

UNIT – IV

PRICING UNDER DIFFERENT MARKET STRUCTURE

Perfect Competition: Meaning and Characteristics of Perfect Competition

Meaning of Perfect Competition:

A Perfect Competition market is that type of market in which the number of buyers and sellers is very large, all are engaged in buying and selling a homogeneous product without any artificial restrictions and possessing perfect knowledge of the market at a time.

Definition of Perfect Competition

”A market is said to be perfect when all the potential buyers and sellers are promptly aware of the prices at which the transaction take place. Under such conditions the price of the commodity will tend to be equal everywhere.”

According to Mrs. Joan Robinson, ”Perfect Competition prevails when the demand for the output of each producer is perfectly elastic.”

According to Boulding—”A Perfect Competition market may be defined as a large number of buyers and sellers all engaged in the purchase and sale of identically similar commodities, who are in close contact with one another and who buy and sell freely among themselves.”

Characteristics of Perfect Competition:

1. Large Number of Buyers and Sellers:

The first condition is that the number of buyers and sellers must be so large that none of them individually is in a position to influence the price and output of the industry as a whole. In the market the position of a purchaser or a seller is just like a drop of water in an ocean.

2. Homogeneity of the Product:

Each firm should produce and sell a homogeneous product so that no buyer has any preference for the product of any individual seller over others. If goods will be homogeneous then price will also be uniform everywhere.

3. Free Entry and Exit of Firms:

The firm should be free to enter or leave the firm. If there is hope of profit the firm will enter in business and if there is profitability of loss, the firm will leave the business.

4. Perfect Knowledge of the Market:

Buyers and sellers must possess complete knowledge about the prices at which goods are being bought and sold and of the prices at which others are prepared to buy and sell. This will help in having uniformity in prices.

5. Perfect Mobility of the Factors of Production and Goods:

There should be perfect mobility of goods and factors between industries. Goods should be free to move to those places where they can fetch the highest price.

6. Absence of Price Control:

There should be complete openness in buying and selling of goods. Here prices are liable to change freely in response to demand and supply conditions.

7. Perfect Competition among Buyers and Sellers:

In this purchasers and sellers have got complete freedom for bargaining, no restrictions in charging more or demanding less, competition feeling must be present there.

8. Absence of Transport Cost:

There must be absence of transport cost. In having less or negligible transport cost will help complete market in maintaining uniformity in price.

Price and Output Determination under Perfect Competition

Perfect competition refers to a market situation where there are a large number of buyers and sellers dealing in homogenous products.

In perfect competition, sellers and buyers are fully aware about the current market price of a product. Therefore, none of them sell or buy at a higher rate. As a result, the same price prevails in the market under perfect competition.

Under perfect competition, the buyers and sellers cannot influence the market price by increasing or decreasing their purchases or output, respectively. The market price of products in perfect competition is determined by the industry. This implies that in perfect competition, the market price of products is determined by taking into account two market forces, namely market demand and market supply.

In the words of Marshall, “Both the elements of demand and supply are required for the determination of price of a commodity in the same manner as both the blades of scissors are required to cut a cloth.” As discussed in the previous chapters, market demand is defined as a sum of the quantity demanded by each individual organizations in the industry.

On the other hand, market supply refers to the sum of the quantity supplied by individual organizations in the industry. In perfect competition, the price of a product is determined at a point at which the demand and supply curve intersect each other. This point is known as equilibrium point as well as the price is known as equilibrium price. In addition, at this point, the quantity demanded and supplied is called equilibrium quantity. Let us discuss price determination under perfect competition in the next sections.

Demand under Perfect Competition:

Demand refers to the quantity of a product that consumers are willing to purchase at a particular price, while other factors remain constant. A consumer demands more quantity at lower price and less quantity at higher price. Therefore, the demand varies at different prices.

Figure-1 represents the demand curve under perfect competition:

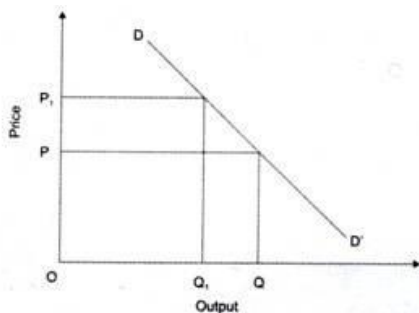


Figure-1: Demand Curve under Perfect Competition

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As shown in Figure-1, when price is OP, the quantity demanded is OQ. On the other hand, when price increases to OP₁, the quantity demanded reduces to OQ₁. Therefore, under perfect competition, the demand curve (DD') slopes downward.

