Manonmaniam Sundaranar University

Directorate of Distance and Continuing Education

Tirunelveli – 627 012. Tamil Nadu.

B.A. Economics

(First Year)

MICRO ECONOMICS - II

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MICRO ECONOMICS – II

Course Objectives:

This course will help the students

1. To understand the basic concepts of Cost and Revenue
2. To be aware of different market structure
3. To acquire knowledge in theories of distribution
4. To become familiar with various theories of wages
5. To have a good understanding of Interest and Profit

Unit I: Cost and Revenue

Cost concepts – Fixed Cost and Variable Cost – Average Cost and Marginal Cost – Short-Run Cost Curves – Long Run curves - Reason for 'U' Shaped Curve – Revenue concepts.

(15L)

Unit II: Market Theories

Perfect Competition: Features – Price determination – Equilibrium of Firm and Industry. Monopoly: Types – Features – Price Determination. Monopolistic Competition: Features – Price determination (General).

(15L)

Unit III: Distribution Theory

The Marginal Productivity Theory of Distribution – Rent – Ricardian Theory of Rent – Quasi-Rent – Modern Theory of Rent – Situation Rent – Scarcity Rent.

(15L)

Unit IV: Wages

Wages – Money Wage – Real Wage – Causes for difference in wage – Theories of Wages – Subsistence Theory of Wages – Standard of living Theory – Wage fund Theory – Residual Claimant Theory – Trade Union and Wages.

(15L)

Unit V: Interest and Profit

Interest – Net Interest – Gross Interest – Theories of Interest: Liquidity Preference Theory – Loanable Fund Theory. Profit – Net Profit – Gross Profit – Theories of Profit: Risk Theory - Uncertainty Theory – Dynamic Theory – Innovation Theory.

(15L)

(Total: 75L)

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2. Bose, D & Marimuthu, A, An Introduction to Micro Economics, Himalaya Publishing House, 2015

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UNIT - I

COST AND REVENUE

1.1. INTRODUCTION

The firm's costs determine its supply. Supply along with demand determines price. To understand the process of price determination and the forces behind supply, we must understand the nature of costs. We study some important concepts of costs, and traditional and modern theories of cost.

1.2. COST CONCEPTS

Costs are very important in business decision-making. Cost of production provides the floor to pricing. It helps managers to take correct decisions, such as what price to quote, whether to place a particular order for inputs or not whether to abandon or add a product to the existing product line and so on. Ordinarily, costs refer to the money expenses incurred by a firm in the production process. But in economics, cost is used in a broader sense. Here, costs include imputed value of the entrepreneur's own resources and services, as well as the salary of the owner-manager. There are various concepts of cost that a firm considers relevant under various circumstances. To make a better business decision, it is essential to know the fundamental differences and uses of the main concepts of cost.

The kind of cost concept to be used in a particular situation depends upon the business decisions to be made. They are: -

1. Actual Cost and Opportunity Cost
2. Incremental Costs and Sunk Costs
3. Past Cost and Future Costs
4. Short-Run and Long-Run Costs
5. Fixed and Variable Costs
6. Direct and Indirect Costs
7. Sunk, Shutdown, and Abandonment Costs.

1. Actual Cost and Opportunity Cost:

Actual costs mean the actual expenditure incurred for acquiring or producing a good or service. In some other alternative uses, opportunity cost can be defined as the revenue forgone by not making the best alternative use. The concept of opportunity cost is more important and useful to management

in making a decision among alternatives. Imputed costs are the costs which are not actually incurred but would have been incurred in the absence of employment of self-owned factors. For example, in the case of an owner-manager, very often the cost of managerial functions is ignored. An imputed cost is a real cost even though it is not recorded in account books of a company and management must not ignore it in making business decisions.

2. Incremental Costs (Differential Costs) and Sunk Costs:

Incremental cost is the additional cost due to a change in the level or nature of business activity. The change may take several forms, e.g., adding a new product line, changing the channel of distribution, adding a new machine, replacing a machine by better machine, expanding to additional markets, etc. Thus, the question of incremental or differential cost would not arise when a business is to be set up afresh. It arises only when a change is contemplated in the existing business.

Sunk cost is one which is not affected or altered by a change in the level or nature of business activity. It will remain the same whatever the level of activity is. The most important example of sunk cost is the amortization of past expenses, e.g., depreciation. The distinction between sunk cost and increment cost assumes importance in evaluating alternatives. Incremental costs will be different in the case of different alternatives. Hence incremental costs are relevant to the management in the analysis for decision making.
Sunk cost, on the other hand, will remain the same irrespective of the alternative selected. Thus, it need not be considered by the management in evaluating the alternatives as it is common to all of them. If the machine is hired, the expenses of installation, servicing and maintenance become the responsibility of the supplier of the machine. If the machine is purchased, the supplier will merely deliver the machine to the buyer.

Now let us analyze the differential costs of the two alternatives. If the machine is hired, the acquisition cost will be confined to the periodic payments of rent. But if the machine is purchased, the acquisition costs will be equal to the price of the machine. Service and maintenance costs will occur only if the machine is purchased; if it is hired, the rent would cover those costs. The operating costs and the space occupancy costs will be the same

irrespective of the decision to buy or rent the machine. Thus, the differential costs would be the acquisition costs and the service and maintenance costs as they would be different under the two alternatives. On the other hand, the operating costs and the space occupancy costs are sunk costs as they would be the same under both the alternatives. And for decision making, we have to compare only the differential costs while ignoring the sunk costs.

Whether a cost is sunk cost or a differential cost is a question of fact and can be determined only in the light of the circumstances of each individual case. Thus, a particular cost of item can be a sunk cost in one case and a differential cost in another. Sometimes, differential costs are considered as synonymous with variable costs and sunk costs as synonymous with fixed costs. But this need not always be the case. For example, operating costs are variable but they are not differential costs. The price of the machine, on the other hand, is a differential cost, though it is also a fixed cost. Hence both the variable and the fixed costs must be scrutinized decision.

3. Past Cost and Future Costs:

Past costs are actual costs incurred in the past and are generally contained in the financial accounts? The measurement of past costs is essentially a record-keeping activity and an essentially passive function insofar as the management is concerned. These costs can merely be observed and evaluated in retrospect. If they are regarded as excessive, management can indulge in post-mortem, just to find out the factors responsible for the excessive costs, if any, without being able to do anything for reducing them.

Future costs are costs that are reasonably expected to be incurred in some future period or periods. Their actual incurrence is a forecast and their management is an estimate. Future costs are the only costs that matter for managerial decisions because they are the only costs subject to management control. Unlike past costs, they can be planned for and planned to be avoided. If the future costs are considered too high, the management can either plan to reduce them or find out ways and means to meet them. The major managerial uses where future costs are relevant are as follows – cost control, projection of future profit and loss statements, appraisal of capital expenditure, introduction of new products, expansion programs, and pricing.

4. Short-Run and Long-Run Costs:

Short-run costs are costs that vary with output when fixed plant and capital equipment remain the same. Long-run costs are those which vary with the output when all input factors including plant and equipment vary. Short-run costs become relevant when a firm has to decide whether or not to produce more in the immediate future. In this case setting up of a new plant is ruled out and the firm has to manage with the given plant. Long-run costs become relevant when the firm has to decide whether to set up a new plant. Long-run costs can help the businessman in planning the best scale of plant or the best size of the firm for his purposes. Thus, long-run costs can be helpful both in the initiation of new enterprises and the expansion of existing ones.

5. Fixed and Variable Costs:

Total costs can be divided into two components – fixed costs and variable costs. Fixed costs remain constant in total regardless of changes in volume up to a certain level of output. They will have to be incurred even when output is nil. There is an inverse relationship between volume and fixed costs per unit. Thus, total fixed costs do not change with a change in volume but vary per unit of volume inversely with volume. If the total production increases, fixed costs per unit will go down and vice versa. Total variable costs vary in direct proportion to changes in volume. An increase in volume means a proportionate increase in the total variable costs and decrease in volume results in a proportionate decline in the total variable costs. There is a linear relationship between volume and total variable costs, but variable costs are constant per unit. The distinction between fixed and variable costs, however, is not a watertight one. Cost may be fixed and variable in each different management decision. Again, it may be noted that the variability of costs is in relation to output and not to the time factor, though in the long run all costs tend to be variable. What is fixed at one level of output may become variable at another level of output.

6. Direct and Indirect Costs:

A direct or traceable cost is one which can be identified easily and indisputably with a unit of operation (costing unit/cost centre). Common or

indirect costs are those that are not traceable to any plant, department or operation, or to any individual final product. To take an example, the salary of a divisional manager, when division is a costing unit, will be a direct cost. The monthly salary of the general manager, when one of the divisions is a costing unit, will be an indirect cost. The salary of the manager of the other division is neither a direct nor an indirect cost. Thus, whether a specific cost is direct or indirect depends upon the costing unit under consideration. The concepts of direct and indirect costs are meaningless without identification of the relevant costing unit.

Common Production Costs (Costs of Multiple Products):

In some manufacturing enterprises, two or more different products emerge from a single, common production process and a single raw material. A familiar example is the variety of petroleum products derived from the refining of crude oil. So also in a shoe factory, the same piece of leather may be used for men's, women's, and children's shoes.

However, for managerial analysis, these costs need not be identified with individual products unless it is meaningful and useful to identify them.

7. Sunk, Shutdown, and Abandonment Costs:

A past cost resulting from a decision which can no more be revised is called a sunk cost. In other words, sunk cost is a cost once incurred but cannot be retrieved. It is usually associated with the commitment of funds to specialized equipment or other facilities not readily adaptable to present or future use, e.g., brewery plant in times of prohibition. Shutdown costs may be defined as those costs which would be incurred in the event of suspension of the plant operation and which would be saved if the operations are continued. Examples of such costs are the costs of sheltering the plant and equipment and construction of sheds for storing exposed property. Further, additional expenses may have to be incurred when operations are restarted. For example, re-employment of workers may involve cost of recruitment and training. Abandonment costs are the costs of retiring altogether a plant from service. Abandonment arises when there is a complete cessation of activities and creates a problem as to the disposal of assets; for example, the costs involved in the discontinuance of tram services in Bombay and Delhi. These

costs become important when management is faced with the alternative of either continuing the existing plant or suspending its operations or abandoning it altogether.

