UNIT – II&III

FORMS OF MARKET AND PRICE DETERMINATION

INTRODUCTION AND DEFINITION

Meaning of Market

In our common language, we always use the word market. Where the commodity are brought and sold in economics, however, we have to understand the term market, as it has different meaning. In economic market refers to group of buyer and seller taking part in exchange of commodity. The buyer and seller may scattered within the country of abroad but their must be some contact.

Definition of Market

"Economists understand by the term market, not any particular market place in which things are bought and sold, but the whole of any region in which buyers and sellers are in such free intercourse with one another that the prices of the same goods tend to equality easily and quickly".

Modern Definition

The modern view regarding market is widely accepted. The modern definition of market is that "it (market) implies the whole area over which buyers and sellers are in such touch with each other, directly or through middlemen, that the price of the commodity in one part influences it in the other parts of it".

CLASSIFICATION OF MARKET

1. **On the basis of area**

    a) Local market: Local market refers to a market in a particular village or locality. Generally perishable goods have local market.

    b) Regional market: Regional market refers to a market, which covers a particular region. Generally bulky articles like bricks and s\ones have regional markets.

    c) National market: It refers to a market which is spread over the entire country. Generally commodities like wheat, rice etc. have national market.

    d) International market: When the market is spread over the globe it is said to be an international market. Generally valuable metals like gold, silver, etc., have an international, market.

2. **On the basis of time**

a) Very short period market: A very short period is one in which supply cannot be increased or decreased to adjust as per demand. Examples for very short period markets are vegetables, fruits, etc.

b) Short period: Short period market refers to a period of time in which the rate of production is variable.

c) Long period: Long period is a period of time in which the supply of the commodity can be varied according to the conditions of demand. Long period involves many years.

3. **Classification on the basis of competition**

a) Perfect market: A perfect market is where there is perfect competition.

b) Imperfect market: A market is imperfectly competitive if the action of one or more buyers and sellers have a perceptible influence on price.

On the basis of Nature of Competition

Perfect or pure competition

- No. of firms are infinite
- Nature of the goods is homogenous

Imperfect Competition

(i) Monopolistic competition
- No. of firms are many
- Nature of goods is differentiated,

(ii) Duopoly
- No. of firms are two
- Nature of goods is Homogenous or differentiated,

(iii) Oligopoly
- No. of firms (or sellers) are few.
- Nature of goods is Homogenous or differentiated,

(iv) Monopoly
- No, of seller (or firm) is single
- Nature of goods is Homogenous.

MEANING OF PERFECT COMPETITION

A market is said to be perfect when there is a large number of buyers and sellers of the product. The products are homogeneous so that the consumers do not mind purchasing a commodity from M/s ABC or M/s XYZ. It implies that the products of the various firms are perfect substitutes or they are identical. There is free entry and exit of the firms. Both the buyers and the sellers have full knowledge of the market conditions. Any buyer can purchase from any seller, and conversely. Price tends to be uniform all over the market Competitive firms may get abnormal profits and suffer loss in the short-run. However, in the long-run, they have to be contented with normal profits only. Only the efficient firms can exist in a perfect market.

From the above mentioned features it should be clear that perfect markets do not exist in real life. It is a hypothetical situation. It is so because the assumptions on which the competitive model of market is based never hold good in the real world. In spite of these limitations, the theory of competitive market provides a useful tool to understand the nature of other markets.

It should be noted that the existence of a single, uniform price in the market is the most important criterion of perfect competition. This uniform price is determined by the market forces of demand and supply. The individual firm has to accept the price fixed by the market. Hence, the price line (or demand curve or average revenue curve) is perfectly elastic in nature. Though this price is determined by total demand and total supply, yet the business motive of all the firms under perfect competition is profit maximisation. Each firm seeks to maximise its profits and no other objective is pursued. To understand this market structure we need to clearly understand its features.

Perfect competition is a market structure in which there are a large number of producers (firms) producing a homogeneous product so that no individual firm can influence the price of a commodity.

FEATURES OF PERFECT COMPETITION

1. **Large number of sellers:** In perfect competition there is an existence of large number of sellers. The number of sellers is so large that each seller sells so little that none of them is in a position to influence the price in the market.

2. **Large number of buyers:** Similarly the number of buyers is also large. Each buyer buys so little that none of them is in a position to influence the price in the market. It is natural that, when there are millions of buyers in the market none of them can be strong enough to influence the price to his advantage.

