**Subject: Management**

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**Paper:** 11, Managerial Economics

**Module:** 18, Market and Market Structure

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| Items | Description of Module |
|---|---|
| **Subject Name** | Management |
| **Paper Name** | Managerial Economics |
| **Module Name/Title** | Market and Market Structure |
| **Module Id** | Module no-18 |
| **Pre-requisites** | Basic knowledge about the Market and Market Structure |
| **Objectives** | *To understand the meaning and concept of Market<br>*To understand the classification of Market & Market Structure |
| **Keywords** | Market, Market Structure, Market Classification |

**QUADRANT-I**

| **Module 18: Market and Market Structure** |
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| 2. Introduction & meaning of Market |
| 3. Classification of market |
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| 5. Market classification and cross elasticity of demand |
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## 1. Learning Objectives

After completing this module, the students will be able to understand:

- The concept of Market and Market Structure
- Classification of Market and Market Structure
- Market classification and cross elasticity of demand
- Concept of Revenue
- Relationship between AR & MR

# MARKET AND MARKET STRUCTURE

## 2. Introduction and meaning of Market

Market in general means a particular place or locality where goods are sold and purchased. But, in economics, the term 'market does not include particular any place or locality in which goods are bought or sold. The notion of exacting of the market locality or geographical place is not necessary to the concept of the market. What is necessary for the market to exist is the contact between buyers and sellers so that the transactions of goods and services at a given price can take place between them. The seller and buyer may be spread over an entire region, sometimes in different countries, but they can contact and communicate and can exchange commodities. The function of a market is to enable the exchange of goods and services. In general a market is defined as a group of people and firms which are in interaction with another for the purpose of buying and selling of products or / services. The main feature of market is that seller and buyer should be able to get in close contact with each other.

## 3. Classification of market

The determination of prices of commodities depends upon the type of market structure in which they are produced. There are various markets prevailing in an economy like (a) perfect competition, (b) Monopoly, (c) Monopolistic Competition, and (d) Oligopoly. Monopoly, monopolistic competition and oligopoly are generally grouped under imperfect competition, since these three markets differ in respect to the degree of imperfections in the market. Most common basis of classifying market structures depends upon two crucial elements, (A) the number of firms producing a product and (B) the nature of product produced by firms, may be homogeneous or heterogeneous. . The price elasticity of demand for a firm's product depends upon the number of competitive firms producing the similar product as well as degree of substitution which is possible between the product of a firm and other products produces by competitive firms. Following are the basis for classification of markets:

- Classification by geographical area: geographical classification of markets based on the spread of buyers and sellers such as local, regional, national and international markets
- Classification by volume of business: according to this classification markets can be classified into wholesale and retail markets.
- Classification by nature of transactions: based on the nature of transactions markets can be classified as spot market or future market.

- Classification by regulation: according to government stipulations and regulations markets can be classified into regulated and unregulated markets.
- Classification by status: based on intermediation with buyers and sellers, markets can be classified into 'primary', 'secondary' and 'terminal' markets
- Classification on the basis of market structures: it is a most important base for classifying markets and takes into consideration the four components of market that is sellers, buyers, products and conditions of entry and exit.
- Classification on the basis of time: according to time, markets can be classified as very short period, short period, long period and very long period markets.

## 4. Classification of market structures

Markets are conventionally classified into four type's namely Perfect competition, monopoly, monopolistic competition and oligopoly. The classification of market structures based on the four principal components of market and the number of decision variables have been presented in a tabular form as follows:

| Type of market | Nature of product | Number of sellers | Number of buyers | Entry and Exit | Price | Decision variables |
|---|---|---|---|---|---|---|
| Perfect competition | Homogeneous for all firm | Large | Large | Free entry/ free exit | Uniformity | Output |
| Monopoly | Unique product without close substitution | One | Large | Entry barriers | High | Both price and output are under control but decision can be taken about one of them |

| Discriminating monopoly | Unique product | One | Large | Entry barriers | High | Discrimination in prices |
|---|---|---|---|---|---|---|
| Monopolistic competition | Product differentiation but close substitution | Large | Large | Product differentiation act as entry barrier | Higher than perfect competition but lower than monopolistic | Nature and extent of product differentiation |
| Oligopoly | May be homogeneous or heterogeneous | Few | Large | Product differentiation act as entry barrier | Low | Price, product differentiation and selling expenses |
| Duopoly | May be homogeneous or heterogeneous | Two | Large | Product differentiation act as entry barrier | High | Price, product differentiation and selling expenses |

Now, we explain below each form of market category.