1.3. FIXED COST AND VARIABLE COST:

The short run, there are some factors which are fixed, while others are variable. Similarly, short run costs are also divided into two kinds of costs:

(i) Fixed Costs

(ii) Variable Costs

The sum total of fixed cost and variable cost is equal to total cost. Let us discuss the short run costs in detail.

Total Fixed Cost (TFC) or Fixed Cost (FC):

Fixed Costs refer to those costs which do not vary directly with the level of output. For example, rent of premises, interest on loan, salary of permanent staff, insurance premium, etc. Fixed Cost is also known as:

(i) Supplementary Cost; or

(ii) Overhead Cost; or

(iii) Indirect Cost; or

(iv) General Cost; or

(v) Unavoidable Cost.

Fixed cost is incurred on fixed factors like machinery, land, building, etc., which cannot be changed in the short run. The payment to these factors remains fixed irrespective of the level of output, i.e. fixed cost remains the same, whether output is large, small or even zero.

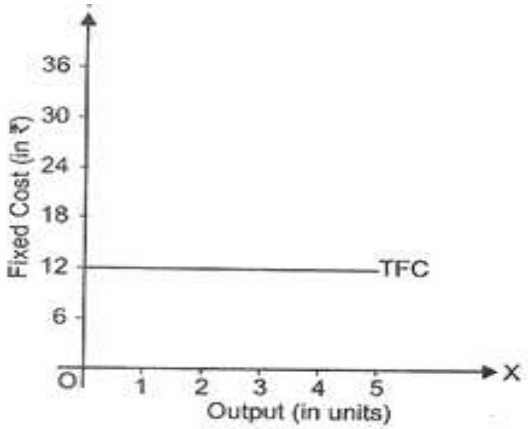


Fig.1.1 Total Fixed Cost Curve

TFC curve is a horizontal straight line parallel to X-axis showing that total fixed costs remain same (Rs. 12) at all levels of output. Fixed costs are diagrammatically shown in Fig. 1.1. Units of output are measured along the X-axis and fixed costs along the Y-axis. The curve makes an intercept on the Y-axis, which is equal to the fixed cost of Rs. 12. TFC curve is a horizontal straight line parallel to the X-axis because TFC remains same at all levels of output, even if the output is zero.

Total Variable Cost (TVC) or Variable Cost (VC):

Variable costs refer to those costs which vary directly with the level of output. For example, payment for raw material, power, fuel, wages of casual labour, etc. Variable costs are incurred on variable factors like raw material, direct labour, power, etc., which changes with change in level of output. It means, variable costs rise with increase in the output and fall with decrease in the output. Such costs are incurred till there is production and become zero at zero level of output. Variable cost is also known as 'Prime Cost', 'Direct Cost' or 'Avoidable Cost'.

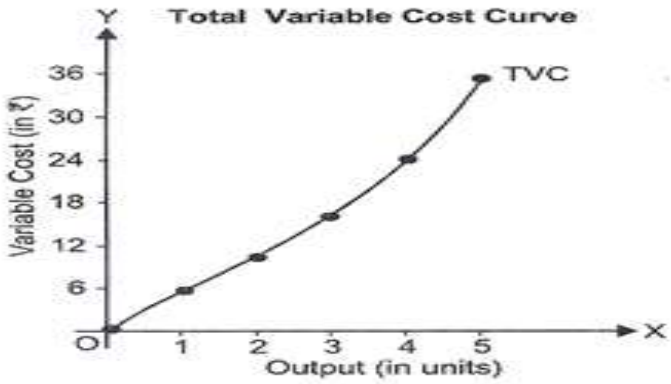


Fig. 1.2. Total Variable Cost Curve

In Fig. 1.2, units of output are measured along the X-axis and variable cost along the Y-axis. As seen in the diagram, TVC curve starts from the origin indicating that when output is zero, variable cost is also zero. TVC is an inversely S-shaped curve due to the Law of Variable Proportions.

Total Cost (TC):

Total Cost (TC) is the total expenditure incurred by a firm on the factors of production required for the production of a commodity. TC is the sum of total fixed cost (TFC) and total variable cost (TVC) at various levels of output.

TC = TFC + TVC

Since TFC remains same at all levels of output, the change in TC is entirely due to TVC.

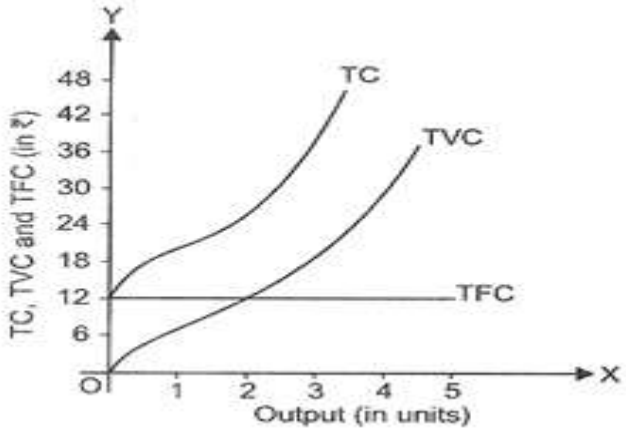


Fig. 1.3. Total cost

i. TC curve is also inversely S-shaped as TC derive its shape from TVC.

ii. TC is equal to TFC (Rs. 12) at zero output.

iii. TC and TVC curves are parallel to each other as vertical distance between them is TFC, which remains constant at all output levels.

At 1 unit of output, TFC remains same at Rs. 12, but TVC increases to t 6. As a result, TC becomes 12 + 6 = Rs. 18. Similarly, other values of TC have been calculated. In Fig. 1.3, TC curve is obtained by summation of TVC and TFC curve. The change in TC curve is entirely due to TVC as TFC remains constant. By adding TFC to TVC curve, we get the TC curve. The vertical distance between TC and TVC always remains the same due to constant TFC. Like TVC curve, TC curve is also inversely S-shaped, due to the Law of Variable Proportions. The change in TC is entirely due to TVC as TFC is constant at all levels of output, TC = TFC at zero output as variable cost is zero. With increase in output, TC also increases by the extent of increase in TVC.

1.4 AVERAGE COST AND MARGINAL COST

Introduction

The relationship between marginal cost and average cost.

The three cost curves TC, AC and MC describe the same physical data and are, therefore, related mathematically. Let TC (q) be the total cost of output q, AC (q), is defined as the total cost divided by the amount produced, or

$$AC\ (q) = TC\ (q)/q \ldots. (1)$$

Marginal cost, MC (q), is defined, precisely enough for our purposes, as the increase in total cost imposed by a unit increase in output.

Therefore:

$$MC\ (q) = TC\ (q + 1) - TC\ (q) \ldots (2)$$

The relationship between average cost and marginal cost can also be studied in the context of laws of return.

It can be explained as under:

(i) Law of Increasing Returns or the Law of Diminishing Costs:

When a firm produces under the law of increasing returns, it means that as it employs more and more factors of production, its output increases at an increasing rate. In such a situation both the average cost and marginal cost slope downward, but the downward slope of MC curve is more than that of AC curve. From Figure 1.4 it becomes clear that when due to the operation of the law of increasing returns, average cost falls, marginal cost also falls. The fall in marginal cost is much more than the average cost, so the marginal cost remains below the average cost.

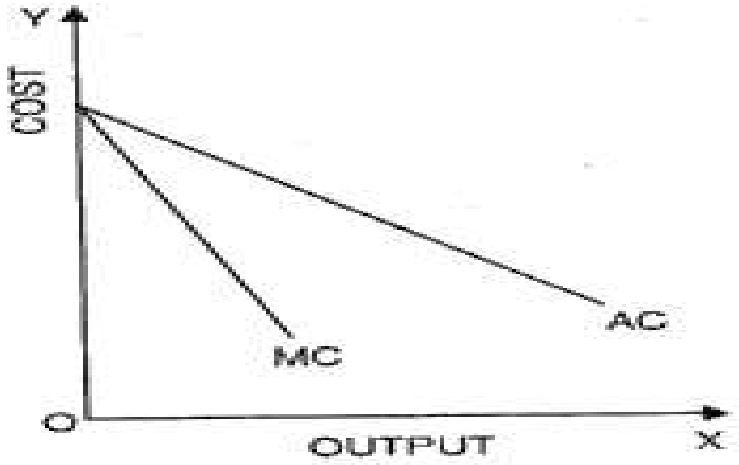


Fig.1.4. Law of increasing returns

(ii) Law of Diminishing Returns or Increasing Costs:

If a firm operates under the law of diminishing returns, it means its output increases at diminishing rate as it employs more and more units of factors of production. In this case, if AC increases MC also increases. The increase in MC will be much more than the increase in AC. It can be shown with the help of figure 1.5. The Figure depicts that as AC increases MC also increases at a faster rate than the AC. Therefore, the curve MC remains above the curve AC.

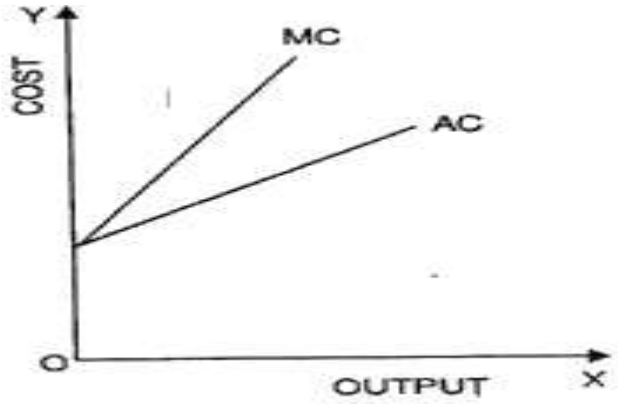


Fig. 1.5. Law of diminishing returns

(iii) Law of Constant Returns or Constant Costs:

According to the law of constant returns when a firm employs more and more factors, output increases at a constant rate. Therefore, the average cost curve as well as marginal cost curve remains parallel to horizontal axis. This can be made clear with the help of diagram 1.6. In the diagram output has been measured on OX- axis while costs on OY-axis. Here, we see that AC = MC and both are parallel to X-axis.