3. **Homogeneous Product:** An important feature of perfect competitive market is that, the goods sold by the large number of sellers must be identical or homogenous in the eyes of the buyers. Here, homogeneity does not mean that goods are identical in all respects. They

are perfect substitutes of each other. In other words, the price of one has great influence on the other. Thus, the product is homogeneous and no seller can charge a price even slightly above the ruling market price. In case the seller changes the price, he will lose all his buyers. There are several firms operating in the market, no single firm is in position to exert any influence on the price.

4. **Free entry and free exit for firms:** In perfect competition there should be a complete freedom for firms to enter or exit the industry at their choice. Likewise, if some firms are incurring losses, they can exit from the industry. The firms that can supply at the ruling price enter the industry, while others which are inefficient and who cannot supply at the prevailing price are incurring losses. They can exit from the market.

5. **Perfect knowledge of the market :** In perfect competition there is an existence of perfect knowledge on part of the buyers and sellers about market conditions. In perfect competition there is no necessity of incurring any expenditure and advertisement due to perfect knowledge. The sellers too have perfect information about potential sales at various price-levels. In short, both the buyers and sellers have perfect knowledge of the price. At this 'price', total demand is equal to total supply and this price is known as 'market-clearing price'.

6. **No transport cost :** A perfectly competitive market assumes the non-existence of transport costs. The assumption is on the basis of a reasoning that the various firms are so close to each other that there are no transport costs.

7. **Perfect Mobility of factors of production:** The smooth functioning of perfect competition necessitates perfect mobility of factors of production. The factors of production should be free to move into any industry which they consider profitable for themselves. The existence of perfect mobility of factors is essential for fulfilling the first condition of perfect competition i.e. large number of sellers in the market.

8. **No Government Interference:** In perfect competition, it is necessary to have non-existence of any artificial restrictions on the demand, supply, prices of commodities and factors of production in the market. There must be no governmental fixation of the prices of goods and factors of production. There must be no artificial controls on demand of goods through governmental rationing.

9. **Single price:** It is assumed that price is determined by interaction of market demand and supply forces. This equilibrium price is accepted by a large number of sellers and buyers.

10. **No selling cost:** As a large number of sellers sell homogeneous products at a given

price, it rules out the possibility of advertisement and other sales promotion expenses.

The foregoing discussion of features of perfect competition and pure competition can be understood in its distinction form.

Perfect competition	Pure competition
1. Meaning: For the market to be perfectly competitive, the features are large number of buyers and sellers, homogeneous goods, free entry and exit, perfect knowledge of market, perfect mobility of factors, no government interference, no transport costs.	For a market to be purely competitive, following features are to be fulfilled : large numbers of buyers and sellers, homogeneous goods, free entry and exit of firms.
2. Known as: The term 'Perfect competition' is traditionally used by the British economists, while discussing the price theory.	The term 'Pure competition' is used by the American economists while discussing the price theory
3. Concept: Perfect competition is an ideal concept for the market structure. It is an imaginary concept.	Pure competition tries to substantiate the norm of perfect competition. It is a real concept.
4. Equilibrium: Any disequilibrium in the price can be adjusted faster due to perfect knowledge of perfect mobility of factors of production in perfect competition	Lack of perfection in the market makes the adjustments in disequilibrium of price a slower process.

PRICE DETERMINATION UNDER PERFECT COMPETITION

Price occupies a central position in economics, because very important decisions like allocation of resources, distribution of factor incomes, composition of production, variations in factor combinations etc. are guided by the price mechanism. Most of the modern economies are market economies where the working of the entire economy is guided and regulated by this mechanism.

Price in the market is determined by the entire industry i.e. by the total demand and total supply.

The supply increases with the rise in price and decreases with the fall in price. Hence, demand and supply are the two economic forces which operate in opposite directions. And, price is determined at a point where industry demand is equal to the industry supply. This is an 'equilibrium price'.

As is well known that, demand and supply are two economic forces operating in opposite directions. Prof. Marshall has compared these two economic forces with the two blades of a scissor. The upper blade represents supply. Just as to cut a piece of paper both the blades of the scissor are essential, similarly to determine the price in competitive market, both the economic forces i.e. total demand and total supply are essential. The two forces are balanced or in equilibrium at that market price at which the quantity demanded equals the quantity supplied. The market price is called the 'equilibrium price'. Equilibrium or Market price need not be an equitable price. It has no moral content in it. It is just the result of an equilibrium between the demand and supply of the commodity.