Supply under Perfect Competition:

Supply refers to quantity of a product that producers are willing to supply at a particular price. Generally, the supply of a product increases at high price and decreases at low price.

Figure-2 shows the supply curve under perfect competition:

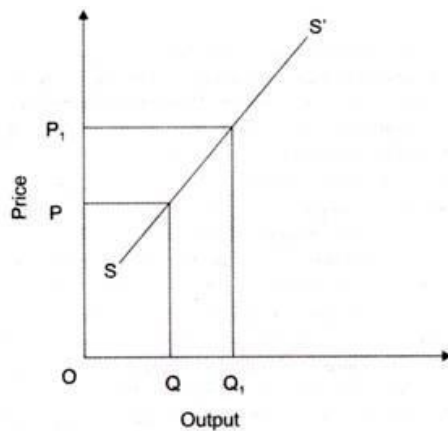


Figure-2: Supply Curve under Perfect Competition

In Figure-2, the quantity supplied is OQ at price OP. When price increases to OP₁, the quantity supplied increases to OQ₁. This is because the producers are able to earn large profits by supplying products at higher price. Therefore, under perfect competition, the supply curves (SS') slopes upward.

Equilibrium under Perfect Competition:

As discussed earlier, in perfect competition, the price of a product is determined at a point at which the demand and supply curve intersect each other. This point is known as equilibrium point. At this point, the quantity demanded and supplied is called equilibrium quantity.

Figure-3 shows the equilibrium under perfect competition:

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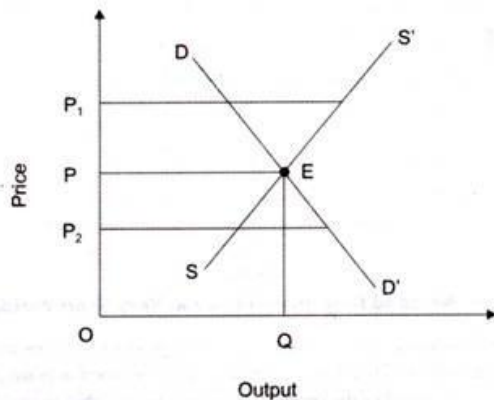


Figure-3: Price and Output Determination under Perfect Competition

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In Figure-3, it can be seen that at price OP_1 , supply is more than the demand. Therefore, prices will fall down to OP . Similarly, at price OP_2 , demand is more than the supply. Similarly, in such a case, the prices will rise to OP . Thus, E is the equilibrium at which equilibrium price is OP and equilibrium quantity is OQ .

Monopoly: Meaning, Definition and Features

Meaning:

The word monopoly has been derived from the combination of two words i.e., 'Mono' and 'Poly'. Mono refers to a single and poly to control.

Monopoly refers to a market situation in which there is only one seller of a commodity.

There are no close substitutes for the commodity it produces and there are barriers to entry. The single producer may be in the form of individual owner or a single partnership or a joint stock company. In other words, under monopoly there is no difference between firm and industry.

Monopolist has full control over the supply of commodity. Having control over the supply of the commodity he possesses the market power to set the price. Thus, as a single seller, monopolist may be a king without a crown. If there is to be

monopoly, the cross elasticity of demand between the product of the monopolist and the product of any other seller must be very small.

Definition:

“ “Monopoly is a market situation in which there is a single seller. There are no close substitutes of the commodity it produces, there are barriers to entry” . - Koutsoyiannis

Features of Monopoly

1. One Seller and Large Number of Buyers:

The monopolist's firm is the only firm; it is an industry. But the number of buyers is assumed to be large.

2. No Close Substitutes:

There shall not be any close substitutes for the product sold by the monopolist. The cross elasticity of demand between the product of the monopolist and others must be negligible or zero.

3. Difficulty of Entry of New Firms:

There are either natural or artificial restrictions on the entry of firms into the industry, even when the firm is making abnormal profits.

4. Monopoly is also an Industry:

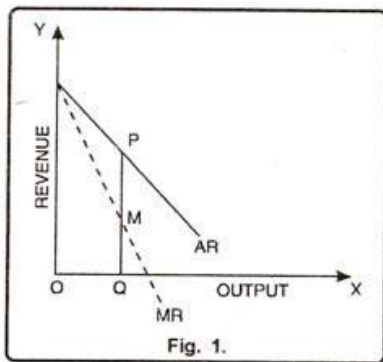
Under monopoly there is only one firm which constitutes the industry. Difference between firm and industry comes to an end.