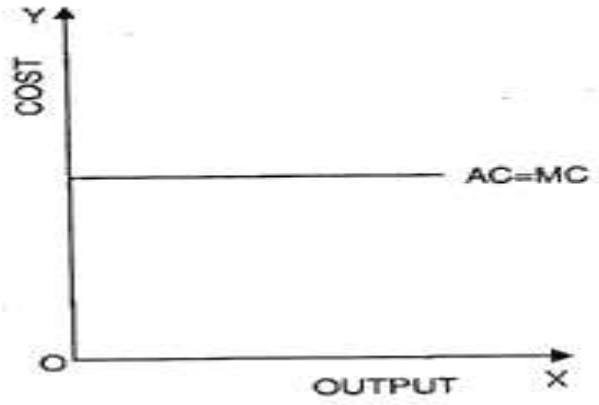


Fig. 1.6. Law of Constant returns

Relationship of Different Cost Curves in Short Period:

In Figure, the relationship between different cost curves can be explained with the help of figure 1.7. In Fig. AFC is the average fixed cost curve which slopes downward. It indicates that as production increases, AFC goes on falling. In the beginning, it slopes steeply but later on rate of fall slows down. AVC is the average variable cost. It falls up to point E and then rises upward. SAC is the short run average cost curve having U-shape. The minimum point E of AVC occurs earlier than the minimum point E' of SAC. MC passes from the

minimum points of both AVC and SAC through the points E and E' respectively.

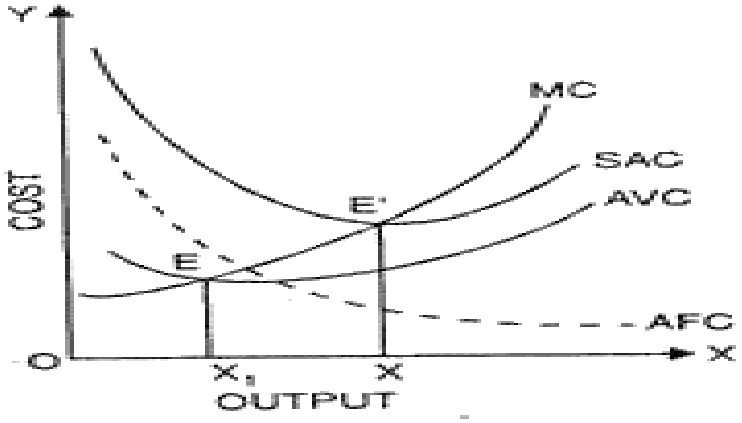


Fig.1.7. short period

Costs in Long Run Period:

Long-run is a period in which there is sufficient time to alter the equipment and the scale or organization with a view to produce different quantities of output. In other words, if we want to change output, it can be done by changing all the factors. It is due to the reason that in the long-run, all the factors are variable. According to Koutsoyiannis, "In the long-run, all the factors of production are assumed to be variable."

Long Run Total Cost:

Long run total cost is always less than or equal to short run total cost, but it is never more than short run total cost. Long run total cost curve represents the least cost of different quantities of output. Therefore, it is tangent to any given point, on short run total cost. There are three different types of long run total cost curves are shown. LTC_1 has been drawn on the assumption that as output is increased, cost at first rises at diminishing rate and then at increasing rate. LTC_1 has been drawn on the assumption that increase in output is followed by rise in cost at constant rate. LTC_3 has been drawn on the assumption that as output increases, cost rises at diminishing rate. Long run cost curve always begins from the point of origin while short run cost curve begins from any point on OY-axis. It means that all costs in long run are variable when quantity of output is zero, total costs also reduced to zero.

Long-Run Average Cost Curve:

Long-run average cost is the long run total cost divided by the level of output.

$$LAC = LTC / Q$$

Similarly, J.S. Bain has defined the long-run average cost as, "The long-run average cost curve shows for each possible output, the lowest cost of producing that output in the long run." Moreover, in the long-run, each firm can make use of different sizes of plants. A given level of output can be had from a special plant to which it is appropriated. If, such a plant is put to operation, goods will be produced at the lowest average cost. Thus, a rational producer in the long- run will choose to produce with the help of such a plant. Now, the question is how to find out this long-run average cost curve. The answer is very simple. We can derive the LAC from the short-run average cost curves.

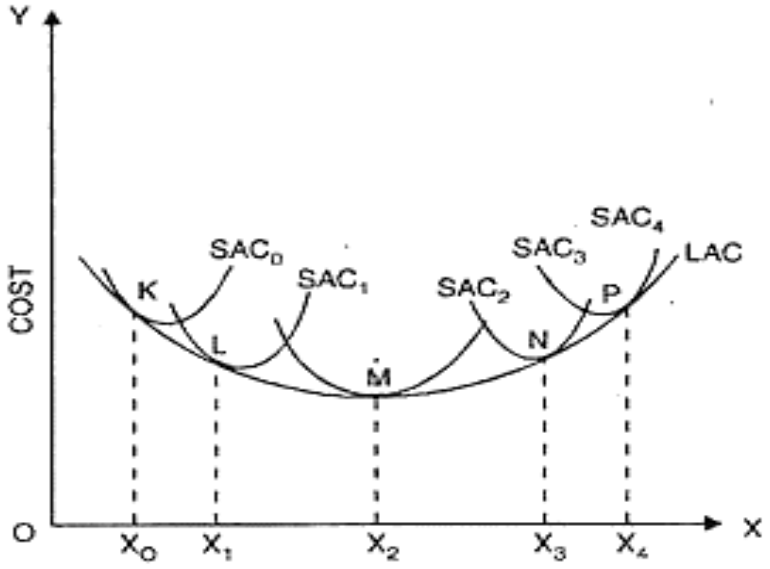


Fig.1.8. Long run average cost curve

In Figure 1.8 long-run average cost has been shown. The long- run average cost curve is tangent to different short run average cost curves. In order to produce OX_0 level of output, the corresponding point on LAC is K at which it 1S tangent to SAC_0. Therefore, if a firm is willing to produce OX_0 level of output, it will construct a plant corresponding to SAC_0 and will operate on this curve at point K.

Different Names of LAC:

LAC is also known by the following names:

(i) Envelope curve:

LAC is also known as envelope curve because it envelopes all the SAC curves. It indicates that LAC cannot exceed SAC. As in the long-run indivisible factors can be used to their full capacity, therefore, LAC curve will be surrounding the SAC. It will not cut SAC curves or rise upward.

(ii) Planning curve:

LAC is also known as planning curve. With its help, a firm can plan as to which plant; it should use to produce different quantities of output so that production is obtained at minimum cost. This fact can also be explained with the help of fig.

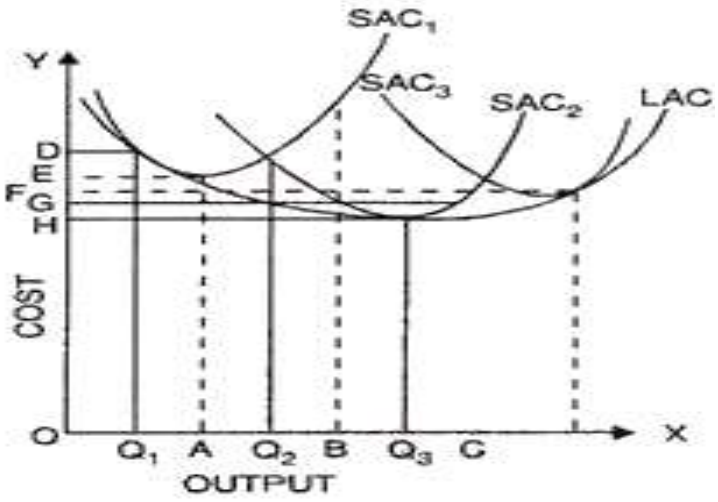


Fig. 1.9. Short run average cost curve

In the Fig. 1.9, short-run average cost curves of all the three types of plants have been shown. If the firm has to produce OQ_1 output, it will select small plant. If it wants to produce OQ3 level of output, it will select the large output plant. If the firm begins production with the small plant and demand for its product rises slowly, it will produce at minimum cost up to OA quantity of output. After OA amount of output its cost begins to rise. In case, demand for the product of the firm increases to OB then the firm will produce either with small or medium plant.

Relationship between LAC and SAC:

The relationship between LAC and SAC can be explained with the help of Fig. 1.10

(1) Representation:

SAC represents the costs of a single plant, whereas LAC represents the costs of different plants.

(2) Shape:

Like SAC, LAC is also U-shaped but it is relatively flatter. The U-shape of LAC is less pronounced as compared to SAC. It indicates that in the long run, increase or decrease in costs is relatively less. It is so because LAC represents the minimum average cost of different quantities of output so there exists less possibilities of fluctuations.

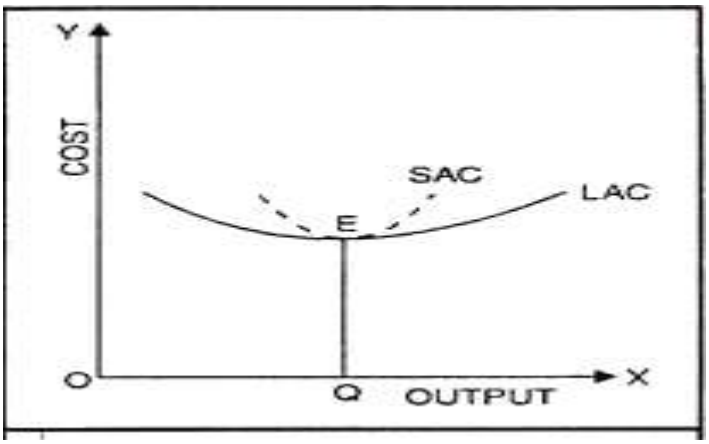


Fig.1.10. LAC and SAC

(3) LAC does not Exceed SAC:

LAC cannot be more than SAC. It is so because LAC is tangent to SAC

(4) LAC Not Tangent to all SAC at their minimum points:

Except to one SAC curve, LAC is not tangent to SAC curve at their minimum point. It will be tangent to that SAC curve at its minimum point which coincides with the minimum point of LAC.

Long-Run Marginal Cost:

Long-run marginal cost shows the change in total cost due to the production of one more unit of commodity. According to Robert, "Long-run marginal cost curve is that which shows the extra cost incurred in producing one more unit of output when all inputs can be changed."

$$LMC = \Delta LTC / \Delta Q$$

Where

LMC = Long run Marginal Cost

ΔLTC = Change in Long-Run Total Cost

ΔQ = Change in Output

Relation between LMC and LAC:

Generally, the relation between long-run marginal cost and long run average cost is similar to that of what it is in short run AC and MC. But the only difference in LAC and LMC is that long run marginal and average costs are more flat than that of SAC and SMC. It is so because in the long run all factors are variable. It can be shown with the help of a figure 1.11.

