

The microeconomics studies the economic actions and behavior of individual units and small groups of individual units. In microeconomics theory we discuss how the various cells of economic organism, that is, the various units of the economy such as thousands of consumers, thousands of producers or firms, thousands of workers and resources suppliers in the economy do their economic activities and reach their equilibrium states.

In other words, in microeconomics we make a microscopic study of the economy. But it should be remembered that microeconomics does not study the economy in its totality. Instead, in microeconomics we discuss equilibrium of innumerable units of the economy piece-meal and their interrelationship to each other.

Professor Lamer rightly says, "Microeconomics consists of looking at the economy through a microscope, as it were, to see how the millions of cells in the body economic—the individuals or households as consumers, and the individuals or firms as producers—play their part in the working of the whole economic organism." For instance, in microeconomic analysis we study the demand of an individual consumer for a goods and from there go on to derive the market demand for the goods (that is demand of a group of individuals consuming a particular goods).

Likewise, microeconomic theory studies the behavior of the individual firms in regard to the fixation of price and output and their reactions to the changes in the demand and supply conditions. From there we go on to establish price-output fixation by an industry (Industry means a group of firms producing the same product).

Thus, microeconomic theory seeks to determine the mechanism by which the different economic units attain the position of equilibrium, proceeding from the individual units to a narrowly defined group. Microeconomic analysis concerns itself with narrowly defined groups; since it does not study the totality of behavior of all units in the economy for any particular economic activity. In other words, the study of economic system or economy as a whole lies outside the domain of microeconomic analysis.

Microeconomic theory takes the total quantity of resources as given and seeks to explain how they are allocated to the production of particular goods. It is the allocation of resources that determines what goods shall be produced and how they shall be produced.

The allocation of resources to the production of various goods in a free market economy depends upon the prices of the various goods and the prices of the various resources or factors of production. Therefore, to explain how the allocation of resources is determined, microeconomics

proceeds to analyze how the relative prices of goods and factors are determined. Thus, the theory of product pricing and the theory of factor pricing (or the theory of distribution) falls within the domain of microeconomics.

The theory of product pricing explains how the relative prices of cotton cloth, food-grains, jute, kerosene oil, Banaspati Ghee and thousands of other goods are determined. The theory of distribution explains how wages (price for the use of labor), rent (payment for the use of land), interest (price for the use of capital) and profits (the reward for the entrepreneur) are determined. Thus, the theory of product pricing and the theory of factor pricing are the branches of microeconomics theory.

Prices of the products depend upon the forces of demand and supply. The demand for goods depends upon the consumers' behavior pattern, and the supply of goods depends upon the conditions of production and cost and the behavior pattern of the firms or entrepreneurs.

Thus, the demand and supply sides have to be analyzed in order to explain the determination of prices of goods and factors. Thus, the theory of demand and the theory of production are two subdivisions of the theory of pricing.

Besides analyzing the pricing of products and factors and the allocation of resources based upon the price mechanism, microeconomics also seeks to explain whether the allocation of resources determined is efficient. Efficiency in the allocation of resources is attained when the resources are so allocated that maximizes the satisfaction of the people.

Economic efficiency involves three efficiencies—efficiency in production, efficiency in distribution of goods among the people (This is also called efficiency in consumption), and overall economic efficiency, that is, efficiency in the direction of production. Microeconomic theory shows under what conditions these efficiencies are achieved. Microeconomics also shows what factors cause departure from these efficiencies and result in the decline of satisfaction from the maximum possible level.

Efficiency in production involves producing a maximum possible amount of various goods from the given available amount of resources. When such productive efficiency is attained, then it is no longer possible by any reallocation of the productive resources or factors among the production of various goods and services to increase the output of any goods without a reduction in the output of some other goods.

Efficiency in consumption consists of distributing the given amount of produced goods and services among millions of the people for consumption in such a way as to maximize the total satisfaction of the society. When such efficiency is achieved it is no longer possible—by any redistribution of goods among the people—to make some people better off without making some other ones worse off. Overall economic efficiency or optimum direction of production consists of producing those goods which are most desired by the people, that is, when the direction of production is such that maximizes the satisfaction of the people.

