnormal profits in the shortrun and normal profits in the long run.

Demand curve of a firm under monopolistic competition

The demand curve is fairly elastic and downward sloping. This is because each firm has monopoly power over its brand and there is a high degree of competition due to many firms producing / dealing in products which are close substitutes.



Note: The MR curve lies below the AR curve because firms are price makers due to product differentiation, and firms can only increase sales / sell more units of output by lowering price.

Output, price and profit determination of a firm under monopolistic competition in the short run

A firm under monopolistic competition is in equilibrium at a point where marginal cost (MC) equals marginal revenue (MR)

Output OQ_e is determined at point Z where marginal cost (MC)= marginal revenue (MR)

Price OP_e is determined at point X where the output line meets the demand curve (AR curve).

In the shortrun the firm under monopolistic competition earns abnormal profits where the average revenue is greater than average cost (AR>AC) and this indicated by the shaded area CP_eXY.

A firm making losses in the short run under monopolistic competition

A firm under monopolistic competition is in equilibrium at a point where marginal cost (MC) equals marginal revenue (MR)

Output OQ_e is determined at point Z where marginal cost (MC)= marginal revenue (MR)

Price OP_e is determined at point A where the output line meets the demand/ AR curve.

A firm incurs losses since the average cost is greater than average revenue (AC>AR) and this indicated by the shaded area P_eCBA.

Long run equilibrium under monopolistic competition

A firm under monopolistic competition is in equilibrium at a point where marginal cost (MC) equals marginal revenue (MR)

Output OQ_e is determined at point Z where marginal cost (MC)= marginal revenue (MR)

Price OP_e is determined at point X where the output line meets the AR curve, and the AR curve is tangent to the LAC curve.

In the longrun the firm under monopolistic competition earns normal profits where the average revenue is equal to average cost (AR=AC).

Each firm is forced in a position of excess capacity i.e. it produces output less than optimum point of the LAC. Excess capacity is measured by the gap between equilibrium output and the output corresponding with the minimum of average cost.

Note: Due to supernormal profits earned in the shortrun, new firms enter into the industry with their own brands. As a result, more firms exist, output rises, product differentiation increases and consumer choice widens. Each firm will produce less as the market size has not expanded. This adjustment continues until the firms are earning normal profits.

Advantages of monopolistic competition

1. The consumers enjoy a variety of products due to product differentiation. This widens their choice.
2. Leads to production of quality output due to competition among the many firms.
3. More employment opportunities are created due to existence of many firms in the industry. This improves the standards of living of individuals.
4. Lower prices are charged for commodities due to the presence of close substitutes. This benefits the majority / low income earners.
5. There is increased innovations due to high degree of competition among the producers. This leads to production of new goods/ brands on the market.
6. Promotes development of infrastructure such as schools, raods etc due to the existence of many competing firms. The firms develop these as they strive to increase their market share.
7. Consumers gain from non-price competition such as after sales services, gifts and other promotion offers.
8. The abnormal profits earned in the short run facilitate the expansion of the firm.

Disadvantages of monopolistic competition

1. There is production at excess capacity by firms , and therefore underutilization of resources. This results into low output.

2. Prices charged for goods are higher than those charged under perfect competition.
3. In the longrun the firms make normal profits and this limits the expansion of firms so as to enjoy economies of scale.
4. There is excessive / persuasive advertisement which increases the costs of production. This is at times passed on to consumers in form of increased prices.
5. Leads to duplication of goods and services hence wastage of resources.
6. Leads to collapse of small firms due to high competition in the market (they may be outcompeted). This leads to unemployment of workers previously working in such firms.

OLIGOPOLY

This is a market structure / situation in which there are many buyers and few competing firms dealing in either homogeneous or differentiated products.

Types of oligopoly

1. **Perfect oligopoly (pure /identical)**
   Refers to a market situation where there are few producers/sellers but many buyers of a homogeneous product.
2. **Imperfect oligopoly (differentiated oligopoly)**
   Refers to a market situation where there few producers but many buyers of differentiated products.