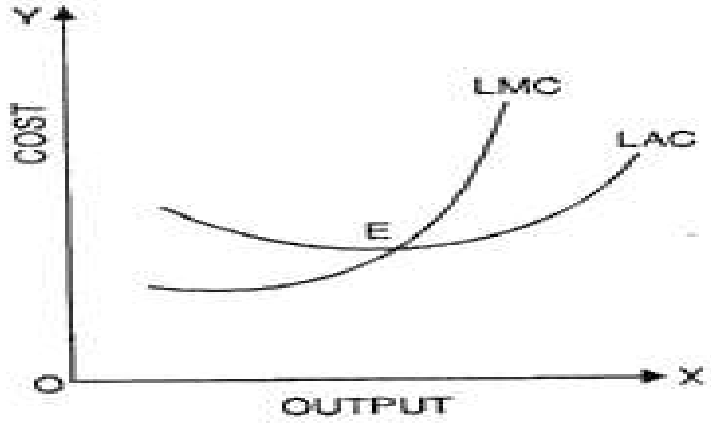


Fig.1.11.LMC and LAC

In Figure 1.11 when LAC is falling, LMC also falls but the fall in LMC is greater than that of LAC. At a minimum point i.e. E, LMC is equal to LAC. In the same fashion when LAC raises LMC also rises. But the increase in LMC is more than the increase in LAC.

Relation between LMC and SMC:

SMC refers to the effect on total cost due to the production of one more unit of output on account of change in variable factors. LMC refers to change in total cost due to production of one more or less unit of output due to change in all factors. When a firm selects a proper scale of plant in order to produce a given quantity of output then at this level of output short run and long run marginal cost curves are equal. This can be shown with the help of fig. 1.12.

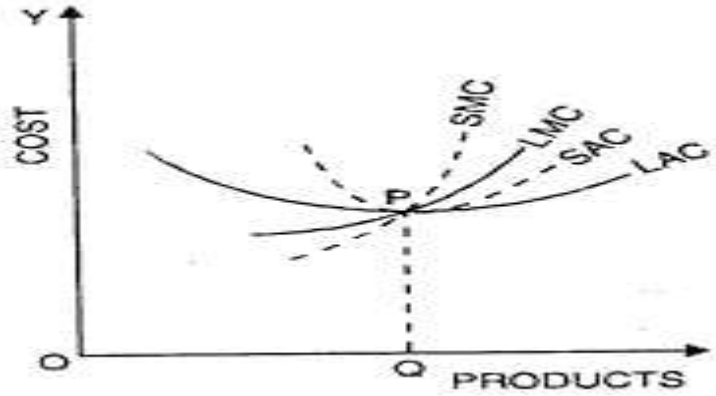


Fig.1.12. LMC and SMC

In Fig. 1.12. OQ is the optimum level of output SMC = LMC. If output is less than the optimum level OQ, then SMC will be less while LMC will be relatively more. On the other hand, if output is more than the optimum level, SMC will be more while LMC will be relatively less.

1.5 MODERN THEORY OF COST CURVES:

Modern theories of costs have been provided by economists like Stigler, Andrews, Sargent, Florence and Friedman etc. According to traditional theory of costs, costs are of U-shape. But according to modern economists, in real life cost curves are L-shaped.

Modern Theory of Short Run Cost Curves:

Like traditional theory modern theory also studies four types of short run cost curves as Average fixed cost, Average variable cost, average cost & marginal cost.

Average Fixed Costs:

This is the cost of indirect factors, that is, the cost of the physical and personal organization of the firm.

The fixed costs include costs on account of:

(1) The salaries and other expenses of administrative staff;

(2) Salaries of staff involved directly in production but paid on a fixed-term basis;

(3) The depreciation of machinery;

(4) Expenses on account of the maintenance of the factory-buildings;

(5) Expenses connected with the maintenance of land on which the plant is installed and operated.

The average fixed cost curve, under these circumstances will be as shown in Fig. 1.13. The firm has some largest capacity units of machinery which set an absolute limit to expansion of output in the short run. This is indicated by boundary line M in the diagram. The firm also has some small sized machinery which set a limit to expansion. This is shown by the boundary line N.N, however, is not an absolute limit because the firm can expand its short run output up to M by paying overtime to labour for working longer hours. In this case, the AFC is shown by the dotted line ab. The firm can also expand output by purchasing some additional small-sized machinery. In this case, the AFC shifts upwards and starts falling again, as shown by the dotted line CD.

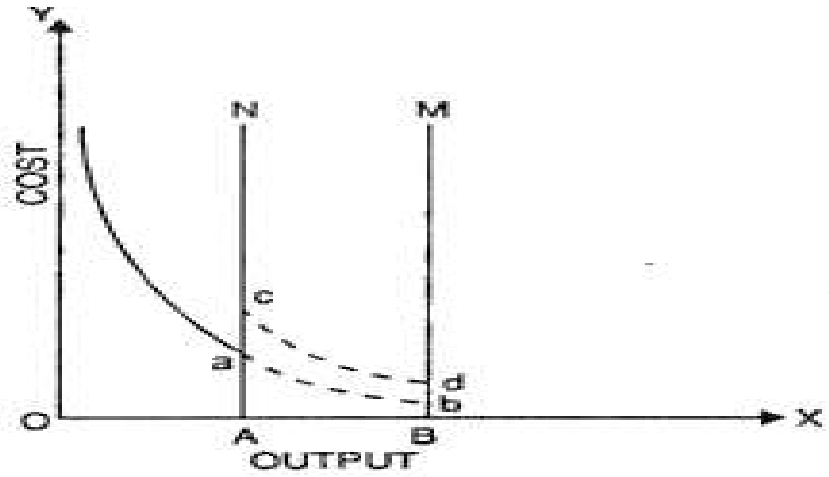


Fig.1.13 Average Fixed Cost Curve

Average Variable Cost:

In modern economics, the average variable cost includes wages of labour employed, cost of raw- material, and running expenses of machinery. The short run average variable cost curve in modern-micro economic theory is saucer-shaped, that is, it is broadly U-shaped but has a flat stretch over a range of output. This flat stretch represents the built-in reserve capacity of the plant. Over this flat stretch, the SAVC is equal to the MC, both being constant per unit of output. To the left of the flat stretch, MC lies below the SAVC, while to the right of the flat stretch; marginal cost rises above the SAVC. The falling portion of the SAVC shows reduction in costs due to better utilization of the fixed factor like machinery and also due to improvement in the skill and efficiency of labour. Better efficiency of labour helps in reducing

wastage of raw-material and achieving better utilization of the whole plant. On the other hand, rising portion of the SAVC curve indicates declining labour efficiency due to longer hours of work, rising costs due to payment of over-time wages, frequent breakdown of machinery, and wastage of raw-materials. This has been shown in Fig. 1.14.

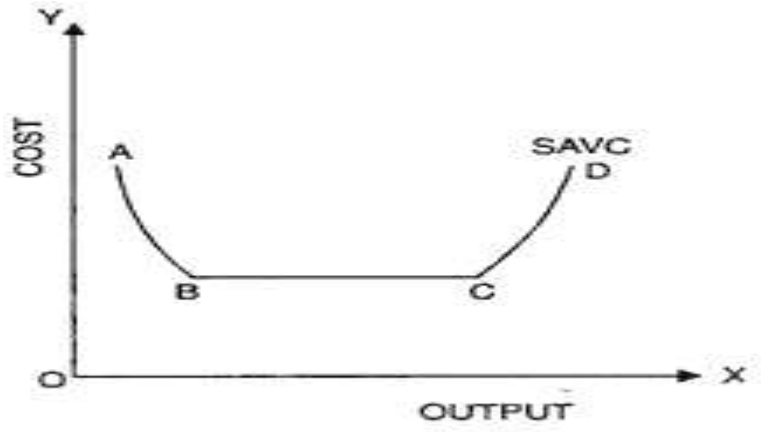


Fig.1.14. Average Variable Cost

Short Run Average Cost Curve:

According to modern economists, short run average cost curve is continuously falling up to a given level of output. This given level of output represents reserved capacity output. Thereafter, average cost curve rising upward meaning thereby that average cost will rise rapidly if output is increased beyond reserved capacity. This is shown with the help of figure 1.15.

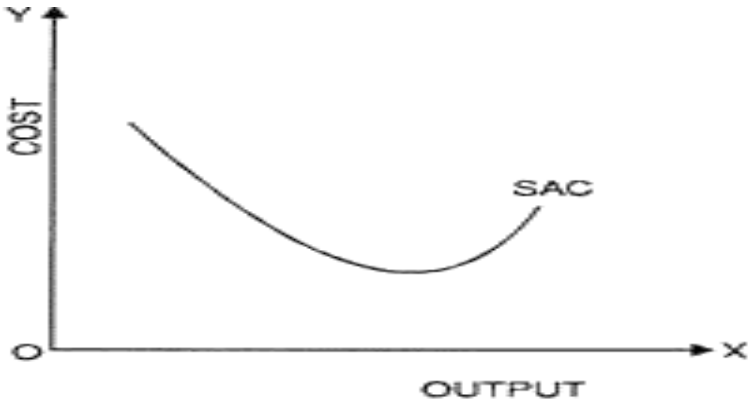


Fig.1.15. Short run Average Cost Curve

Short Run Marginal Cost Curve:

In the initial stages, SMC, to modem economist's falls, from point A to B it becomes horizontal. Moreover, from A to B marginal cost is equal to average variable-cost. In this situation, production takes place under reserved capacity as shown in Figure 1.16.