To understand the mechanism of the equilibrium price (i.e. price determination) in competitive market, we illustrate it with the help of a schedule and diagram.

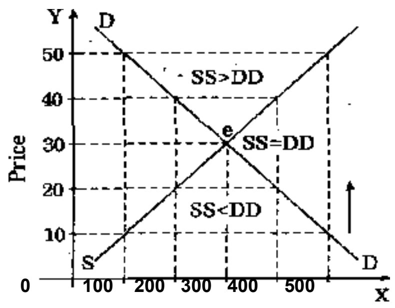
Table 6.1: Demand and Supply Schedule

Price of Oranges (Rs /Dozen)	Quantity Demanded (Dozen/Day)	Quantity Supplied (Dozen/Day)	Price Movement
50	100	500	Downwards
40	200	400	Downwards
30	300	300	No change
20	400	200	Upwards
10	500	100	Upwards

In the above schedule we observe that, when the price is Rs. 50 per dozen of oranges, the total supply (by all firms) is 500 dozens per day but the total demand (by all buyers) is only 100 dozens per day. Hence, the goods remain unsold as the supply to the market is more than the demand for it. It puts pressure on the price to move downwards. Now, when the price is Rs. 40 per dozen, some suppliers of oranges leave the market. There is a free entry and exit of firms in perfectly competitive market. Thus, at lower price, supply decreases to 400 dozens per day. However, the total demand rises to 200 dozens. The total supply exceeds the total demand. This pressurizes the market price (determined by total demand and total supply) to fall to Rs. 30 per dozen. At this price some more suppliers exit the market. But, marginal buyers enter the market. We observe that at Rs. 30 per dozen the total supply is 30 dozens per day and total demand is also 30 dozens per day. This is market price or equilibrium price. At this price, the market demand is equal to market supply. Hence, this uniform, single price prevails in the market and thus no change.

If we now analyse the schedule in the reverse direction, we observe that, when the price is Rs. 10 per dozen the total demand is 500 dozens per, day but total supply is only 100 dozens per day, hence there is shortage of goods in the market. The price moves upwards. This encourages some sellers to enter the market but some buyers leave the market. At Rs.20 per dozen, the demand is now 400 dozens and supply rises to 200 dozens. But, competition among the buyers pushes the price of Rs. 30 per dozen per day where total demand is equal to the total supply.

Let us now see price determination under perfect competition, diagrammatically.



Market Demand & Supply

SS is the supply curve which is lateral summation of all supply curves of all firms in an industry. It slopes upwards from left to right indicating that higher the price more the supply. DD is the demand curve which is summation of all demand curves of all buyers in industry. It slopes downwards from left to right indicating that higher the price less is demanded.

Rs.30 is the equilibrium price as at point e total demand is equal to total supply. It is the market price.

At Rs.50 price (higher price) supply is 500 dozens and demand is 100 dozens i.e. supply is in excess of demand. There is thus, the pressure on the price to move downwards.

At Rs.10 (lower price) supply is 100 dozens and demand is 500 dozens i.e. supply is short of total demand. This pressurizes the price to move upwards. Effects:

When price moves downwards :

(i) Firms exit from the market. (ii) Marginal buyers enter the market.

When price moves upwards:

(i) Firms enter the market. (ii) Marginal buyers leave the market.

MONOPOLY

Meaning : The word monopoly is made up of two syllables ‘mono’ and 'poly'. Mono means single while 'poly' means selling. Thus, monopoly implies one single seller a product in the market. Infact, monopoly is understood as a market situation in which there is only one seller (or producer). He controls the entire supply of a single commodity. It is single commodity as the commodity has no close substitutes. In this way the literal meaning of 'monopoly’ is a single seller of a product in the market.

Absolute Monopoly

In Economics, however, monopoly can be understood in different ways. It can be understood with the help of degree of competition present in the market. If in a market there is one single seller of a product and no competition at all of any sort, such a situation is pure or perfect or absolute monopoly. In absolute monopoly the firm and industry are one i.e. there is no distinction between the firm and the industry. Any change in the price of those other commodities has no impact on the commodity of the monopolist. Pure monopoly is seen to exist in local public utility industries such as gas, electricity, water supply etc.

In pure monopoly, the position of the seller is very powerful. Since there is no substitute for his product, he can fix a price to his liking.

However, the reality is, no firm anywhere is so powerful as to sell a small output at exceeding high price. In short, pure monopoly is a myth. It has never existed anywhere. It is only a theoretical imagination of economists.