3. **Duopoly**
   Refers to a market situation where there are two firms/sellers but many buyers of either homogeneous or differentiated products.
   (a) **Perfect duopoly**. Refers to a market situation where there are only two sellers but many buyers of homogeneous goods.
   (b) **Imperfect duopoly**. Refers to a market situation where there are two sellers/ producers but many buyers of differentiated products/goods.
4. **Oligopsony**
   Refers to a market situation characterized by many producers but a small number of large buyers who control the entire market.
5. **Duopsony**
   Refers to a market situation where there are only two buyers of a good or a service traded.

Features/ characteristics of oligopoly

1. There are few firms competing and of varying/ different sizes in the industry. (each firm has a significant market share)
2. Firms are of different sizes
3. There are many buyers and therefore no single buyer can have significant influence on market conditions

4. Limited / restricted freedom of entry of firms into the industry. This is due to the high capital required and large size of the existing firms.
5. The products are either homogeneous for perfect oligopoly or differentiated for imperfect oligopoly.
6. There is close interdependence among firms, with regard to price-output policies. Every firm is concerned with the activities of other firms, since it is affected by their policies/ decisions.
7. There is intensive sales promotion activities /non-price competition among firms) such as non-price through intensive advertisement, quality improvement, free offers etc
8. There is a high degree of uncertainty among firms in the market. The firm cannot be sure of the reactions of other firms whenever it chooses to act and hence causing anxiety.
9. There is no unique pattern of pricing of commodities, such as there can be collusion or price leadership.
10. Profit maximization is the major objective of the firm, and profits are maximized at output level where MC curve lies in the dotted portion of the MR curve and that is where MC=MR).
11. The demand curve under oligopoly is kinked. There is no unique demand curve due to uncertainty and high degree of interdependence in the market.
12. There exists price rigidity and that is why prices tend to be stable under oligopoly. *(this is because of the high degree of uncertainty and yet also firms usually resort to non-price competition , cartel arrangement, price leadership)*

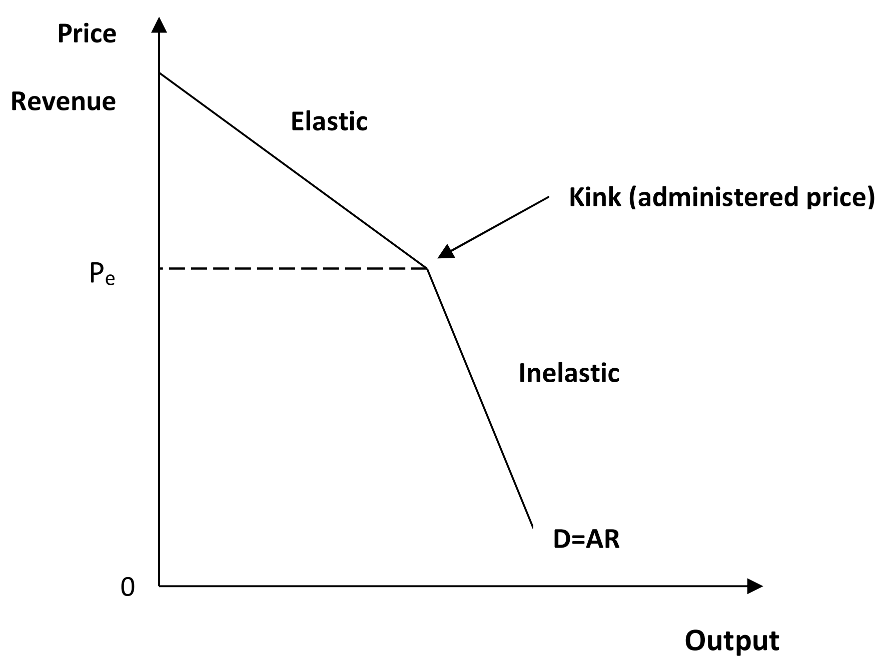
Note: Non- price competition refers to strategies / methods adopted by competing firms to expand their market share rather than reducing prices of their products.