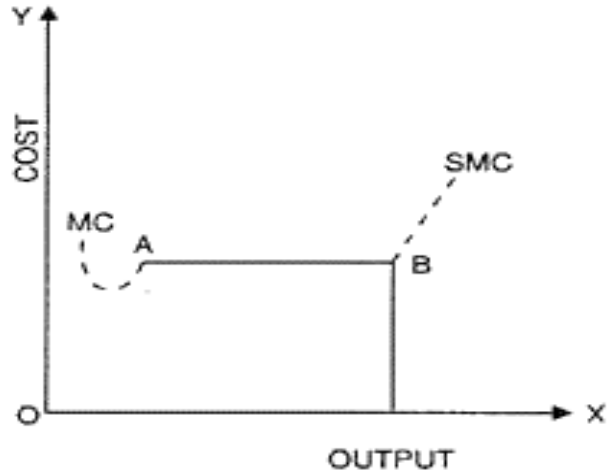


Fig.1.16. **Short Run Marginal Cost Curve**

1.6. Reasons for U shaped curve:

Short-run is meant that period of time within which a firm can vary its output by varying only the amount of variable factors, such as labour and raw material. In the short-run period, the fixed factors such as capital equipment, management personnel, the factory buildings, etc., cannot be altered. If, therefore, a firm wants to increase production in the short-run, it can do so only by hiring more workers or buying and using more raw materials. It cannot, in the short-run, enlarge the size of the existing plant or build a new plant of a bigger capacity. Thus, in the short-run, only variable factors can be varied, while the fixed factors remain the same. On the other hand, long-run is a period of time during which the quantities of all factors, variable as well as fixed, can be adjusted. Thus, in the long-run, output can be increased by increasing capital equipment or by increasing the size of the existing plant or by installing a new plant of bigger capacity.

Short-run Fixed and Variable Costs:

We have already drawn a distinction between prime (or variable) costs and supplementary (or fixed) costs. During the short period, only the prime costs relating to labour and raw materials can be varied, whereas the fixed costs remain the same. But, during the long period, even the fixed costs relating to plant and machinery, staff salaries, etc., can be varied. That is, in the long run, all costs are variable, and no costs are fixed.

Short-run Cost Curves:

We may repeat that, in the short-run, a firm will adjust output to demand by varying the variable factors. If all the factors of production can be used in varying proportions, it means that the scale of operations of the firm can be changed. Each time, the scale of operations is changed, a new short-run cost curve will have to be drawn for the firm such as SAC', SAC" and SAC" in the next diagram (Fig. 1.17).

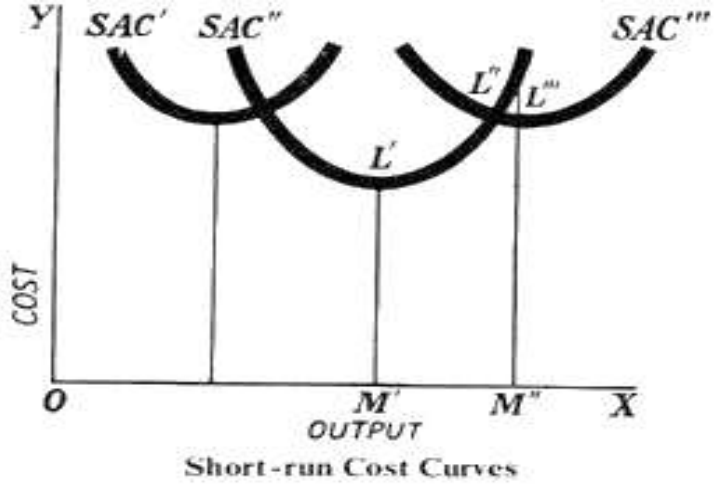
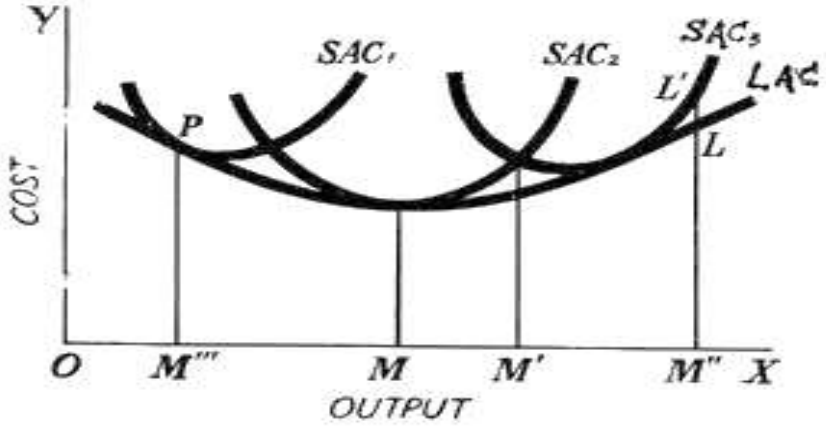


Fig.1.17. short run cost curves

To begin with, let us suppose that the firm has the short-run cost curve SAC. In this case, the optimum output will be OM'. Now, if it is desired to increase the output to OM" in the short-run, it can be obtained at the average cost M"L" along the short-run cost curve SAC", because in the short-run, the scale of operations is fixed. But, in the long run, a new and bigger plant can be built on which OM" is the optimum output. That is, the firm has now a short-run average cost curve SAC "', and by increasing the scale of its operations, the firm can produce the OM" output at a cost of M "L" 'instead of M "L".

Thus, it will be seen that, at any scale of operations in the short-run, a firm will have regions of rising and falling costs. But, in the long-run, the firm can produce on a completely different cost curves to the left (i.e., SAC') or right



LAC Curve : An Envelope

Fig.1.17. LAC Curve

(i.e., SAC"') of the original cost curve (i.e., SAC"). For each different scale represented by a different short-run cost curve, there will be an output where the average cost is the minimum. This is the optimum output.

Long-run Average Cost Curve:

In the diagram (Fig. 1.17), SAC, SAC, and SAC, are the short-run cost curves corresponding to the different scales of operations. In each case, the firm in question will be producing the desired output at the lowest cost. For example, OM"' output is produced at PM"' in the scale of operations represented by the curve SAC OM will be produced on SAC, and so on.

It should be clearly understood that only in the long-run can the scale of operations be altered; in the short-run, it will be fixed, and the average cost of output above or below the optimum level will necessarily rise along the short-run cost curve in question, whether it be SAC,, SAC $_2$ and SAC_3. A long-run average cost will show what the long-run cost of producing each output will be. It will be seen, in the Fig. 1.17 that the short-run average cost curve SAC, has a lower minimum point than either the curves SAC, and SAC_3. The optimum output of the firm is obtained at OM.

The long-run average cost curve LAC is a tangent to all the short-run cost curves SAC, SAC_2 and SAC. The LAC curve will, therefore, be U-shaped like the short-run cost curves, but its U-shape will be less pronounced than that of the short-run cost curves. It will be flatter. That is why the long-run

cost curve is called an 'Envelope', because it envelops all the short-run cost curves. The cost curves, whether short-run or long-run, are U-shaped because the cost of production first starts falling as output is increased owing to the various economies of scale. But after touching the lowest point at the optimum output level, it starts rising, and goes on rising if production is continued beyond the optimum level.

This obviously makes a U-shape. But, as we have said already, the U-shape of the long-run cost curves is less pronounced. In other words, the long-run average costs are flatter than the short-run curves. The longer the period to which the curve relates, the less pronounced will be the U-shape of the cost curves. By the long period, we mean the period during which the size and organisation of the firm can be altered to meet the changed conditions.

Why is the Long-run Cost Curves Flatter? The answer can be given in terms of fixed and variable costs. We have said before that no costs are fixed in the long-run, i.e., in the long run all costs are variable. In other words, the longer the period, the fewer costs will be fixed and the more costs will be variable. That is, in the long period, the total fixed costs can be varied, whereas in the short period, this amount is fixed absolutely.

In the short-run, if output is reduced, average cost will rise because the fixed costs will work out at a higher figure. But, in the long-run, fixed costs can be reduced if the output is continued at the low level. Hence, average fixed cost will be lower in the long than in the short run. The variable costs will not rise as sharply in the long-run as in the short-run, because in the long-run, the size of the firm can be increased to deal more economically with an increased output. Thus, LAC curves are flatter than the short-run cost curves, because, in the long-run, the average fixed cost will be lower, and variable costs will not rise to sharply as in the short period.

Why Are Long-Run Cost Curves U-Shaped?

We have explained above that the long-run cost-curves are U-Shaped. That is, as output is increased, the cost per unit falls, then it reaches a minimum after which it starts ascending so that it takes the shape of U. How do we account for this U-shape? The reason is that the cost curve falls on account

of the various economies of scale. But when the firm has expanded too much, economies are changed into diseconomies and the cost curve starts rising.

Dish-Shaped Cost Curves:

Empirical studies have further revealed that there is relatively very large flat portion or a large horizontal region in the centre of the long-run average cost curve. This means that for a considerable range of production, the long-run average cost remains the same and then it moves up at the right and making a sort of dish or saucer.

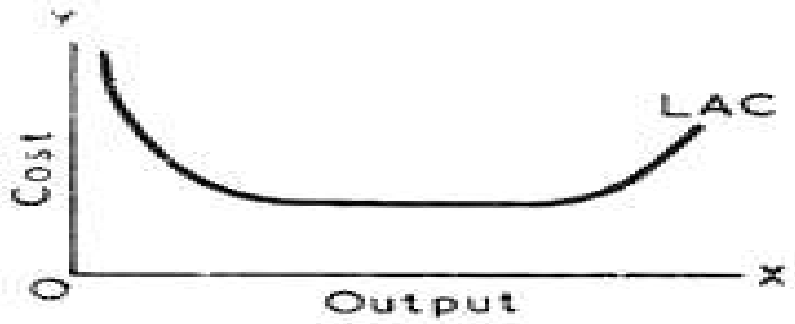
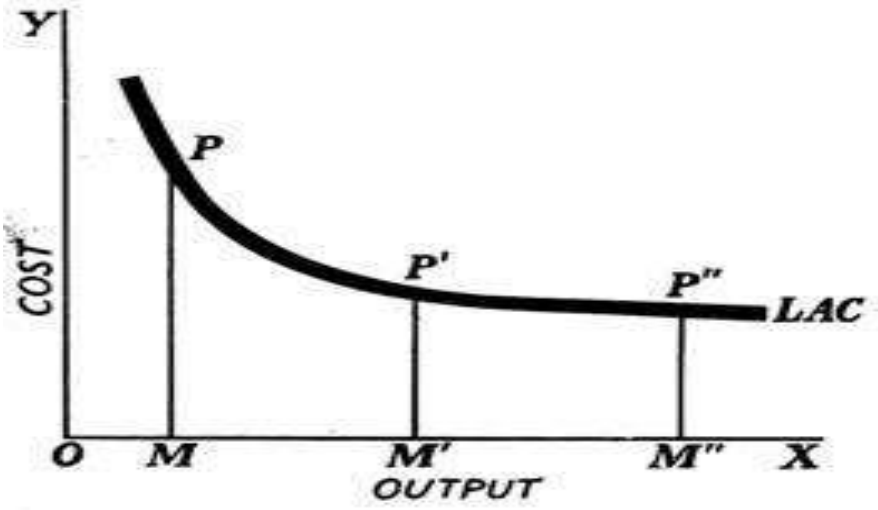


Fig.1.18. L – shaped cost curve

This means that the economies of scale are exhausted at some scale of operation, but diseconomies do not occur yet. But after the scale is enlarged beyond a point, dis-economies emerge and bring about a rise in the long-run average cost and thus give the curve a saucer or dish shape.