In other words, overall economic efficiency implies that pattern of production (i.e., amounts of the various goods and services produced) should correspond to the desired pattern of consumption of the people. Even if efficiencies in consumption and production of goods are present, it may be that the goods which are produced and distributed for consumption may not be those preferred by the people.

There may be some goods which are more preferred by the people but which have not been produced and vice versa. To sum up, overall efficiency (optimum direction of production) is achieved when the resources are so allocated to the production of various goods that the maximum possible satisfaction of the people is obtained. Once this is achieved then by producing some goods more and others less by any rearrangement of the resources will mean loss of satisfaction or efficiency.

The question of economic efficiency is the subject-matter of theoretical welfare economics which is an important branch of microeconomic theory. That microeconomic theory is intimately concerned with the question of efficiency and welfare is evident from the following remarks of A. P. Lerner, a noted American economist.

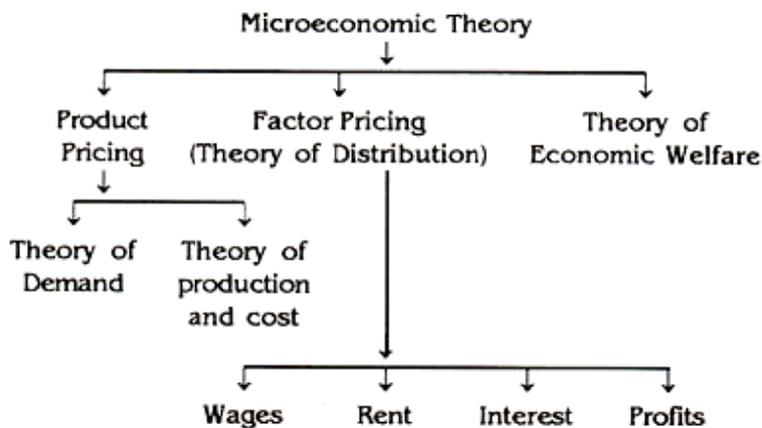
In microeconomics we are more concerned with the avoidance or elimination of waste, or with inefficiency arising from the fact that production is not organized in the most efficient possible manner. Such inefficiency means that it is possible, by rearranging the different ways in which products are being produced and consumed, to get more of something that is scarce without giving up any part of any other scarce item, or to replace something by something else that is preferred.

Microeconomic theory spells out the conditions of efficiency (i.e., for the elimination of all kinds of inefficiency) and suggests how they might be achieved. These conditions (called Pareto-optimal, conditions) can be of the greatest help in raising the standard of living of the population.

The four basic economic questions with which economists are concerned, namely,

- (1) What goods shall be produced and in what quantities,
- (2) How they shall be produced,
- (3) How the goods and services produced shall be distributed, and
- (4) Whether the production of goods and their distribution for consumption is efficient fall within the domain of microeconomics.

The whole content of microeconomics theory is presented in the following chart:



It is generally understood that microeconomics does not concern itself with the economy as a whole and an impression is created that microeconomics differs from macroeconomics in that whereas the latter examines the economy as a whole; the former is not concerned with it. But this is not correct.

That microeconomics is concerned with the economy as a whole is quite evident from its discussing the problem of allocation of resources in the society and judging the efficiency of the same. Both microeconomics and macroeconomics analyze the economy as a whole but with two different ways or approaches.

Microeconomics examines the economy as a whole, so to say microscopically, that is, it analyses the behavior of individual economic units of the economy, their interrelationships and equilibrium adjustment to each other which determine the allocation of resources in the society.

This is known as general equilibrium analysis. No doubt, microeconomic theory mainly makes particular or partial equilibrium analysis, that is, the analysis of the equilibrium of the individual economic units, taking other things remaining the same. But microeconomic theory, as stated above, also concerns itself with general equilibrium analysis of the economy wherein it is

explained how all the economic units, various product markets, various factor markets, money and capital markets are inter-related and interdependent to each other and how through various adjustments and readjustments to the changes in them, they reach a general equilibrium, that is, equilibrium of each of them individually as well as collectively to each other.

Professor A.P. Lerner rightly points out, “Actually microeconomics is much more intimately concerned with the economy as a whole than is macroeconomics, and can even be said to examine the whole economy microscopically. We have seen how economic efficiency is obtained when the “cells” of the economic organism, the households and firms, have adjusted their behavior to the prices of what they buy and sell.