Forms of non-price competition used by oligopoly firms

1. ***Offering after sales services***. Services given to customers for a specified period such as repairs, servicing free of charge or at low prices, technical advice, spare parts at low cost.
2. ***Offering trade discounts and cash discounts***. The consumers who buy in large quantities and those who pay cash are given a reduction in the amount they pay, so as to encourage them.
3. ***Offering credit facilities/ installment selling to consumers***. The consumers pay at agreed periods and thus they are motivated to buy in larger quantities since they do not clear at once.
4. ***Improving the quality of rental outlets/ renovating premises*** such as using attractive colours. This attracts more customers to shopping centre/ premises.
5. ***Use of promotional games and sponsoring them/ organizing raffles/ draws***. Using simple questions to encourage mass participation, and participation is 'free of charge' and prize awards given after.
6. ***Sponsoring events and services for public benefit*** such as sports events, education services, musical shows. Many people are attracted to the products of the firm which supports them.
7. ***Giving out free offers/ gifts/ prizes to consumers***. The customers who buy a given quantity of a product, to encourage people to buy more.
8. ***Organizing and participating in trade fairs/ exhibitions***. Producers/ firms display products at a show ground to make them known to the public.
9. ***Use of attractive packaging and pre-packaging***. This involves better shopping bags, packs, containers or wrappers. There is use of appropriate containers and weights ready for sale.

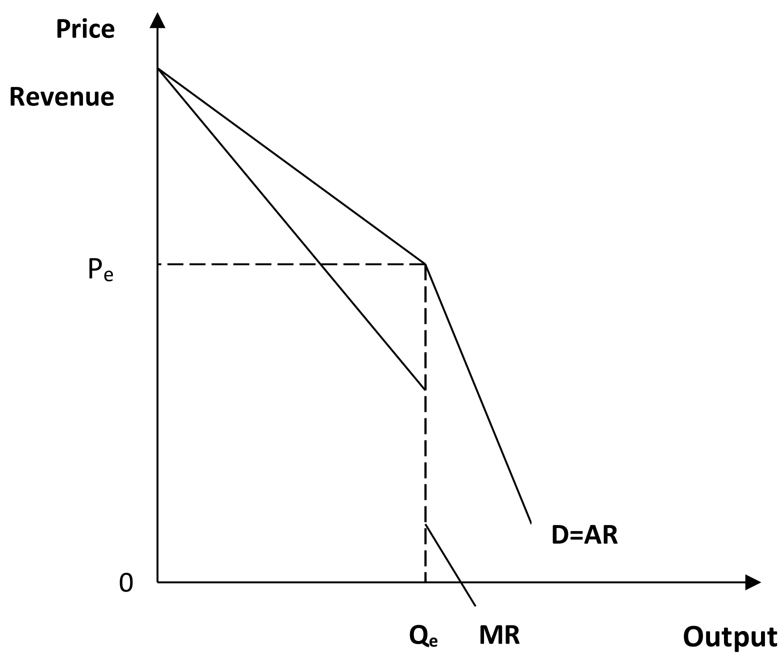
10. ***Branding of commodities***. Process of giving a particular name, slogan and trademark to a product to distinguish it from other similar products of other producers. *(It involves giving appealing names and slogans).*
11. ***Product development such as through blending***—improving ingredients; reshaping and standardization of the product.
12. ***Intensive/ persuasive advertising of commodities*** such as on radios, newspapers. This provides information about goods or services intended to persuade people to buy ; by giving the impression of superior quality.
13. ***Opening of new braches and distribution points***. This is intended to extend services or products to many people and hence increasing sales.
14. ***Use of one-stop shopping centres*** such as fueling stations. This reduces inconvenience to consumers since they buy many items from one place.
15. ***Giving free samples to consumers***. With free samples to potential customers, they approve, later buy and also encourage others to buy the product.
16. ***Sales drives (salesmanship).*** Salesmen are employed to visit both potential and existing customers persuading them to buy or to increase their purchases. They explain details about products and may demonstrate the use of the products.

Demand curve of a firm under oligopoly



Marginal revenue curve

The marginal revenue (MR) curve has two parts because of the two demand curves. It is separated by a gap XY due to high degree of uncertainty in the market. When a firm reduces its price below the administered price its market share remains constant (since other firms do likewise) and the MR is less below the administered price.