L-shaped Cost Curves:

Recently some economists have put forward the view based on recent empirical studies that the cost curves take the shape of 'L' and not 'U'. According to them, the shape of the long-run cost curve will be something as is given in Fig. 1.18. In this diagram, first OM is output produced and PM is the average cost of production including both the fixed and variable costs. When the output is expanded to OM", the cost is P'M', and when output is further increased to OM", the cost is P"M" which is almost equal to P'M'. From this point onwards, the cost per unit is stabilized so that, whatever the output,



the cost per unit remains practically the same and the LAC comes to have L-shape. This means that the cost first falls over a range of output, and then it neither rises nor falls but remains flat.

The following two reasons are given in support of the L-shape:

(i) Rapid technical progress brings about a sharp decline in unit cost up to a certain point and then stabilizes it.

(ii) With lapse of time the producer learns to produce at lower cost.

1.7. REVENUE CONCEPTS:

Revenue refers to the amount received by a firm from the sale of a given quantity of a commodity in the market. Revenue is a very important concept in economic analysis. It is directly influenced by sales level, i.e., as sales increases, revenue also increases.

1.7.1. Revenue Types: Total, Average and Marginal Revenue

The term revenue refers to the income obtained by a firm through the sale of goods at different prices. In the words of Dooley, 'the revenue of a firm is its sales, receipts or income'. The revenue concepts are concerned with Total Revenue, Average Revenue and Marginal Revenue.

1. Total Revenue:

The income earned by a seller or producer after selling the output is called the total revenue. In fact, total revenue is the multiple of price and output. The behaviour of total revenue depends on the market where the firm produces or sells. "Total revenue is the sum of all sales, receipts or income of a firm." - Dooley

"Total revenue at any output is equal to price per unit multiplied by quantity sold."- Stonier and Hague

Thus,

$$TR = AR \times Q$$

where
TR = Total Revenue
AR = Average Revenue or Price per Unit
Q = Output

For example if the price of a commodity is Rs. 100 and total units sold are 20 in that case total revenue will be

$$TR = 100 \times 20 = 200$$
$$TR = 2000$$

2. Average Revenue:

Average revenue refers to the revenue obtained by the seller by selling the per unit commodity. It is obtained by dividing the total revenue by total output. "The average revenue curve shows that the price of the firm's product is the same at each level of output." Stonier and Hague.

Thus :

$$AR = \frac{TR}{Q}$$

where
AR = Average Revenue
TR = Total Revenue
Q = Output

According to **McDonnell**, "Average Revenue is the per unit revenue received from the sale of one unit of a commodity."

$$TR = \text{Price} \times \text{Output}$$
$$TR = Pq$$
$$AR = \frac{Pq}{q} = P$$

and $P = f(Q)$ is an average curve which shows that price is a function of quantity demanded. It is also a demand curve.

3. Marginal Revenue:

Marginal revenue is the net revenue obtained by selling an additional unit of the commodity. "Marginal revenue is the change in total revenue which results from the sale of one more or one less unit of output." Ferguson. Thus, marginal revenue is the addition made to the total revenue by selling one more unit of the good. In algebraic terms, marginal revenue is the net addition to the total revenue by selling n units of a commodity instead of n – 1.

Total Revenue, Average Revenue and Marginal Revenue:

The relation of total revenue, average revenue and marginal revenue can be explained with the help of table and fig.

Table Representation:

The relationship between TR, AR and MR can be expressed with the help of a table 1.1.

Table 1

Unit (q)	TR/q AR or Price	(Pq) TR	($TR_n - TR_{n-1}$) MR
1	10	10	10
2	9	18	8
3	8	24	6
4	7	28	4
5	6	30	2
6	5	30	0
7	4	28	– 2
8	3	24	– 4
9	2	18	– 6
10	1	10	– 8

From the table 1.1 we can draw the idea that as the price falls from Rs. 10 to Re. 1, the output sold increases from 1 to 10. Total revenue increases from 10 to 30, at 5 units. However, at 6th unit it becomes constant and ultimately starts falling at next unit i.e. 7th. In the same way, when AR falls, MR falls more and becomes zero at 6th unit and then negative. Therefore, it is clear that when AR falls, MR also falls more than that of AR: TR increases initially at a diminishing rate, it reaches maximum and then starts falling.

The formula to calculate TR, AR and MR is as under:

$TR = P \times q$

Or $TR = MR_1 + MR_2 + MR_3 + MR_3 + \ldots\ldots MR_{„}$

TR

$AR = TR/q$ $MR = TR_n - TR_{n\_x}$

In fig. 1.20 (A) and (B) three concepts of revenue have been explained. The units of output have been shown on horizontal axis while revenue on vertical axis. Here TR, AR, MR are total revenue, average revenue and marginal revenue curves respectively.

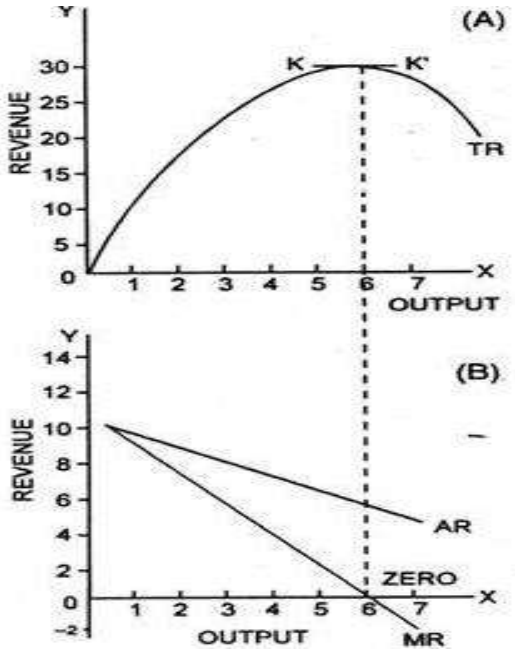


Fig.1.20 (A) and (B)

In figure 1.20 (A), a total revenue curve is sloping upward from the origin to point K. From point K to K' total revenue is constant. But at point K' total revenue is maximum and begins to fall. It means even by selling more units total revenue is falling. In such a situation, marginal revenue becomes negative. Similarly, in the figure 1.20 (B) average revenue curves are sloping downward. It means average revenue falls as more and more units are sold. In fig. 1.20 (B) MR is the marginal revenue curve which slopes downward. It signifies the fact that MR with the sale of every additional unit tends to diminish. Moreover, it is also clear from the fig. that when both AR and MR are falling, MR is less than AR. MR can be zero, positive or negative but AR is always positive.

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UNIT II

MARKET THEORIES

2.1. Introduction

Perfect competition refers to a market situation in which there are large number of buyers and sellers of homogeneous products. The price of the product is determined by industry with the forces of demand and supply. For instance, if you require pen, there should be several shops selling pens. Under conditions of perfect competition, every seller should be selling the same quality of pens at the uniform prevailing price in the market. You may buy a pen from any shop at price Rs. 10. If another shopkeeper charges Rs. 12 for same quality of pen, nobody will buy from him. But if a shopkeeper charges Rs. 9 all will buy pens from that particular shop. But, both these situations are unrealistic. There must be one price prevailing throughout the market. Thus, perfect competition in a market structure is characterized by the complete absence of rivalry among individual firms.

DEFINITIONS:

"Perfectly competitive market is a situation where large number of buyers and sellers are 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." –Boulding.

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.

2.2. ASSUMPTIONS:

A perfectly competitive market has following assumptions:

1. Large Number of Buyers and Sellers:

It means no single buyer or seller can affect the price. If a firm enters into the market or exit the market, there will be no effect on the supply. Similarly if a buyer enters into the market or exit from the market, demand will not be affected. Thus no individual buyer or seller can affect the price.

2. Homogeneous Products:

The second assumption of perfect competition is that all sellers sell homogeneous product. In such a situation, the buyers have no reason to prefer the product of one seller to another. This condition is present only when the commodity is a substance of definite chemical and physical composition i.e., salt, tin, specified grade of wheat etc.

3. No Discrimination:

Under perfectly competitive market, buyers and sellers must buy and sell freely among themselves. It implies that buyers and sellers must be willing to deal openly with one another to buy and sell at the market price. This may be true of one and all that may wish to do so without offering any special deals, discounts, or favours to selected individuals.

4. Perfect Knowledge:

A competitive market is (me in which the buyers and sellers are in close contact with each other. It means that, there is perfect knowledge of the market on the part of buyers and sellers. It implies that a large number of buyers and sellers in the market exactly know how much is the price of the commodity in different parts of the market. In other words, there must be knowledge on the part of each buyer and seller of the prices at which transactions are being carried on, and of the prices at which other buyers and sellers are willing to buy or sell.

5. Free Entry or Exit of Firms:

In the long run, under perfect competition, firm can enter into or exit from the industry. There is no let or hindrance on firms as far as their entry into or exit from the market. In other words, there are no legal or social restrictions on the firm. Large number of sellers can be possible only if there is free entry of firms.

6. Perfect Mobility:

There must be perfect mobility of factors of production within the country which ensures uniform cost of production in the whole economy. It implies that different factors of production are free to seek employment in any industry that they may like.

7. Profit Maximization:

Under perfect competition, all firms have a common goal of profit maximization. Thus, there is absence of social welfare of the general masses.

8. No Selling Cost:

Under perfect competition, there are no selling costs.

9. No Transport Costs:

There shall not be any cost of transport between sellers. If transport costs exist buyers are prevented from moving from one seller to another to take advantage of price difference. This means that transport cost has no influence on the pricing of a product. In other words, these are always uniform price in the market.