Each cell is then said to be ‘in equilibrium.’ But these adjustments, in turn, affect the quantities supplied and demanded and therefore also their prices. This means that the adjusted cells then have to readjust themselves. This, in turn, upsets the adjustment of others again and so on. An important part of microeconomics in examining whether and how all the different cells get adjusted at the same time.

This is called general equilibrium analysis in contrast with particular equilibrium or partial equilibrium analysis. General equilibrium analysis is the microscopic examination of the inter-relationships of parts within the economy as a whole. Overall economic efficiency is only a special aspect of this analysis.

According to the neo-classical theory, under conditions of perfect competition in the factor and product markets, it is both demand for and supply of factors which determine their prices. It is therefore essential to understand first the nature of demand for factors of production. Demand for a factor differs in certain respects from the demand for consumer goods or products.

Products or consumer goods are demanded because they satisfy the wants of the people directly. People demand food to satisfy the pangs of their hunger, they demand clothes to satisfy their want of providing a cover to their bodies and so forth. These products possess utility which directly satisfy the desires of the people and who are therefore willing to pay price for these products.

Derived Demand:

But unlike the products, the factors of production do not satisfy the wants of the people directly. The factors of production are demanded not because they directly satisfy the wants of the people who wish to buy them. Instead, they are demanded because they can be used to produce consumer goods which then directly satisfy human wants.

Therefore, demand for factors of production is called derived demand. It is derived from the demand for the product they help to make. Thus, the demand for a factor ultimately depends upon the demands for goods it helps to produce.

The greater the demand for goods a particular types of factor helps to make, the greater the demand for that type of factor. Just as demand for a consumer good depends upon its utility, the demand for a factor depends upon the marginal revenue productivity of the factor. The marginal revenue productivity curve of the factor is the demand curve for that factor. The entrepreneur's demand for a factor of production is governed by the marginal productivity of the factor.

Determination of a Factor Price:

According to Marshall-Hicks version of marginal productivity theory of distribution, price of a factor is determined by demand and supply of a factor. Marshall and Hicks held that the price of a factor of production is determined by both the demand for and supply of the factor, but is be equal to the marginal revenue product of the factor.

Thus, in their view, price of the factor is not determined by the marginal revenue product but is, in equilibrium, equal to the marginal revenue product of the factor. We will discuss below the various determinants of the demand for a factor of production.

Further, we have seen above how the demand for a factor of production depends upon its marginal revenue product. We have also derived the demand curve for a factor of production of an industry. The supply curve of a productive factor is given by the curve showing the amounts of factor offered by the owners of the factor at various factor prices and it slopes upward to the right.

The supply curve of a factor for an industry depends upon the transfer earnings of the various units of the factor. The price of a factor is determined by the intersection of these demand and supply curves of the factor.

In other words, given the demand and supply curves of a factor, the price of the factor will adjust to the level at which the amount of the factor supplied is equal to the amount demanded. This is

shown in fig. 1 below, where DD is the demand curve and SS is the supply curve of the factor. Only at price OP, quantity demanded is equal to the quantity supplied.

The price OP is thus determined. The price of a factor cannot be determined at a level higher than or lower than price OP, i.e., other than the price where amount demanded is equal to the amount supplied. For example, the price cannot be established at the level OP', since at price OP' the quantity offered to supply (P' H) of the factor is greater than the quantity demanded (P'S) of it.

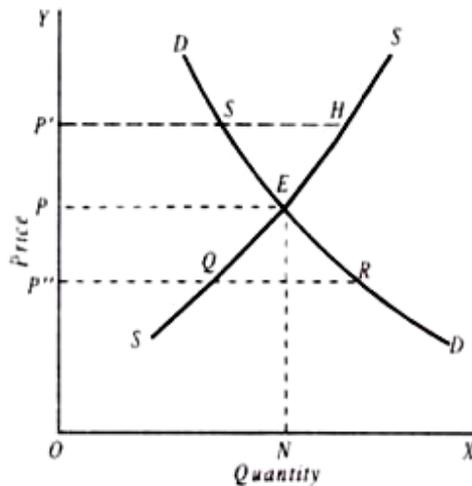


FIGURE 1

As a result, the competition between the owners of the factor will force down the price to the level OP where the quantity supplied is equal to the quantity demanded. Likewise, the price of the factor cannot be determined at the level OP'', since at price OP'' the quantity demanded of the factor is greater than the quantity offered to supply of it. Consequently, the competition among the producers or entrepreneurs demanding the factor of production will push up the price to the level OP.