Short run output, price and profit maximization under oligopoly

An oligopoly firm is in equilibrium at a point where marginal cost (MC) equals marginal revenue (MR)

Output OQ_e is determined at point Z where marginal cost (MC)= marginal revenue (MR).

Price OP_e is determined at point X where the output line meets the demand curve (AR curve). The price is determined by the leader firm (dominant) or a cartel, and all firms sell their output at that price.

In the shortrun the firm under oligopoly earns abnormal profits/ supernormal profits where the average revenue is greater than average cost (AR>AC) and this indicated by the shaded area CP_eXY.

Short run losses under oligopoly

An oligopoly firm is in equilibrium at a point where marginal cost (MC) equals marginal revenue (MR)

Output OQ_e is determined at point Z where marginal cost (MC)= marginal revenue (MR).

Price OP_e is determined by the leader firm (dominant) or a cartel, and all firms sell their output at that price.

The firm under incurs losses where the average revenue is less than average cost (AR<AC) and this indicated by the shaded area P_eCYX.

Long run equilibrium of an oligopoly firm

An oligopoly firm is in equilibrium at a point where marginal cost (MC) equals marginal revenue (MR)

In the longrun, oligopoly firms earn abnormal profits/ supernormal profits.

The LAC reduces due to little relative expenditure on production of each unit of output (but the profits do not reduce). Instead, profits increase due to reduction in costs, formation of cartels, greater market sharing and reduced/ lower degree of uncertainty.

The longrun demand curve is fairly elastic and has a minimum kink. The MR curve has a small break/gap unlike in the shortrun because of reduced uncertainty in the mature oligopoly industry.

Merits of oligopoly firms

1. There is price stability under oligopoly, which helps buyers in budgeting.
2. Firms charge lower prices for goods and services which reduces consumer exploitation.
3. Widens consumer choices due to production of a variety of goods and services (in case of differentiated products).
4. Leads to production of better quality goods and services due to competition among different firms. This improves the standards of living of consumers.
5. Consumers gain from non-price competition such as promotional offers, gifts, free samples, prize awards.
6. Provides employment opportunities to individuals. This is especially due to expansion of firms and increase in variety of products.

7. Firms contribute government revenue through taxation of the abnormal profits. This facilitates the provision of social services.
8. Leads to increase in research, innovations and inventions due to high degree of competition among firms. This encourages development of technology.
9. Firms enjoy abnormal profits which enable them to expand their scale of production by ploughing back.
10. Leads to increased development of infrastructure such as communication network. Some firms develop infrastructure to increase market share.

Demerits of oligopoly firms

1. Under collusion there is exploitation of consumers by being over charged.
2. Firms incur high /increased costs of production due to carrying out intensive sales promotion activities such as persuasive advertisement.
3. Leads to duplication of goods and services due to product differentiation, leading to wastage of resources.
4. There is limited employment opportunities provided due to few firms in the industry. (The existence of stiff competition in the market causes unemployment since the inefficient firms are out competed).
5. Large firms exert pressure on government policies/ decisions such as asking for tax concessions/ holidays.
6. There is under utilization of resources due to production at excess capacity (especially in the longrun/ existence of few firms).
7. Leads to collapse of small firms due to the stiff competition. They are outcompeted by large firms, leading to unemployment.
8. Existence of price rigidity defies/ undermines consumer sovereignty.

Price determination under oligopoly

1. ***Perfect collusion (cartel arrangements).*** A cartel is an organization of independent firms within the same industry formed for the purpose of reducing competition by fixing of prices or output. *(A cartel is a group of firms that seeks to cooperate for the purpose of fixing output and price normally by restricting supply).*
   Price-output policies for all members are taken by a cartel board of control to maximize joint profits of member firms (the firms charge the uniform agreed price).
2. ***Price leadership (imperfect collusion).*** This is a situation in an oligopoly industry where one firm usually the most efficient or low cost firm, setting price which other firms within the industry follow to sell their output. It is categorized as:
   (a) *Dominant price leadership*. This is a situation where the dominat firm or low cost firm sets the price which other firms within the industry follow to sell their output.
   (b) *Barometric price leadership*. This is a situation where the firm with good reputation especially in forecasting economic trends setting the price which other firms within the industry follow to sell their output.
   © *Aggressive / exploitative price leadership*. This is a situation where the dominant firm fixes the profit maximization price for itself and other firms that forces some firms to leave the industry.