1) **Perfect competition**: it is characterized by large number of buyers and sellers of an essentially identical product. Individual buyers and sellers are only price takers not makers. At the ruling price a firm can sell any quantity.

- The number of sellers is deemed to be so large and the amount of sales done by each so small in relation to the market that none of the seller, taken by him, is able to influence the price by his own individual action of expanding or with holding his produce.
- Again here the number of buyers is thought to be large enough to prevent any one buyer from affecting the price in the market by his own action of purchasing more or less, and the purchases made by any one of the buyers are small as compared with the purchase of all the buyers in the market.

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- All the sellers in the market have a perfectly similar product to offer, that is the product offer by each of the producers is in every way the same from time viewpoint of the buyer. The sellers' products are similar in colour, shape, design and service so that no one of the buyers has reason to be attached to any one of the sellers. There is no effect of any kind whatever to prejudice buyers mind in favour of their product.
- There is free entry or exit of firms. It means any firm from outside the industry must be able to enter the industry without any obligation and any firm working in the industry must be free to go out of it and when the firm likes.

The four conditions given above have been introduced in the market to ensure that an individual seller is a price-taker. Single seller can neither raise his price above that of the market nor can afford to lower it. If a seller raises his price above that prevailing in the market, he loses all of his customers. On the other hand, he has no incentive to lower his price since he can sell the whole of his production at the going price.

If no one seller or buyer can influence the price, then how is the price determined? It is not determined by individuals, it is the result of the industry demand and supply. Market supply and demand interact to determine price, and individual take it as a 'given'.

2) **Monopoly**: Monopoly is the opposite of competition; pure monopoly is the opposite of pure perfect completion. In such a market there is only one seller of the product, the sole controller of supply of the product in the market. The seller produces a commodity for which it is difficult to find a substitute. The firm constitutes the industry. The demand for output of this one firm is at once demand for the total industry.
A pure monopolist is one who can charge any price he likes by restricting his output. Whatever the price he decides to charge, total expenditure on his product done by purchasers remains the same. In other words, the elasticity of demand for the product of the firm is unitary.

3) **Monopolistic Competition**: It involves many sellers, selling differentiated products and many buyers. The products are close, although not exact substitutes and there is high cross-elasticity of demand between the products. There may be

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difference in quality, style, colour, size, packing, trade names, brands, type of service, location of stores, containers and many other considerations that may give rise to a spirits of attachment of buyers to particular sellers. All the firms producing the closely related, competing goods, compose one industry. Examples are articles of clothing, bay food, toilet articles and many other articles generally sold in retail stores.

4) **Oligopoly**: It is that market situation in which the market for a commodity is dominated by a few firms each of which is producing and selling a considerable proportion of the total output sold in the market. When there are two sellers in the market, the market structure is called duopoly. It is just a special case of oligopoly. Each firm is so large relative to the size of the market that y its own individual action it can affect market price.

Changes by it in the output sold or price charged do not go unnoticed by its rivals. Therefore, in shaping its price policy each firm must take into consideration the reactions of the few owner producers and also his possible reaction to their reactions.

## 5. Market Classifications and Cross Elasticity of Demand

This concept of cross elasticity of demand has been used to measure the amount and kind of competition among firms and therefore for classifying market structures. In perfect competition the cross elasticity of demand for the product of a single firm with respect to a change in price of the rest of the industry will be infinite. It means, the proportionate fall in the demand for the product of a single firm will be infinitely large compared with any given proportionate fall in the price of the product of the whole industry. In monopolistic competition the cross elasticity of demand for the product of a single firm with respect to a change in the price of other products made in the monopolistic group will be very high. The cross elasticity of demand for a product of a monopolist with respect to a fall in the price of other products in the economy will be very low. In nutshell, we can say in perfect competition cross elasticity of demand is infinite. In monopoly, cross elasticity of demand is very low or zero and in case of monopolistic competition, cross elasticity of demand is very high.

But, this concept of cross elasticity of demand as a measure of classifying market structure is very much inadequate and sometimes leads to erroneous conclusions. The main objection is that it causes neglect of the two basic elements of market structure

that is, the degree of attachment or detachment of substitution among products and the number of firms in the relevant group or industry and these two concepts are fundamental to an understanding of market structure.