Limited monopoly : Thus, we come to a more realistic market situation i.e. limited or imperfect monopoly. It is a market situation in which there is a single seller of the product for which there are no close substitutes.

In imperfect monopoly, the monopolist's position is weaker as compared to pure monopolist. The reason is that under pure monopoly we assume that, no substitute is available for his product. But, under limited monopoly, the monopolist has the possibility of some substitutes for his product, though they may not be very close or perfect substitutes. For example, an electric supply company is an illustration of imperfect competition as light can also be supplied by gas, kerosene, candles. Now, these are no close substitutes of electricity, at the same time same substitute is available. Thus, the average revenue curve slopes downwards. Higher the price he fixes, less is the output sold. If he lowers the price, he can sell greater output.

I. Features of Monopoly:

The outstanding features of monopoly are :

1. **Single seller :** The monopolist is the single producer in the market.
2. **Firm and industry identical:** The distinction between firm and industry is not there under monopoly market because, being the only seller, firm and industry are identical.
3. **No close substitute :** There are no close competitive substitutes for the product.
4. **Price-maker;** A monopolist is a price-maker and not a price-taker. In perfect competition, it is the ruling price which the seller accepts from the market i.e. the seller is a 'price-taker'. But, a monopolist is in a position to fix the price for the product. He can also vary the price from buyer to buyer, i.e. he can have price differentials.
5. **Average Revenue or Demand Curve :** A monopoly firm which is also identical to industry, faces a downward sloping demand curve for its product. In other words, it can sell more at lesser price and less at higher price.
6. **No free entry :** The fact that the monopolist is the single seller with no close substitutes, implies that, there are barriers may be legal, technical, economic or natural in nature that do not allow free entry of firms.
7. **Control over output:** In the absence of a close substitute for his product, a monopolist has a complete control over the market supply. The monopolist can restrict the supply of output in the market and fix the price high.

II. Types of Monopoly

The different types of barriers to the entry of firms and other factors in monopoly market give rise to the monopoly of different kinds.

1. Simple and Discriminating Monopoly: On the basis of the price policy adopted by the monopolist, it is simple monopoly and discriminating monopoly. Simple monopoly is when the firm charges a uniform price to all the buyers. Such a monopoly operates in a single market.

Discriminating monopoly is, when the firm charges different prices to different buyers. E.g. Doctor charges less fees from poor and high fees from rich people.

2. **Private Monopoly and Public Monopoly :** On the nature of ownership; it is private and public monopolies.

Private monopoly is when a private body controls a monopoly. Private monopolies, which are confined to the private sector in a mixed economy are usually profit-oriented. E.g. Tata, Birla, Reliance etc.

Public monopoly is when production is solely owned, controlled and operated by the state. Such monopolies are generally confined to nationalised industries. Public monopolies are service-motivated and welfare-motivated. That is why they are also referred to as 'Social Monopolies'. E.g. The Industrial Policy Resolution (1991) in India has categorically stated that, certain areas like atomic energy, arms and ammunition etc. as sole monopolies of the Central Government.

3. **Pure Monopoly and Imperfect Monopoly :** On the degree of monopoly power, monopolies can be pure Monopoly and Imperfect Monopoly. Pure Monopoly is when a single seller solely controls supply of a commodity has absolutely no substitute to his product. It is an absolute monopoly. Pure monopoly is completely antithesis to competition.

Imperfect monopoly implies a limited degree of monopoly. The single seller in this case has some close substitute for his product. Imperfect monopoly is a reality, while pure monopoly is a myth.

4. **Legal, Natural, Technological Monopolies :** On basis of the source, the different kinds of monopolies are :

Legal monopoly : It arises due to legal provisions such as trade marks, copyrights etc. It is legal because the law does not allow the potential competitors to imitate the design or form of products which are registered under the given trademark, brand name etc. Eg. Postal service in India.

Natural monopoly: This type of monopoly arises due to endowment of resources by nature and natural advantages such as good location, climate conditions, availability of certain minerals or raw material, etc. The firm claiming the use of these resources first, is said to have natural monopoly. For example, Gulf countries have monopoly in oil, South Africa in diamonds, India in jute, etc.

Technological monopoly: This monopoly exists when certain technology is registered and cannot be imitated. Thus, the firm which has that technology becomes a monopoly which is referred as technological monopoly.

Joint Monopoly : Business combinations like trusts, cartels, syndicates etc. create joint monopolies i.e. when firms unite in a group and acquire joint monopolies in the market. E.g. Organisation of Petroleum Exporting Countries (OPEC).