3. ***Independent pricing***. This is a situation where there is independent action of each firm/ seller within the oligopoly industry in setting profit maximizing price for its output. This may be due to distrust and antagonism among rivals. However independent action often leads to price wars when a price-cut leads to retaliation by other firms/ sellers.

Qn. Account for stable prices/ price rigidity under oligopoly (despite changes in costs of production)

1. Firms may not change their price if it has been determined by all firms i.e. through collusive price determination.
2. Firms may be satisfied with the profits they are earning and see no need to change the price.
3. Firms may consider experience of adverse effects of price wars and prefer price stability.
4. Firms might wish to prevent entry of new firms and prefer price stability.
5. The sellers may intensify their sales promotion effects at current price instead of reducing price i.e. non-price competition is better than price rivalry.
6. After intensive advertisement a seller may not like to raise the price to reduce the profit margin.

Note: Price rigidity is illustrated by the kinked demand curve.

Price war/ cut-throat competition. Refers to a form of competition where the firms involved try to outcompete each other by lowering their prices relative to the prices of their competitors. Cut-throat competition by firms is likely to endanger the continued existence of some firms.

Comparing market structures

Monopolistic competition and perfect competition

Similarities

1. There are many firms/ sellers in the market.
2. There are many buyers in the market.
3. There is freedom of entry and exit in the industry
4. The firms enjoy abnormal profits in the shortrun and normal profits in the longrun.
5. Firms aim at profit maximization and produce at a level where MC=MR. (equilibrium is determined where MC=MR)

Differences

1. Products are differentiated under monopolistic competition while products are homogeneous under perfect competition.
2. The demand curve is fairly elastic under monopolistic competition while the demand curve is perfectly elastic under perfect competition.
3. Firms are price makers/ have some influence over price because of product differentiation under monopolistic competition while firms are price takers under perfect competition.
4. MR<AR under monopolistic competition while MR=AR under perfect competition.

5. There is excess capacity under monopolistic competition unlike perfect competition.
6. There is persuasive advertisement under monopolistic competition while there is no advertisement under perfect competition.

Monopolistic competition and oligopoly

Similarities

1. There are many buyers
2. There is intensive sales promotion among firms
3. Firms aim at profit maximization , producing a level of output where MC=MR.
4. The firms earn abnormal profits in the shortrun.
5. In both monopolistic competition and oligopoly AR> MR.

Differences

1. There are many firms under monopolistic competition while there are few firms/ sellers under oligopoly.
2. Freedom of entry and exit under monopolistic competition while there is limited/ restricted entry of firms under oligopoly.
3. Products are differentiated under monopolistic competition while products are either homogeneous or differentiated under oligopoly.
4. The demand curve is fairly elastic under monopolistic competition while the demand curve is kinked under oligopoly.
5. Firms earn abnormal profits in the shortrun and normal profits in the longrun under monopolistic competition while firms earn abnormal profits both in the shortrun and longrun under oligopoly.

Questions:

1. (a) Using an illustration, distinguish between break-even and shut down point of a firm (6mks)
   (b) Under what circumstances may a firm continue operating even when it is making losses? (14 mks)
2. (a)Outline the characteristics of:
   (i) Perfect oligopoly
   (ii) Imperfect oligopoly

   (b)Explain how profits are maximized under oligopoly in the shortrun and longrun (12mks)

3. (a)Explain how profits are maximized by a monopolist (6 mks)
   (b) Explain the advantages and disadvantages of monopoly in an economy (14 mks)
4. (a) Describe the features of monopolistic competition (8 mks)
   (b)Explain profit maximization for monopolistic competition in the:
      (i) Short run (6mks)
      (ii) Long run (6mks)
5. (a) Outline the characteristics of monopolistic competition (8mks)

(b) Explain the merits and demerits of monopolistic competition in your country (12 mks)

6. Compare and contrast monopoly and monopolistic competition