5. Price Maker:

Under monopoly, monopolist has full control over the supply of the commodity. But due to large number of buyers, demand of any one buyer constitutes an infinitely small part of the total demand. Therefore, buyers have to pay the price fixed by the monopolist.

Nature of Demand and Revenue under Monopoly:

Under monopoly, it becomes essential to understand the nature of demand curve facing a monopolist. In a monopoly situation, there is no difference between firm and industry. Therefore, under monopoly, firm's demand curve constitutes the industry's demand curve. Since the demand curve of the consumer slopes downward from left to right, the monopolist faces a downward sloping demand curve. It means, if the monopolist reduces the price of the product, demand of that product will increase and vice-versa. (Fig. 1).



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In Fig. 1 average revenue curve of the monopolist slopes downward from left to right. Marginal revenue (MR) also falls and slopes downward from left to right. MR curve is below AR curve showing that at OQ output, average revenue (= Price) is PQ where as marginal revenue is MQ. That way $AR > MR$ or $PQ > MQ$.

Costs under Monopoly:

Under monopoly, shape of cost curves is similar to the one under perfect competition. Fixed costs curve is parallel to OX-axis whereas average fixed cost is rectangular hyperbola. Moreover, average variable cost, marginal cost and average cost curves are of U-shape. Under monopoly, marginal cost curve is not the supply curve. Price is higher than marginal cost. Here, it is of immense use to quote that a monopolist is not obliged to sell a given amount of a commodity at a given price.

Monopoly Equilibrium and Laws of Costs:

The decision regarding the determination of equilibrium price in the long run depends on the elasticity of demand and effect of law of costs on monopoly price determination.

1. Nature of Elasticity of Demand:

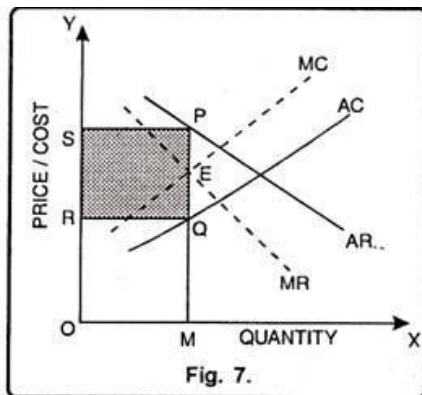
If the demand is inelastic, the monopolist will fix high price of his product. Inelastic demand refers to the situation in which consumers must have to buy the commodity what-so-ever may be the price. On the other hand, if demand is elastic, the monopolist will fix low price per unit.

2. Effects of Laws of Costs:

The monopolist also takes into consideration laws of costs while determining the prices. In the long run, output may be produced under law of diminishing costs, increasing costs and constant costs.

Increasing Costs:

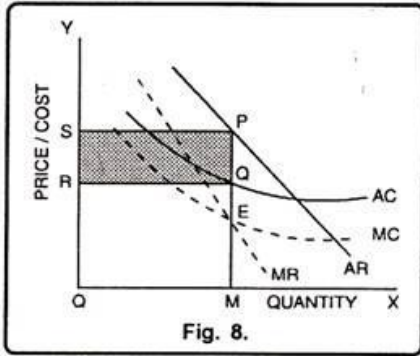
If the monopolist produces the commodity under the law of Diminishing Returns or Increasing costs, he will get the maximum profit at point E where marginal revenue is equal to marginal cost. This is indicated in Fig. 7. Here he produces OM units of the commodity and gets PM as the price. His monopoly profit is represented by the shaded area PQRS. No other alternative will give him this much of profit and hence this is the best position for him provided he produces goods under the Law of Increasing Costs.



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Diminishing Costs:

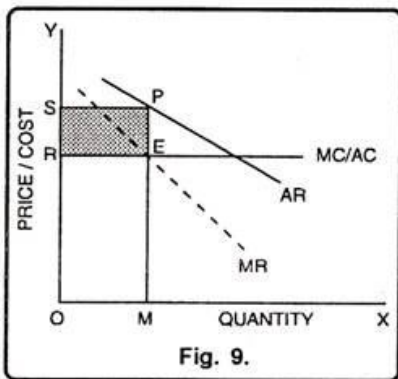
The same approach will be applicable under the Law of Increasing Returns or Diminishing Cost as explained in Fig. 8. Here AC and MC are falling. The MC and MR are equal at point E. accordingly; the monopolist will produce OM units of commodity and sell the same at PM Price. His net monopoly revenue will be PQRS indicated by shaded area.