MONOPOLISTIC COMPETITION

In the real world, we find neither perfect competition nor monopoly. These extreme positions are rare. In reality, there is monopolistic competition which is one of the various forms that imperfect competition takes. In other words, the term "Monopolistic Competition" is used interchangeably with imperfect competition.

Imperfect competition prevails where any of the conditions of perfect competition is absent. Imperfect competition includes a variety of market forms ranging from 'near' monopoly to 'near' perfect competition.

Monopolistic competition refers to a market situation where there are many firms selling a differentiated product. In monopolistic competition "there is a keen competition among many firms making or producing very similar products,"

Imperfect competition takes too many forms. The two main forms are Monopolistic Competition and Oligopoly.

Monopolistic competition is found in many fields - in retail trade, in service industries and also in some branches of manufacturing, e.g. cosmetic products, garment industry, electrical appliances stores, beauty parlors, coaching classes, restaurants etc. All these and many Others tend to have monopolistic competitive markets.

We point out here, that imperfect competition and monopolistic competition are; not interchangeable terms. Imperfect competition is a wider term and monopolistic competition is only one of the sub-category of imperfect competition.

Features / Characteristics of Monopolistic Competition

The main features are :

(i) Large number of sellers : Under monopolistic competition, there is a large number of firms selling closely related but not identical products in the market. We repeat the examples here Monopolistic competition may be found in retail trades, service industries like petrol stations dry-cleaning establishments etc. Each firm controls only an insignificant proportion of the total market output. Any action on its part will have little or no effect on other firms.

(ii) Product Differentiation: This is the second important feature of monopolistic competition. The large number of firms under monopolistic competition bring out differentiated products which are not perfect substitutes but relatively close substitutes to each other.

For instance, many firms in India produce cosmetics but the product of each differs from its rivals in one or more respect like different face powders Lakme, Revelon, Himalaya etc. Product differentiation can be brought about in a variety of ways as discussed below :

(a) Product differentiation can be through differences in the Quality of the material used through strength, workmanship etc.

(b) Product differentiation by offering to their customers supplementary services alongwith the sale of the product e.g. home delivery of goods, guarantee of repairs.

(c) Product differentiation can be through advertisement and publicity.

(d) Product differentiation can be brought about through differences in the location of premises, e.g. Clothes in the boutique and on the roadside store.

(iii) Free entry : Under monopolistic competition, there is no difficulty for a new firm to enter into an existing firm or to leave the industry. There is a large number of relatively small-sized firms also allow easy entry and exit from the industry. Since the production techniques are simple and capital required is less, it allows easy entry of new firms.

(iv) No Interdependence of firms: Under monopolistic competition, there is no interdependence of firms. The reasons for absence of interdependence are:

(a) There is a large number of firms operating under monopolistic competition.

(b) Each firm is of a small size. Its share in total market may not be more than 10 percent or even much less.

(c) Each firms sells a 'differentiated' product.

(v) Selling costs: A unique feature of monopolistic competition is selling costs. Since products are differentiated, sales propaganda becomes an integral part in marketing the goods. Expenditure (outlays) on sales promotion are termed as selling costs.

(vi) Revenue (Demand) and Cost Curves: The demand curve (Revenue curve) is neither perfectly elastic (as in perfect competition) nor rigidly inelastic (as in monopoly). Infact, the demand for the product of the firm under monopolistic competition is much more sensitive to even a small change in price. Thus, the demand curve will have less steepness than that of monopoly. The curve will have greater elasticity and is downward - sloping.

Monopolistic competition has two aspects - (a) price competition and (b) non-price competition. The firms compete with each other on the price issue. The firms also compete on non-price issues to expand their sale, in terms of product variation.

(vii) The Group: Prof. E.H. Chamberlin introduced the concept of group in place of traditional concept of industry in the theory of price. Industry means collection of firms producing a homogenous commodity.

But, monopolistic competition is characterised by product differentiation. They produce similar but not identical goods. Hence, the concept of industry (firms with homogeneous goods) cannot be conceived in monopolistic competition. Therefore, Chamberlin introduced the concept of 'group'.

How do perfect competition differ from monopolistic competition ?