It has been further pointed out by many economists that cross elasticity of demand of any perfectly competitive firm, instead of being infinity, is zero and in case of monopoly it is also zero. So cross elasticity of demand in two market situations that is in pure competition or in pure monopoly which are opposite to each other, found to be the same.

Therefore, it is observed that, the market classification on the basis of elasticity of demand is not satisfactory. The basis of classification of market should be on the number of firms in the industry and, on the nature of the product that is attachment or detachment of substitutes.

## 6. Concept of Revenue

The firm has to play the dual role of the producer and a seller. As a producer, it tends to minimise the cost of producing output. But how much is to be produce /is decided by the conditions that prevail in its product market and the sale proceeds it expect to earn from the produce and costs that it has incurred. The equilibrium output is that which gives it the maximum profit. So the sale proceed that a firm gets from the sale of its product is called revenue. Total revenue a firm earns calculated by multiplying the total sale by the price at which the product is sold. Average revenue is total revenue divided by output. It is nothing but the sale price of the product.

**Total Revenue = price × output**

**Average Revenue = Price = Total Revenue / Total Output**

Marginal Revenue is the addition made to total revenue by the sale of an additional unit of the product in the market.

**Marginal Revenue = Total revenue of n units – Total revenue of (n-1)**

As the firm sells more of its production in the market, it expects adding to its sale proceeds. So a firm is expected to sell more only when it adds to its total revenue. In other words, marginal revenue ordinarily goes on falling as more is sold. Ultimately, a state is reached, where as the firm goes on selling more and more, the market is saturated with an output and marginal revenue is reduced to zero, that is no addition to total revenue.

## 7. Relationship between Average Revenue and Marginal Revenue

A cost curve in different market forms remains the same but revenue curves changes with the change in the form of market. The relationship of AR and MR can be studied in different market forms such as Perfect Competition, Monopoly, Monopolistic Competition and oligopoly.

- **Revenue Curves under Perfect Competition**: 'One market and one price' is the golden rule of perfectly competitive market. In perfect competition all firms are price taker and price is settled by an industry with the forces of demand and supply. So one price prevails in the market. So in perfectly competitive market:

$$\text{Price} = AR = MR$$

Under perfect competition both AR and MR will be parallel to 'OX' axis as it is seen in the following figure:



**AR Curve Under Perfect Competition**
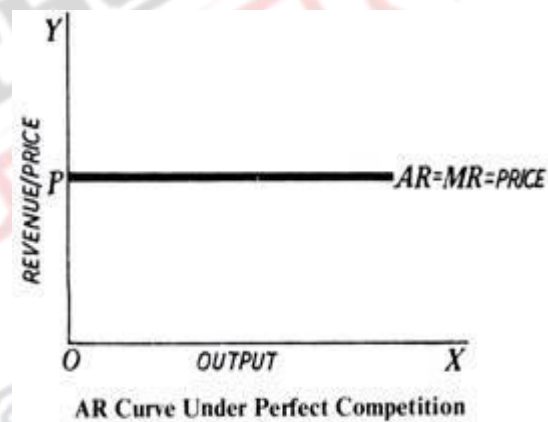
In this figure output and revenue is taken on 'OX' and 'OY' axis respectively AR and MR are equal to each other and are parallel to 'OX' axis. At OP price a firm can sell any amount of goods.

- **Revenue curves under Monopoly:** Monopoly is a market where one seller and large number of buyers. Under monopoly market both AR and MR curves slopes downward but MR lies below AR.

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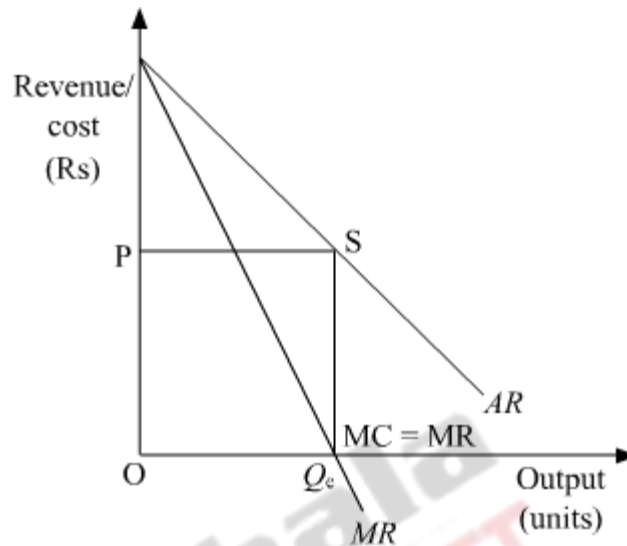
In this figure output and revenue all measured on 'OX' and 'OY' axis respectively. MR lies below AR. Perpendicular drawn from any point of AR on 'OY' axis will be divided into two equal parts by MR curve.AR and MR slope down ward because under monopoly a producer has one option with him. Either he can sell more quantity of output at lesser prices or he can charge high price but is bound to sell less quantity of output. MR also slopes downward and the rate of fall of MR will be greater than AR.