2.3. PRICE DETERMINATION:

Perfect competition is defined as a market situation where there are a large number of sellers of a homogeneous product. An individual firm supplies a very small portion of the total output and is not powerful enough to exert an influence on the market price. A single buyer, however large, is not in a position to influence the market price. Market price in a perfectly competitive market is determined by the interaction of the forces of market demand and market supply. Market demand means the sum of the quantity demanded by individual buyers at different prices.

Similarly, market supply is the sum of quantity supplied by the individual firms in the industry. Each seller and buyer takes the price as determined. Therefore, in a perfectly competitive market, the main problem for a profit-maximizing firm is not to determine the price of its product but to adjust its output to the market price so that profit is maximized.

Price determination under perfect competition is analyzed under three different time periods:

(a) Market Period

(b) Short Run

(c) Long Run

(a) Market Period:

In a market period, the time span is so short that no firm can increase its output. The total stock of the commodity in the market is limited. The

market period may be an hour, a day or a few days or even a few weeks depending upon the nature of the product. For example, in the case of perishable commodities like vegetables, fish, eggs, the period may be a day. Since the supply of perishable commodities is limited by the quantity available or stock in day that neither can be increased nor can be withdrawn for the next period, the whole of it must be sold away on the same day, whatever may be the price?

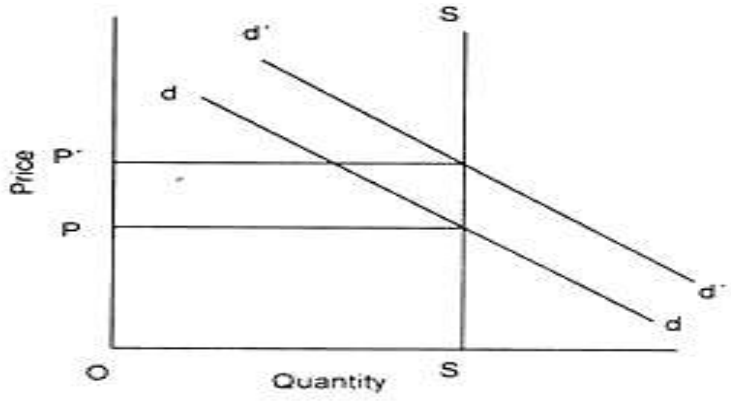

Fig.2.1. pricing in the market period

Fig 2.1 shows that the supply curve of perishable commodities like fish is perfectly inelastic and assumes the form of a vertical straight line SS. Let us suppose that the demand curve for fish is given by dd. Demand curve and supply curve intersect each other at point R, determining the price OP. If the demand for fish increases suddenly, shifting the demand curve upwards to d'd'. The equilibrium point shift from R to R" and the price rises to OP'. In this situation, price is determined solely by the demand condition that is an active agent.

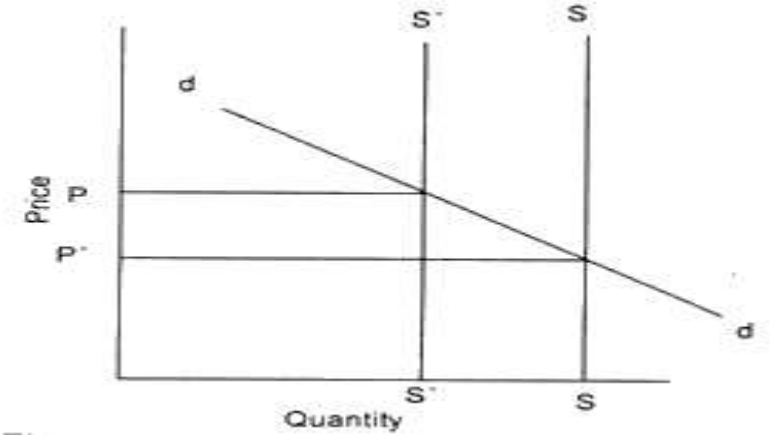

Fig.2.2. Change in supply in market period

Similarly, if the demand for a product is given, as shown in demand curve SS in figure 2.2. If the supply of the product decreases suddenly from SS to S'S', the price increases from P to P'. In this case price is determined by supply, the supply being an active agent. In this case supply curve shifts leftward causing increase in price of the reduced supply goods. Given the demand curve dd and supply curve SS, the price is determined at OP. Demand curve remaining the same, the decrease in supply shifts the supply curve to its left to S'S'. Consequently, the price rises from OP to OP'.

The supply curve of non-perishable but reproducible goods will not be a vertical straight line throughout its length. This is for certain goods can be withdrawn from the market if the price is too low as the seller would not sell any amount of the commodity in the present market period and would like to hold back the whole stock. The price below which the seller declines to offer for any amount of his product is known as 'reserve price'. Thus, the seller faces two extreme price-levels; at one he is ready to sell the whole stock and the other he refuses to sell any. The amount he offers for sale will vary with price. The seller will be ready to supply more at a higher price rather than at a lower one will depend upon his anticipations of future price and intensity of his need for cash. The supply curve of a seller will, therefore, slope upwards to the right up to the price at which he is ready to sell the whole stock. Beyond this point, the supply curve will become a vertical straight line whatever the price.

(b) Pricing in the Short Run- Equilibrium of the Firm:

Short period is the span of time so short that existing plants cannot be extended and new plants cannot be erected to meet increased demand. However, the time is adequate enough for producers to adjust to some extent their output to the increase in demand by overworking their fixed capacity plants. In the short run, therefore, supply curve is elastic. Figure 2.3 shows the average and marginal cost curves of the firm together with its demand curve. Demand curve, in a perfectly competitive market, is also the average revenue curve and the marginal revenue curve of the firm. The marginal cost intersects the average cost at its minimum point. The U-shape of both the cost curves reflects the law of variable proportions operative in the short run

during which the size of the plant remains fixed. The firm is in equilibrium at the point B where the marginal cost curve intersects the marginal revenue curve from below:

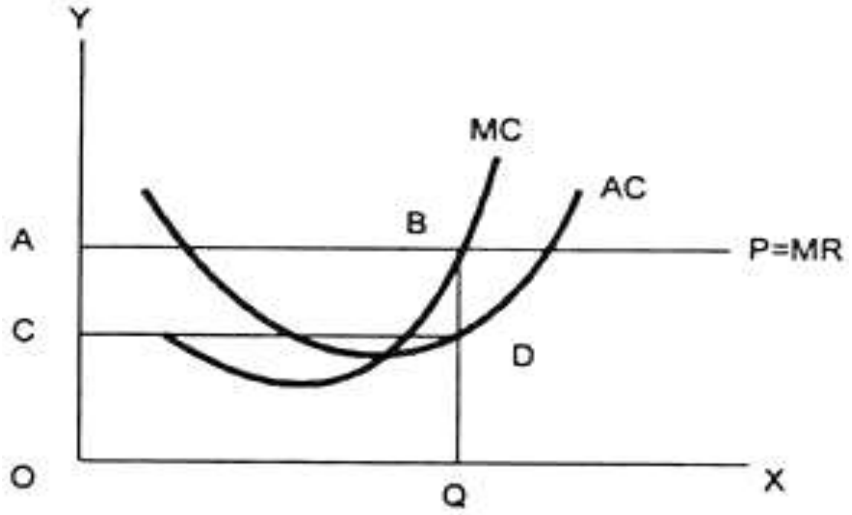

Fig.2.3. Pricing in the short run

The firm supplies OQ output. The QC is the average cost and the firm earns total profit equal to the area shown by ABCD. The firm maximizes its profit. Earlier to the point of equilibrium, the firm does not attain the maximum profit as each additional unit of output brings more revenue that its cost. Any level of output greater than OQ brings less marginal revenue than marginal cost.

For the equilibrium of a firm the two conditions must be fulfilled:

(a) The marginal cost must be equal to the marginal revenue. However, this condition is not sufficient, since it may be fulfilled and yet the firm may not be in equilibrium. Figure 2.4 shows that marginal cost is equal to marginal revenue at point e', yet the firm is not in equilibrium as Oq output is greater than Oq'.

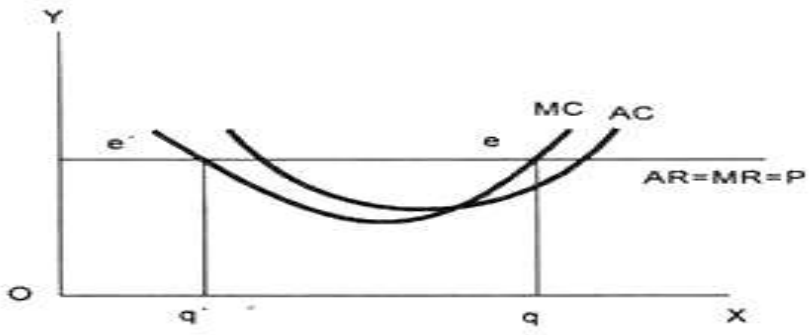

Fig.2.4. Equilibrium conditions

(b) The second and necessary condition for equilibrium requires that the marginal cost curve cuts the marginal revenue curve from below i.e. the marginal cost curve be rising at the point of intersection with the marginal revenue curve.

Thus, a perfectly competitive firm will adjust its output at the point where its marginal cost is equal to marginal revenue or price, and marginal cost curve cuts the marginal revenue curve from below. The fact that a firm is in equilibrium does not imply that it necessarily earns supernormal profits. In the short-run equilibrium firms may earn supernormal profits, normal profits or may incur losses. Whether the firm makes supernormal profits, normal profits or incurs losses depends on the level of the average cost at the short run equilibrium. If the average cost is below the average revenue, the firm earns supernormal profits. Figure 2.5 illustrates that the average cost QC is less than average revenue QB, and the firm earns profits equal to the area ABCD.

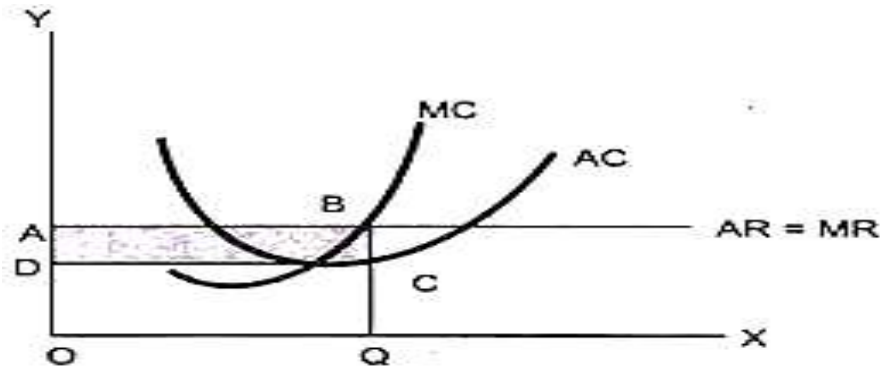

Fig.2.5.