Perfect Competition	**Monopolistic competition**
Meaning : It is a form of a market situation in which there are a large number of sellers	It is a form of a market situation in which there are many sellers
Product:- the sellers deal in homogenous product	the sellers deal in differentiated product
Firms/ industry:- There are large number of firms in an industry	There are no industry but deals with group
Price: There is uniform/ single price ruling in ht market	The price differs in the market. There is no singly price for the same product
Cost:- there is perfect knowledge of the market to the buyers, hence no advertisement costs are incurred.	There is imperfection in the market, hence promotional, selling cost is an integral par of monopolistic competition.

PRICING AND OUTPUT UNDER OLIGOPOLY

Oligopoly is an important form of imperfect competition. Since 'oligo' means few and 'poly' means seller, oligopoly refers to the market structure involving only few sellers or firms. The automobile industry in India is oligopolistic in structure as only few firms produce and supply automobiles. In fact, competition among few firms is the basic ingredient of the oligopolistic market structure.

1. FEATURES OF OLIGOPOLY

The oligopolistic market structure exhibits the following features:

1. **Few Firms**. Oligopoly is the market in which few firms compete with each other. The simplest model of oligopoly is duopoly. Duopoly is the market structure when only two firms produce and supply the product

2. **Nature of the Product.** In an oligopoly market, all the few firms produce an identical product Such an oligopoly market is called Pure or Perfect Oligopoly. On the other hand, firms with product differentiation constitute imperfect oligopoly.

3. **Interdependence of Firms.** In an oligopoly market, there is interdependence among firms. Each firm treats the other firms as its rivals. As a result of this, each firm attempts to estimate the nature of its rival's reactions to its price-output policies. Thus, the move made by one firm to reduce price evokes reaction from other firms.

4. **Indeterminateness.** The oligopoly firm's demand curve for the product is indeterminate because the firm can not assume that the rival firms will not change their prices in response to change in price effected by it In other words, the firm can not predict with certainty how its price-output decision will affect the rival firms. In short, reaction patterns of rival firms are indeterminate.

5. **Complex Market Structure.** The oligopolistic market structure is quite complex. On the one side, there is a possibility of rival firms to end rivalry by working out some policy of collusion. The collusive oligopoly manifests itself in the form of combination of rival firms to fix the common price and output sharing. Cartel is an example of collusive oligopoly. The non-collusive oligopoly is the other form of complex market structure.

6. **Selling Costs.** In the oligopoly market, each firm pursues an aggressive and defensive marketing strategy to gain a greater share in the market. Advertisement is an important method used by oligopolists to gain larger share in the market. The costs incurred on advertisement are selling costs.

PRICE-OUTPUT DETERMINATION UNDER NON-COLLUSIVE OLIGOPOLY : PAUL SWEEZY'S KINKED DEMAND CURVE OR PRICE RIGIDITY MODEL

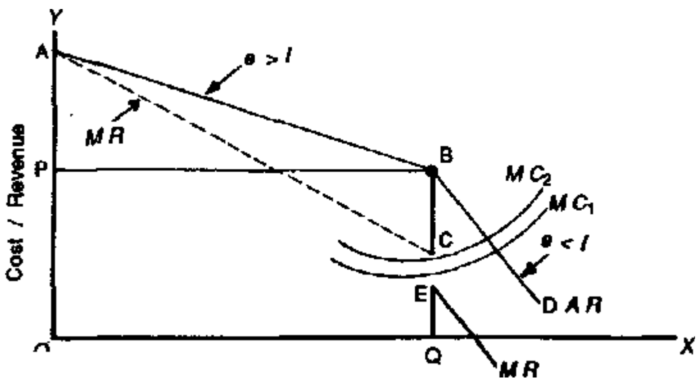
Paul Sweezy formulated a model to explain interdependence among firms in the oligopoly market This model also recognises the uncertainty of rival firm's reaction. On the basis of interdependence among firms and uncertainty of rival firm's reaction, this model explains that the oligopoly price is insensitive to market forces. It implies 'stickiness' or 'rigidity' of price in the oligopoly market The explanation of rigidity of price in the oligopoly market has been given in terms of 'kinked demand curve'.

Since on oligopolist does not know how his competitors will react, he has to make conjectures (guess). That is why oligopoly has been likened to a game where various options are open to the players. An oligopolist may assume that his competitors will follow him, if he increases or decreases the price. Alternatively, he may assume that the price cut by him will be followed by a price cut by the rival firms, but the price rise by him will not be followed by a price rise by the rival firms. This alternative hypothesis is the basis of 'Kinked demand curve.

In order to explain kinked demand curve and price rigidity, following assumptions are made:

(i) There are two firms namely A and B.

(ii) Product of both the firms is homogeneous.