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Constant Costs:

The determination of monopoly price under constant costs can be shown with the help of Fig. 9. In the diagram, the AC curve will be a horizontal line running parallel to OX and for all the levels of output AC will be equal to MC. AR and MR represent the average revenue curve and marginal revenue curve respectively. The equilibrium between MC and MR is brought at point E when the output is OM. Thus, the monopolist will produce OM and will sell it at PM Price. The monopoly profit will, therefore, be equal to PERS which is represented by the shaded area.



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Monopolistic Competition

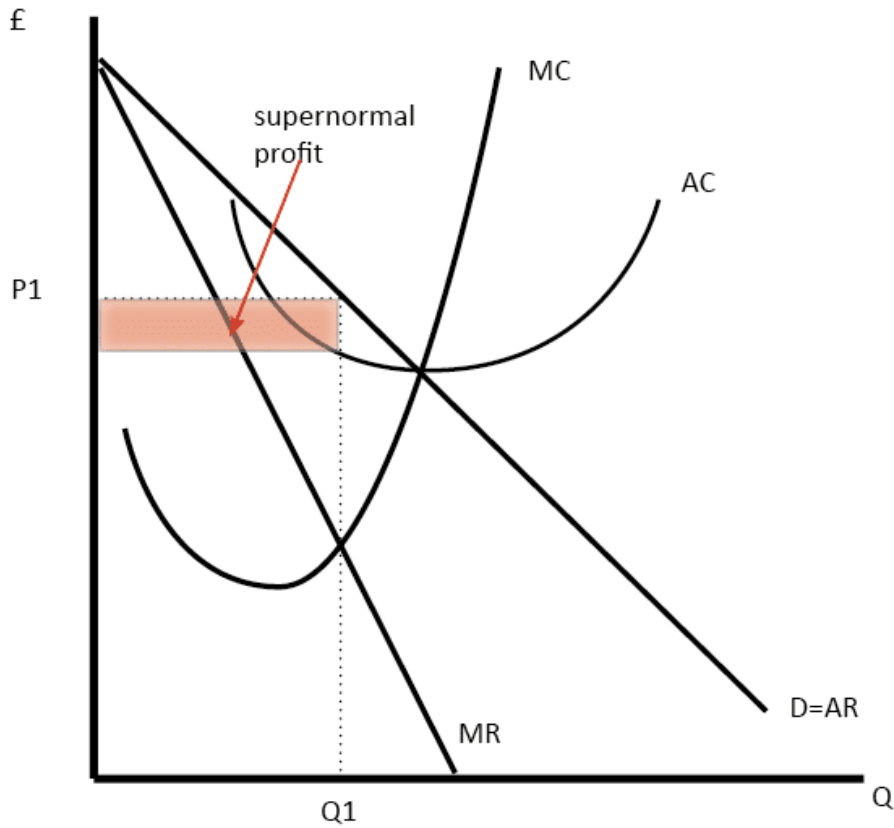
Definition:

Monopolistic competition is a market structure which combines elements of monopoly and competitive markets. Essentially a monopolistic competitive market is one with freedom of entry and exit, but firms can differentiate their products. Therefore, they have an inelastic demand curve and so they can set prices. However, because there is freedom of entry, supernormal profits will encourage more firms to enter the market leading to normal profits in the long term.

Features of Monopoly

- Many firms.
- Freedom of entry and exit.
- Firms produce differentiated products.
- Firms have price inelastic demand; they are price makers because the good is highly differentiated
- Firms make normal profits in the long run but could make supernormal profits in the short term
- Firms are allocatively and productively inefficient.