Though price of a factor is determined by demand for and supply of the factor, it is equal to the marginal revenue product of the factor. This is illustrated by above Figure 1. It will be seen from Fig. 2 (a) that equilibrium price OP of the factor is determined in the market and ON is equilibrium quantity demanded and supplied of the factor.

An individual producer or firm who demands that factor will take the factor price OP as given. It will now be seen from Fig. 2 (b) which depicts the position of a single firm or entrepreneur that at price OP the firm will employ or use OM quantity of the factor.

This is so because in order to maximise its profits, the firm will equalise the price of the factor with the MRP of the factor, and at OM, the price of the factor is equal to the marginal revenue product of the factor. If the firm employs fewer than OM units of the factor, then the MRP of the factor will be greater than the price of the factor which will imply that there is still a scope for earning more profits by increasing the use of the factor.

If, on the other hand the, firm employs more than OM units of the factor, MRP of the factor will be less than the price paid for it. As a result, the firm will incur losses on the marginal units and it will therefore be to the advantage of the firm to reduce the employment of the factor.

Thus, the firm maximises its profits and is in equilibrium when it is employing OM amount of the factor at which MRP of the factor is equal to the price of the factor. To sum up, price of a factor is determined by the demand for and supply of the factor and is equal to the marginal revenue product of the factor.

As is evident from 2, at price OP, the firm is earning super-normal profits, since in equilibrium ARP of the factor is greater than the price of factor. This can happen in the short run, but not in the long run. If firms are earning super-normal profits, more entrepreneurs will enter the market in the long run to purchase that particular factor to produce the products made by that particular type of the factor.

Entry of more entrepreneurs to the factor market will compete away the super-normal profits. As a result, the demand for factors will rise and the demand curve for the factor in Fig. 2 (a) will shift outward to the right. This shift in demand curve due to rise in demand for the factor is shown in Fig. 3. With this increase in demand, the price of the factor will rise to OP'.

It is evident from Figure 3 that with factor price OP', the firm will be in equilibrium at H when it is employing OM' amount of the factor. At OM' amount of the factor the price of the factor is equal to MRP as well as ARP of the factor. Since at OM' the price of the factor OP' is equal to ARP of the factor, the firm is neither making super-normal profits, nor having losses. It is earning only normal profits.

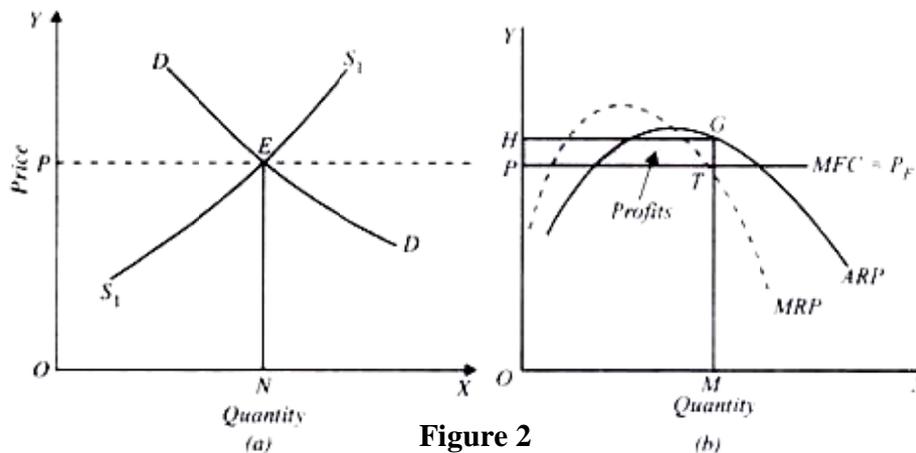


Figure 2

If, in the short run, firms are having losses, some entrepreneurs will leave and stop purchasing the factor. As a result, the demand for the factor will decrease. The demand curve will shift downward and to the left so that the price of the factor will fall to a level at which price the firms earn only normal profits. Thus, in the long run, under perfect competition in the factor market, price of the factor is equal to both MRP and ARP of the factor.