Output

(iii) There is a particular price prevailing in the market It is assumed to be OP as is shown in Fig.

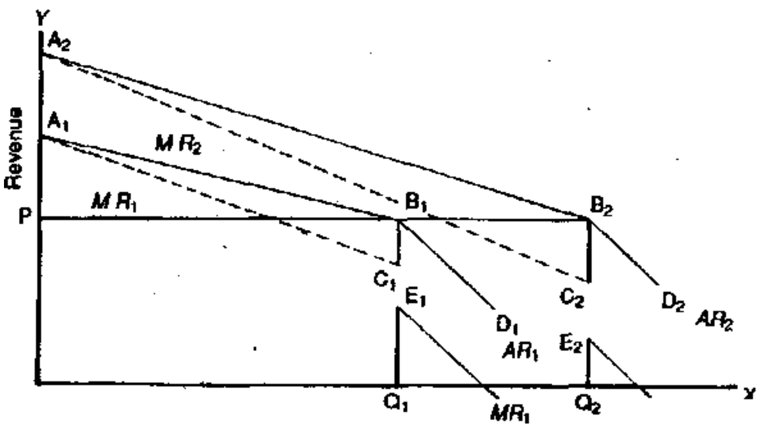
In Fig. the demand curve-AD is kinked at B with its two segments. The segment AB is relatively greater elastic and the other segment BD is relatively less elastic. Since the demand curve (AR)-AD is discontinuous, so the corresponding MR curve is also not continuous. The MR curve's segment AC corresponds to AR curve's segment AB. The MR curve's segment starting from E corresponds to BD segment of the AR curve.

Let us assume that the firm A raises the price above the prevailing price OP. Now the firm B will not raise the price. As a result, the demand for A's production will decline considerably. It is due to this fact that the AB segment of the demand curve-AB is greater elastic with the positive MR. Since the firm B as a reaction has not raised the price, so firm A will also reduce the price. Hence, the price is rigid at the level of OP.

Let us now assume that the firm A reduces the price below prevailing price OP. Now firm B reacts by reducing the price so that the firm A may not take away whole of the market As a result of this, the firm A will not have any increase in the demand for its product. Hence, BD segment of the demand curve-AD is relatively less elastic. As the firm A has not gained by reducing the price, so it will raise the price to the prevailing level of OP Hence, price is rigid at OP.

The price rigidity or stickiness is also established by the fact mat any shift in the MC curve also does not affect the price. It is evident from Fig. that despite shift in MC curve from MC_1 to MC_2 the price remains rigid at the level of OP. It is also to be noted that in we kinkeu model equilibrium is not defined by MC = MR as the MC curve passes through the discontinuous segment CE.

The price also remains rigid despite shift in the demand curve. In Fig. the demand curve (AR) – A_1D_1 shifts to the right to A_2D_2, but the price is rigid at OP level.



In short, Paul Sweezy has emphasised the price rigidity as the basic feature of the non-collusive oligopoly. Kinked demand curve is the logical deduction from price rigidity.

3. PRICE-OUTPUT DETERMINATION UNDER COLLUSIVE OLIGOPOLY

The term 'collusion' implies 'to play together'. The oligopolistic firms arrive at a formal agreement about price-output instead of competing with each other. The competing firms form a 'cartel'. The 'cartel' is a common sales agency formed to eliminate competition and fix such a price and quantity of output that will maximise profits of the member firms. The cartel determines the price-output for whole of the industry as well as for each member firm. In other words, the cartel administration determines the equilibrium total output as well as the equilibrium quantity of output for each member firm.

The price-output determination by the cartel administration can be explained on the basis of the following assumptions:

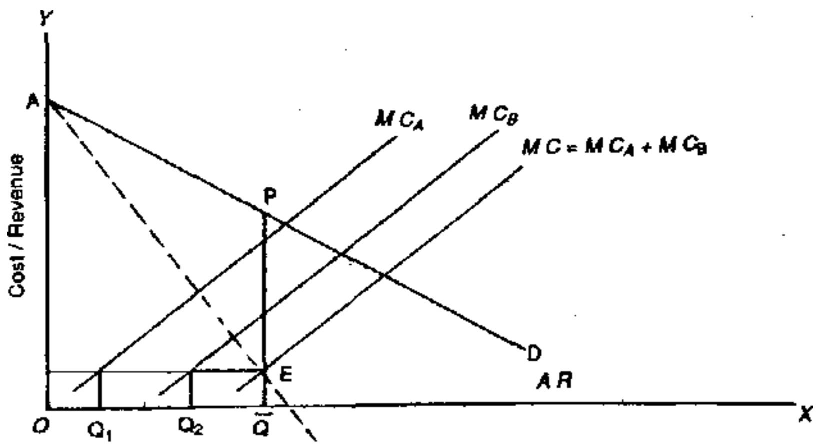
(i) It is assumed that there are two firms namely A and B. These firms form a cartel.