Diagram monopolistic competition short run

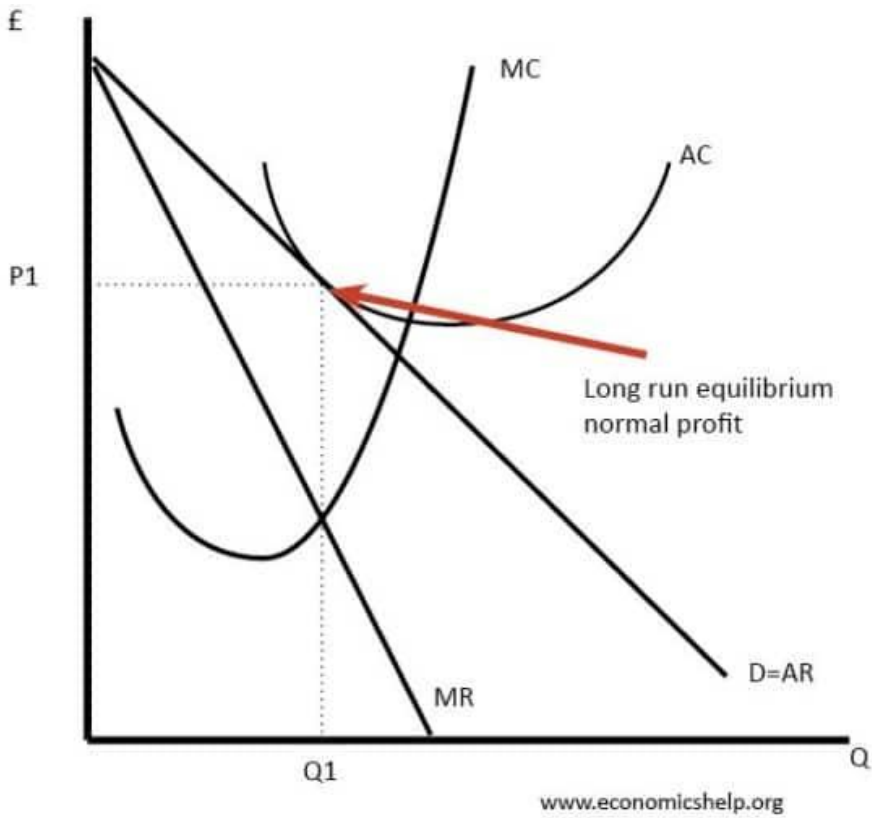


In the

short run, the diagram for monopolistic competition is the same as for a monopoly.

The firm maximises profit where $MR=MC$. This is at output $Q1$ and price $P1$, leading to supernormal profit.

Monopolistic competition long run



Demand curve shifts to the left due to new firms entering the market.

In the long-run, supernormal profit encourages new firms to enter. This reduces demand for existing firms and leads to normal profit. I

In monopolistic competition there are no barriers to entry. Therefore in long run, the market will be competitive, with firms making normal profit.

Oligopoly

The word Oligopoly is derived from two Greek words – ‘Oligi’ meaning ‘few’ and ‘Polein’ meaning ‘to sell’.

Oligopoly Definition and Meaning

Oligopoly is defined as a market structure with a small number of firms, none of which can keep the others from having significant influence.

Meaning of Oligopoly Market

An Oligopoly market situation is also called ‘competition among the few’. In this article, we will look at Oligopoly definition and some important characteristics of this [market structure](#).

An oligopoly is an industry which is dominated by a few firms. In this market, there are a few firms which sell [homogeneous](#) or differentiated products.

Also, as there are few sellers in the market, every seller influences the behavior of the other firms and other firms influence it.

Oligopoly is either perfect or imperfect/differentiated. In India, some examples of an oligopolistic market are automobiles, cement, steel, [aluminum](#), etc.

Characteristics of Oligopoly

Few firms

Under Oligopoly, there are a few large firms although the exact number of firms is undefined. Also, there is severe competition since each firm produces a significant portion of the total output.

Barriers to Entry

Under Oligopoly, a firm can earn super-normal profits in the long run as there are barriers to entry like patents, licenses, control over crucial raw [materials](#), etc. These barriers prevent the entry of new firms into the [industry](#).

Non-Price Competition

Firms try to avoid price competition due to the fear of price wars in Oligopoly and hence depend on non-price methods like [advertising](#), after sales [services](#), [warranties](#), etc. This ensures that firms can influence demand and build brand recognition.

Interdependence

Under Oligopoly, since a few firms hold a significant share in the total output of the industry, each firm is affected by the price and output decisions of rival firms. Therefore, there is a lot of interdependence among firms in an oligopoly. Hence, a firm takes into account the action and reaction of its competing firms while determining its price and output levels.

Nature of the Product

Under oligopoly, the products of the firms are either homogeneous or differentiated.

Selling Costs

Since firms try to avoid price competition and there is a huge interdependence among firms, selling costs are highly important for competing against rival firms for a larger market share.

No unique pattern of pricing behavior

Under Oligopoly, firms want to act independently and earn maximum profits on one hand and cooperate with rivals to remove uncertainty on the other hand.

Depending on their motives, situations in real-life can vary making predicting the pattern of pricing behavior among firms impossible. The firms can compete or collude with other firms which can lead to different pricing [situations](#).