- **Revenue curves under Monopolistic competition:** AR and MR curves under monopolistic competition slope downward but have less slope. Because in monopolistic competition each producer charges different price of his product than the price charged by other producers. AR and MR are more elastic as each product has its close substitute.

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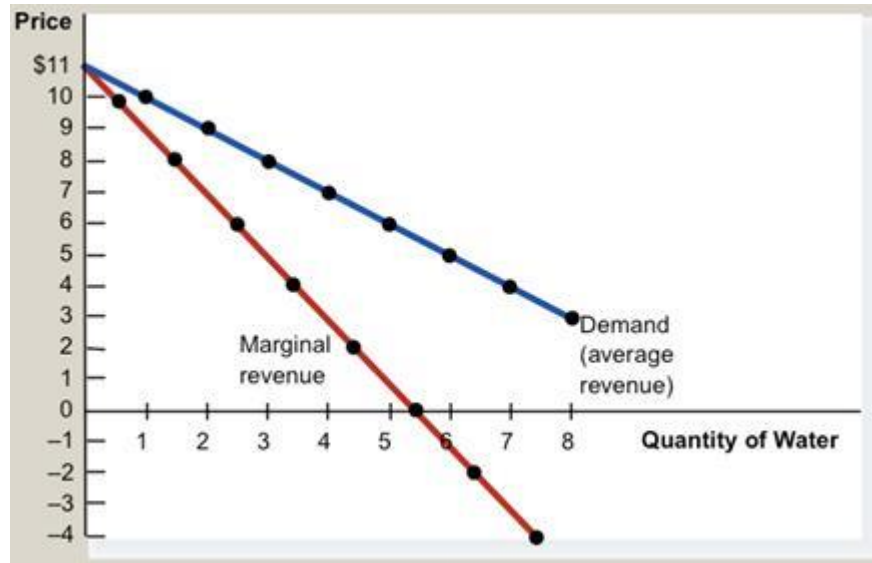
Both AR and MR are more elastic than AR and MR under monopoly market. Comparison of both AR and MR are given below:
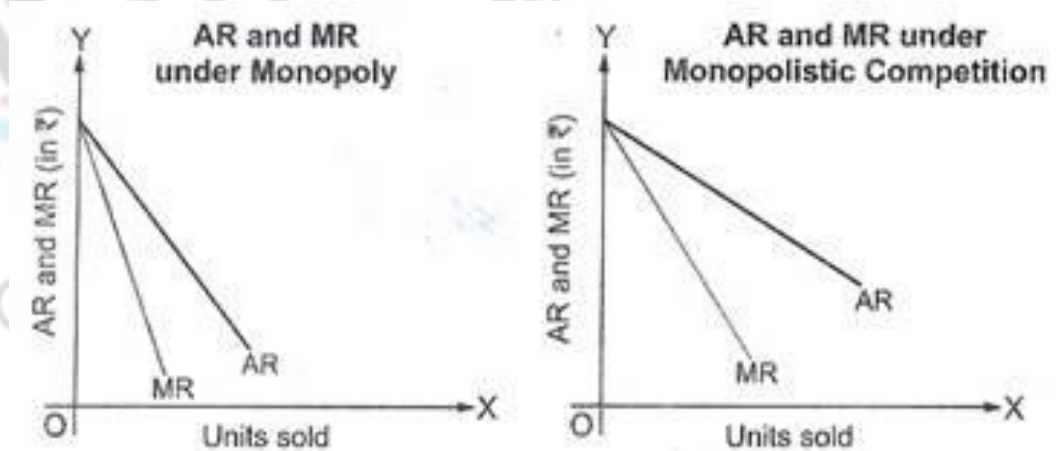