(ii) The products of firms A and B are homogeneous.

(iii) The costs of production of firms A and B are different.

(iv) The cartel determines such price-output combination which ensures maximum profits for whole of the oligopolistic industry.

The cartel estimates the total demand for the industry's product it is signified by the curve-AD in Fig. The marginal revenue curve - MR in the diagram shows cartel's revenue from the sale of the additional quantity of output. Cartel’s MC curve is the horizontal summation of the marginal cost curves of the firms A and B. The equilibrium of the oligopolistic industry is denoted by E, where MC = MR, The equilibrium price is QP and the equilibrium total output is OQ¯.



Having decided the total output to be produced equal to OQ the cartel allots the output quota to each member firm so that the marginal cost of each firm is the same. This can be determined by drawing a horizontal straight line from E towards the Y-axis. The firm A produces OQ_1 output and the firm B produces OQ_2 output. The total output OQ is equal to $OQ_1 + OQ_2$.

In short, Qp price and OQ output ensure joint profits to the members of the cartel or industry.

4. PRICE LEADERSHIP MODEL OLIGOPOLY

According to price leadership model of oligopoly, the leader firm in the market determines the price of the product. The firm which acts as the leader firm is one which is either a tow-cost firm, dominant firm or experienced and respected firm. Accordingly, the most common types of leadership are:

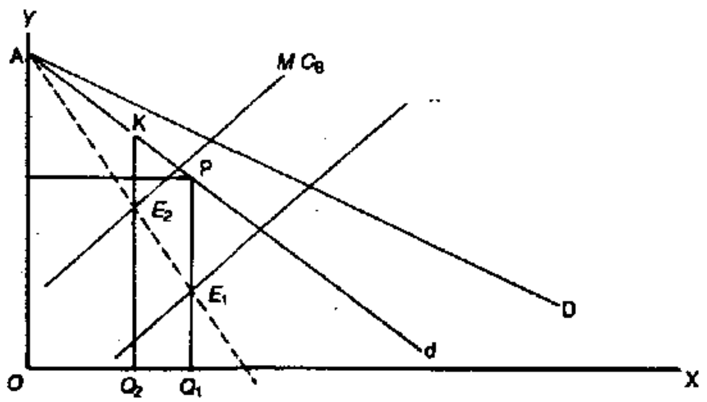
(i) Price leadership by a low-cost firm, (ii) Price leadership by a large (dominant) firm, (iii) Barometric price leadership (experienced and respected firm).

The leader firm determines the price by using the marginalistic rule of MC = MR. The Leader firm is a price-maker, and the other firms are price-takers. The price-taker firms maximise their profits by adopting the price fixed by the leader firm.

Price Leadership by a Low-cost Firm

The price-output determination under this model is based on the following assumptions:

(i) It is assumed that there are two firms A and B. (ii) The product produced by the two firms is homogeneous, (iii) The firm A being the low-cost firm acts as a leader firm, (iv) Each of the two firms has an equal share in the total market.



In Fig. AD is the market demand curve. Each of the two firms has a demand curve Ad. MR is the marginal revenue curve of each firm. MCA is the marginal cost curve of firm A and MCB is the marginal cost curve of firms B. MCA lies below MCB because we are assuming that firm A is a tow-cost firm acting as a Leader firm.

The Leader firm A is in equilibrium at E_1 where MC_A = MR. The firm A maximises profits by selling output OQ_1 and setting price Q_1P.

The firm B can maximise profits by producing OQ_2 output and selling it at Q_2K price as these correspond to its equilibrium at E_2 where MCB = MR. Since the firm B has to compete with the low-cost firm A (Leader firm), therefore it will be defeated in the price war if it fixes up Q_1K price which is higher than the Q_1P price of the leader firm A. Hence, the firm B will be compelled to follow the Leader firm A. The firm B will charge the price Q_1P as set by firm A. It will also produce OQ_1 output which is the equilibrium output of the Leader firm A.

To conclude, Q_1P price will prevail in the market and total output will be twice of OQ_1.

x-x-x-x-x