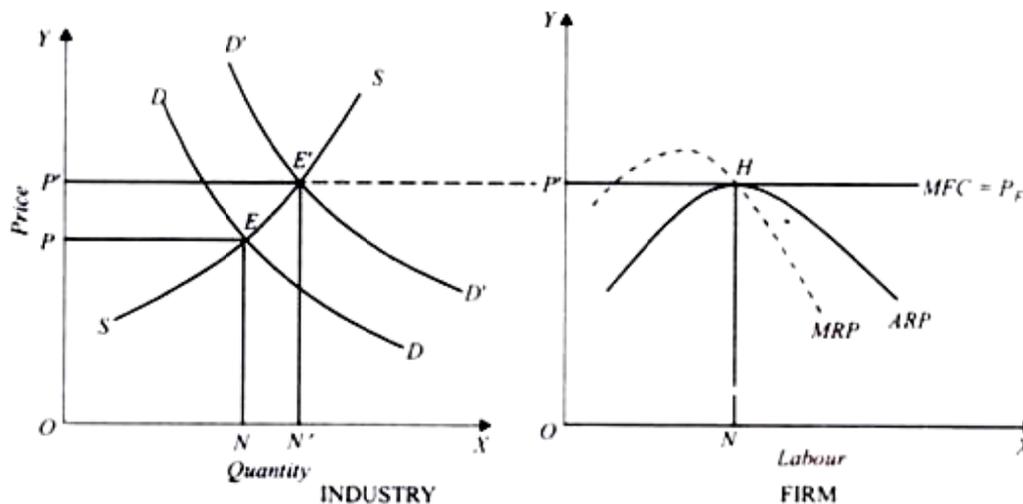


Figure 3

To sum up, in the long run, the equilibrium between demand for and supply of the factor is established at the level where the price of the factor is equal to both the MRP and ARP of the factor and thus the firms earn only normal profits.

We have seen above that when demand for a factor of production increases, given the supply curve of the factor, the factor price will rise. Now, what happens when the supply of a factor increases, given the demand curve of the factor.

When the supply of a factor increases, the supply curve will shift to the right. This new supply curve will intersect the given demand curve at a lower price. Thus, with the increase in the supply of a factor, its price will tend to fall. On the other hand, when the supply of a factor decreases, the supply curve will shift to the left and, given the demand curve, the price of the factor will rise.

As regards the policy of factor owners, two results follow from our analysis. First, if the owners of a factor want to raise the price of the service of their factor, they should try to increase the demand for their factor service.

The demand for a factor will rise if demand for and price of the product rise or the price of the substitute factor rises, or there are increases in the productivity of the factor due to the improvement in technology. Second, if factor owners want to maintain the price of their factor service, i.e., to prevent the price from falling, they should not allow their supply to increase.

The above modern theory of factor pricing under conditions of perfect competition is based upon Marshall-Hicks' version of marginal productivity theory. In this, marginal productivity of a factor is an important economic force which determines the price of the factor.

Determination of Factor Price under Imperfect Competition (or Monopoly)

The price of a factor of production is determined when there prevails perfect competition both in the product and factor markets. Before the theories of imperfect competition and monopolistic competition were introduced in economic theory no distinction was made between value of marginal product (VMP) and marginal revenue product (MRP).

That when there is imperfect competition (i.e. monopoly, oligopoly or monopolistic competition) in the product market, marginal revenue differs from the price of the product. As a result, under conditions of imperfect competition in the product market, marginal revenue product (MRP) of the factor differs from value of the marginal product (VMP).

This affects the demand for a factor and the price it will get under conditions of imperfect competition. Determination of Factor Price when there exists Monopoly (or Imperfect Competition) in the Product Market but Perfect Competition in the Factor Market or monopoly in the product.

Determination of Factor Price when there is Imperfect Competition (or Monopoly) in the Product Market and Perfect Competition in Factor Market:

The determination of prices and employment of factors under imperfect competition in the product and factor markets in general.

We will explain below the employment of a factor by a firm and the price it will pay to a factor when the firm is working under conditions of imperfect competition or monopoly in the product market. However we assume in this section that as far as factor market is concerned perfect competition prevails in it.