- **Revenue curves under Oligopoly**: Oligopoly is a situation of market where few sellers are selling homogeneous or differentiated products. In this market

there is a competition among few sellers and AR will be kinked curve as it is shown in figure:



Fig. 12.
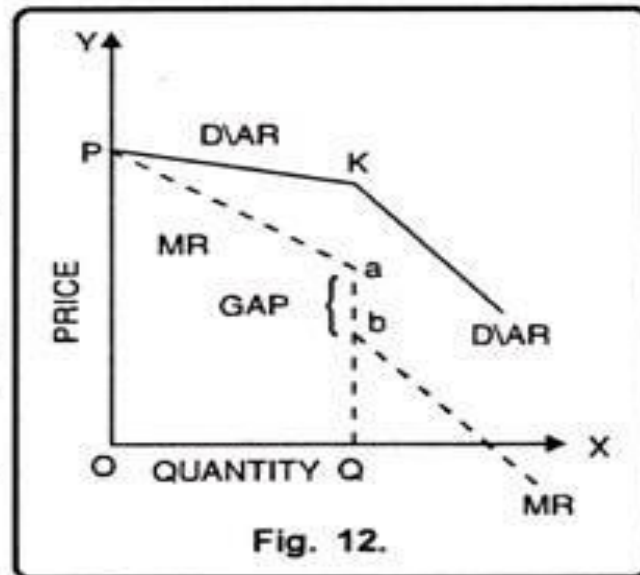
Output and revenue is measured in 'OX' and 'OY' axis. AR has a kink at point 'K'. This demand curve is a combination of two demand curves. First portion of DD up to point ' K' is more and the lower portion of DD after point K is less elastic when a producer changes price of his product then he assumes that other firms are not changing prices of their products. This portion is up to point 'K'. From point 'K' onward when a producer changes price of his product it is assumed that other producer will also change prices of their products. When all firms lower price of their products then sale will not increase of any single firm, there will be a very small increase in the sales of all firms both these portions form a kink on AR at point 'K'. MR curve becomes discontinuous at 'ab' level of quantity sold. 'ab' portion of MR which lies below point 'K' represents discontinuity. First portion of MR which is below the more elastic portion of AR is positive. This shows that when a firm lower the price then its total revenue will increase. Below the point 'b' portion of MR which is below less elastic part of AR signifies that at lowering price level there will not e any increase in total revenue. Gap of MR from point 'a' to 'b' emerge due to sudden change in AR from more to less elastic position.

## 8. Significance of the Concept of Revenue

The importance of the concept of revenue as under:

- **Firm's equilibrium**: A producer is able to know the position of equilibrium of his firm with the help of revenue curves. When MR is greater than MC a producer can increase the size of output to get more revenue. The basic aim of each producer is to get maximum profits. When MR is less than MC firm will get loss and firm will be in equilibrium when both MC and MR are equal. This is a position of break-even point. Departure from this position will gave firm more profit and in backward direction gives loss to firm.

- **Estimates of profit and loss**: A firm can also calculate profit and loss by making use of revenue curves.
    1) A firm will earn super normal profits when TR is more than TC or AR>AC
    2) A firm will earn normal profits when TR=TC or AR=AC
    3) A firm will earn loss when TR<TC or AR<AC.

- **Change in price**: Firm is also able to know whether it can earn profit by lowering or increasing the price of products. In case of elastic demand when increases by lowering the price. The firm can earn profits. When TR increases by raising the price in case of inelastic demand then it will raise the price. When there is no change in TR either by lowering or increasing the price then firm will not lower or raise the price of its products.

- **Knowledge about full or under Capacity production**: revenue curves are also helpful to know whether firm is producing output by using full or under capacity of its production. If AR is tangent to AC at its minimum point then firm is using its full capacity to produce goods or output, but in case of monopoly and monopolistic competition firm possesses excess capacity.

**9. Summary:** Market structure describes the competitive environment in the market for any good or service. A market consists of all firms and individuals willing and able to buy and sell a particular product. This includes firms and individuals currently engaged in buying and selling a particular product, as well as potential entrants. There are four types of markets Perfect competition, monopoly, monopolistic competition and oligopoly. Market structure determines a firm's power to fix the price of its product a great deal. The degree of competition determines a firm's degree of freedom in determining the price of its product.

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