Indeterminateness of the Demand Curve

Unlike other market structures, under Oligopoly, it is not possible to determine the demand curve of a firm. This is because on one hand, there is a huge interdependence among rivals. And on the other hand there is uncertainty regarding the reaction of the rivals. The rivals can react in different ways when a firm changes its price and that makes the demand curve indeterminate.

Firms behaviour under Oligopoly

Based on the objectives of the firms, the magnitude of barriers to entry and the nature of government regulation, there are different possible outcomes in relation to a firm's behavior under Oligopoly. These are:

1. Stable prices
2. Price wars
3. Collusion for higher prices

Further, Oligopoly can either be collusive or non-collusive. Collusive oligopoly is a market situation wherein the firms cooperate with each other in determining price or output or both. A non-collusive oligopoly refers to a market situation where the firms compete with each other rather than cooperating.

Non-Collusive Oligopoly-Sweezy's Kinked Demand Curve Model (Price-Rigidity)

Usually, in Oligopolistic markets, there are many price rigidities. In 1939, Paul Sweezy used an unconventional demand curve – the kinked demand curve to explain these rigidities.

Reason for the kink in the demand curve

It is assumed that firms behave in a two-fold manner in reaction to a price change by a rival firm. In simple words, firms follow price cuts by a rival company but not price increases. So, if a seller increases the price of his product, his rivals do not follow the price increase.

Therefore, the market share of the firm reduces significantly as a result of the price rise. On the other hand, if a seller reduces the price of his product, then the rivals also reduce their price to bring it at par with the price reduction of the firm.

This ensures that they prevent their market share from falling. Once the rivals react, the firm lowering the price first cannot gain from the price cut.

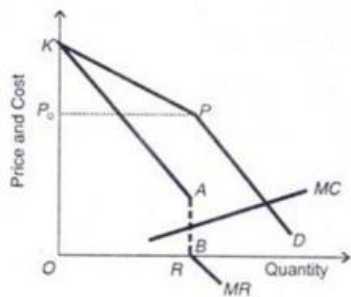
Why the price rigidity?

As can be seen above, a firm cannot gain or lose by changing its price from the prevailing price in the market. In both cases, there is no increase in demand for the

firm which changes its price. Hence, firms stick to the same price over time leading to price rigidity under oligopoly.

Explanation of the Kinked-Demand Curve Model

Kinked – Demand Curve Model



In the figure above, KPD is the kinked-demand curve and OP_0 is the prevailing price in the oligopoly market for the OR product of one seller. Starting from point P, corresponding to the point OP_1 , any increase in price above it will considerably reduce his sales as his rivals will not follow his price increase.

This is because the KP portion of the curve is elastic and the corresponding portion of the MR curve (KA) is positive. Therefore, any price increase will not just reduce the total sales but also his total revenue and profit. On the other hand, if the seller reduces the price of the product below OP_0 (or P), his rivals will also reduce their prices.

However, even if his sales increase, his profits would be less than before. This is because the PD portion of the curve below P is less elastic and the corresponding part of the marginal revenue curve below R is negative. Therefore, in both price-raising and price-reducing situations, the seller is the loser. He will stick to the prevailing market price OP_0 which remains rigid.

Working of the kinked-demand curve

Let's analyze the effect of changes in cost and demand conditions on price stability in the oligopolistic market. Let's suppose that the prevailing price in the market is OP_0 .

Therefore, if one seller increases the price above OP_0 and the rival sellers don't and keep the prices of their products at OP , then it will lead to the product becoming costlier than the others.

Subsequently, the demand for the costlier product will fall significantly. This is seen in the demand curve of a firm for any price above OP_0 or the KP section of the curve, is relatively elastic. The high elasticity reduces the demand significantly as a result of the price increase.

On the other hand, if the seller reduces the price below OP_0 , the rivals also follow the price cut to prevent their demand from falling. This is seen in the demand curve of a firm for any price below OP_0 or the PD segment of the curve is relatively inelastic. The low elasticity does not increase the demand significantly as a result of the price cut.

This asymmetrical behavioral pattern results in a kink in the demand curve and hence there is price rigidity in oligopoly markets. The prices remain rigid at the kink (point P). In other words, the price will remain sticky at OP_0 and the output = OR at this price.

Due to the difference in the elasticities, the MR curve becomes discontinuous corresponding to the point of change in elasticity of the demand curve. The kink represents this. At the output $< OR$, the demand curve is KP and the corresponding MR curve is KA . For output $> OR$, the demand curve is PD and the corresponding MR curve is BMR .