Since perfect competition is assumed to be prevailing in the factor market, price of the factor will be determined by demand for and supply of the factor of production, as explained above. But now the demand for the factor of production is determined not by the value of the marginal product (VMP) but by the marginal revenue product (MRP) of the factor.

As we will see below, in this case price of the factor, which is determined by demand for and supply of the factor, will be equal to the marginal revenue product, but will be less than the value of the marginal product (VMP) of the factor.

The conditions of firm's equilibrium in factor market developed above will also apply in the present case. The firm working under perfect competition in factor market but monopoly or imperfect competition in the product market would also be in equilibrium position where $MRP = MFC$, and MRP curve cuts MFC curve from above. But there are some differences between this case and the case explained above.

Since in this case, as in the previous, the firm is working under perfect competition in the factor market it will not be able to affect the price of the factor and factor-cost line will be a horizontal straight line. Therefore, the firm will be in equilibrium, that is, will be maximizing profits when $MRP = MFC = \text{Price of the factor}$.

But because the firm in the present case is working under conditions of monopoly or imperfect competition in the product market, it will be able to exercise some influence or control over the price of the product.

AR curve for it will slope downward and MR curve will be below it. Consequently, MRP which is equal to $MPP \times MR$ will not be equal to VMP which is equal to $MPP \times \text{price of the product}$. Since MR is less than the price of the product under monopoly or imperfect competition, MRP would be less than VMP.

In symbolic terms:

$$\text{MRP} = \text{MPP} \times \text{MR}$$

$$\text{VMP} = \text{MPP} \times \text{Price of the product}$$

Since, under imperfect competition or monopoly in the product market, $\text{MR} < \text{Price of the product}$. Therefore

$$\text{MRP} < \text{VMP}$$

In equilibrium in the factor market, the firm will make

$$P_F = \text{MRP}$$

Therefore, $P_F = \text{MRP} < \text{VMP}$

It is, therefore, concluded that under conditions of monopoly or imperfect competition in the product market, assuming perfect competition in the factor market, the factor will get price less than the value of its marginal product.

The equilibrium of the firm when it is working under conditions of perfect competition in the factor market and monopoly or imperfect competition in the product market is shown in Fig. 4. Since VMP is greater than MRP when there is imperfect competition in the product market, VMP curve will be above MRP curve (for the sake of convenience, we have drawn only the downward-sloping portions of MRP and VMP curves).

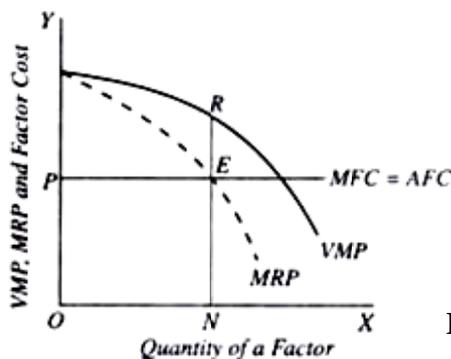


Figure 4

The firm will be in equilibrium at E, where $\text{MRP} = P$. The equilibrium employment of the factor is ON. It will be noticed from the figure that the price of the factor OP is, in equilibrium, equal to marginal revenue product EN but is less than its value of marginal product which is equal to RN. Therefore, factor gets RE less than the value of its marginal product.

Meaning of Factor Exploitation:

It follows from above that price of a factor will be less than the value of the marginal product of the factor under conditions of monopoly and imperfect competition in the product market.

According to Joan Robinson a factor is exploited when it is paid less than the value of its marginal product (VMP).

Therefore, according to Joan Robinson, when imperfect competition prevails in the product market, labour and other factors, (i.e., factors other than the entrepreneur) are exploited by the entrepreneur. But many economists, especially E.H. Chamberlin, do not agree with Robinson's definition of exploitation of labour.

According to Chamberlin, a factor is exploited only when it is paid less than the marginal revenue product (MRP). As explained above, when there prevails imperfect or monopolistic competition (including monopoly and oligopoly) with perfect competition in the factor market, price of a factor is equal to the marginal revenue product, though it is less than the value of the marginal product.

Therefore, according to Chamberlin, there is no any exploitation of labour or any other factor by the entrepreneur when imperfect competition exists in the product market if there is perfect competition in the factor market.