If the average cost is above the average revenue the firm makes a loss. Figure 2.6 shows that the Average cost QF is higher than QG average revenue and the firm is incurring loss equal to the shaded area EFGH. In this case the firm will continue to produce only if it is able to cover its variable costs. Otherwise it will close down, since by discontinuing its operations the firm is better off; it minimizes its losses. The point at which the firm covers its variable costs is called 'the closing-down point'.

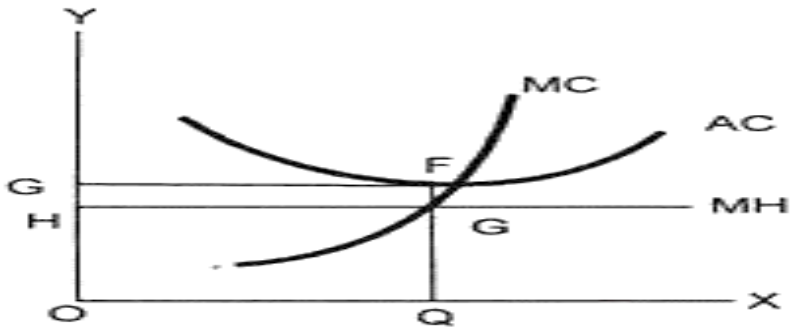

Fig.2.6.

If the price falls below or average costs rise, the firm does not cover its variable costs and is better off if it closes down. Figure 2.7 explains shut-down point. Figure 2.7 explains that DD is the industry demand and SS the industry supply. The point E, which industry demand and industry supply equalizes, the price OP is determined. OQ is the quantity demanded and quantity supplied. This, however, is a short run equilibrium where at the market-determined price some firms may be making supernormal profits, normal profits or making losses. In the long run the firms may not continue incurring losses. Loss making firms that cannot adjust their plant will close down.

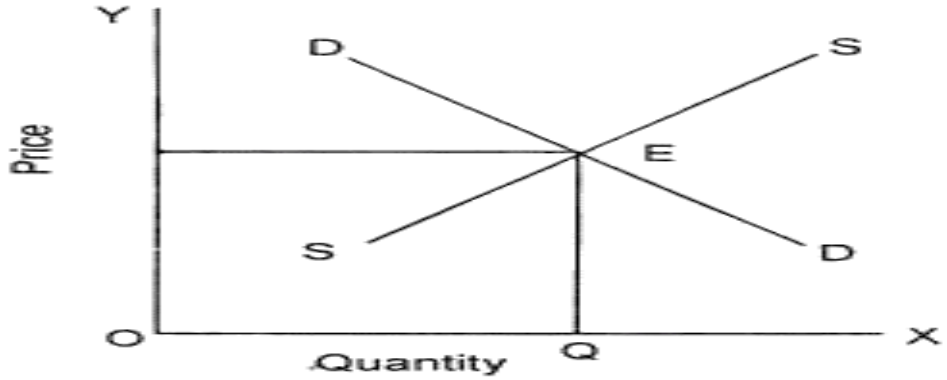

Fig.2.7.

(c) Pricing in the Long Run:

The long run is a period of time long enough to permit changes in the variable as well as in the fixed factors. In the long run, accordingly, all factors are variable and non- fixed. Thus, in the long run, firms can change their output by increasing their fixed equipment. They can enlarge the old plants or replace them by new plants or add new plants. Moreover, in the long run, new firms can also enter the industry. On the contrary, if the situation so

demands, in the long run, firms can diminish their fixed equipment's by allowing them to wear out without replacement and the existing firm can leave the industry. Thus, the long run equilibrium will refer to a situation where free and full scope for adjustment has been allowed to economic forces. In the long run, it is the long run average and marginal cost curves, which are relevant for making output decisions. Further, in the long run, average variable cost is of no particular relevance. The average total cost is of determining importance, since in the long run all costs are variable and none fixed. In the short run a firm under perfect competition is in equilibrium at that output at which marginal cost equals price or Marginal Revenue. This is equally valid in the long run. But, in the long run for a perfectly competition firm to be in equilibrium, besides marginal cost being equal to price, price must also be equal to average cost. If the price is greater than the average cost, the firms will be making supernormal profits.

Lured by these supernormal profits, new firms will enter the industry and these extra profits will be competed away. When the new firms enter the industry, the supply or output of the industry will increase and hence the price of the output will be forced down. The new firms will keep coming into the industry until the price is depressed down to average cost, and all firms are earning only normal profits.

On the other hand, if the price happens to be below the average cost, the firms will be incurring loses. Some of the existing firms will quit the industry. As a result, the output of the industry will decrease and the price will rise to equal the average cost so that the firms remaining in the industry are making normal profits. Hence, in the long run, firms need not be forced to produce at a loss since they can leave the industry, if they are having losses. Thus, for a perfectly competitive firm to be in equilibrium in the long run, price must equal marginal and average cost.

Now when average cost curve is falling, marginal cost curve is below it, and when average cost curve is rising, marginal cost curve must be above it. Hence, marginal cost can be equal to the average cost only at the point where average cost curve is neither falling nor rising, i.e. at the minimum point of

average cost curve. Therefore, it is at the point of minimum average cost curve, and the two are equal there.

Thus, the conditions for long run equilibrium of perfectly competitive

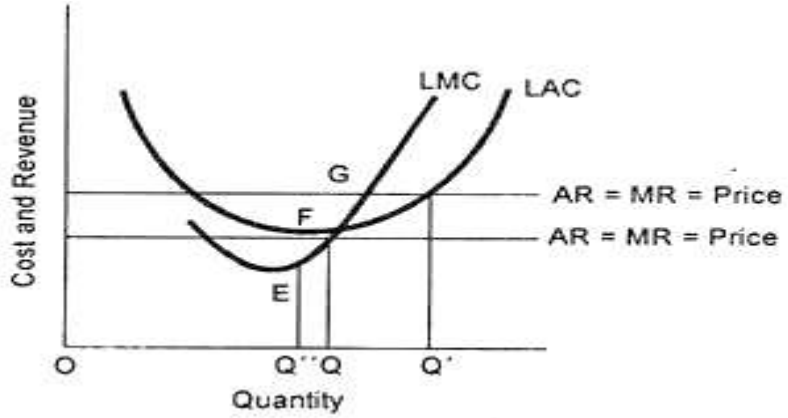

Fig.2.8. Pricing in the long run

Firm can be written as:

Price = Marginal Cost = Minimum Average Cost.

The conditions for the long run equilibrium of the firm under perfect competition can be easily understood from the Fig. 2.8, where LAC is the long run average cost curve and LMC in the long run marginal cost curve. The firm under perfect competition cannot be in long run equilibrium at price OP', because though the price OP' equals MC at G (i.e., at output OQ) but it is greater than the average cost at this output and, therefore, the firm will be earning supernormal profits. Since all the firms are assumed to be identical, all would be earning supernormal profits. Hence, there will be attraction for the new firms to enter the industry. As a result, the price will be forced down to the level Op at which price, the firm is in equilibrium at F and is producing OQ" output.

At point F or equilibrium output OQ", the price is equal to average cost, and hence the firm will be earning only normal profits. Therefore, at price OP, there will be no tendency for the outside firms to enter the industry. Hence, the firm will be in equilibrium at OP price and OQ output. On the contrary, a firm under perfect competition cannot be in the long run equilibrium at price OP". Though price OP" is equal to marginal cost at point E, or at output OQ" but price OP" is lower than the average cost at this point and thus the firm will be incurring losses.

Since all the firms in the industry are identical in respect of cost curves, all would be incurring losses. To avoid these losses, some of the firm will leave the industry. As a result, the price will rise to OP, where again all firms are making normal profits. When the price OP is reached, the firms would have no further tendency to quit.

Thus, to conclude that at price OP, the firm under perfect competition is in equilibrium in the long run when:

Price = MC = Minimum AC

Now, at price OP, besides all firms being in equilibrium at output OQ, the industry will also be in equilibrium, since there will be no tendency for new firms to enter or the existing firms to leave the industry, because all will be earning normal profits. Thus, at OP price, full equilibrium, i.e. equilibrium of all the individual firms and also of the industry, as a whole, is achieved in the long run under perfect competition.

2.4. MONOPOLY:

2.4.1. 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. In this way, 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.

2.4.2. DEFINITIONS:

"Pure monopoly is represented by a market situation in which there is a single seller of a product for which there are no substitutes; this single seller is

unaffected by and does not affect the prices and outputs of other products sold in the economy." Bilas

"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

2.4.3. FEATURES:

We may state the features of monopoly as:

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.

2.4.4. KINDS OF MONOPOLY:

Monopoly is of following kinds:

1. Simple Monopoly and Discriminating Monopoly:

A simple monopoly firm charges a uniform price for its output sold to all the buyers. While a discriminating monopoly firm charges different prices for the same product to different buyers. A simple monopoly operates in a single market a discriminating monopoly operates in more than one market.

2. Pure Monopoly and Imperfect Monopoly:

Pure monopoly is that type of monopoly in which a single firm which controls the supply of a commodity which has no substitutes not even a remote one. It possesses an absolute Monopoly power. Such a Monopoly is very rare. While imperfect monopoly means a limited degree of Monopoly. It refers to a single firm which produces a commodity having no close substitutes. The degree of Monopoly is less than perfect in this case and it relates to the availability of the closeness of a substitute. In practice, there are many cases of such imperfect monopoly.

3. Natural Monopoly:

When a Monopoly is established due to natural causes then it is called natural monopoly. To-day India has got Monopoly in mica production and Canada has got Monopoly in nickel production. These Monopoly natures has provided to these countries.

4. Legal Monopoly:

When anybody receives or acquires Monopoly due to legal provisions in the country. For Example: When legal monopolies emerge on account of legal provisions like patents, trade-marks, copyrights etc. The law forbids the potential competitors to imitate the design and form of products registered under the given brand names, patent or trade-marks. This is done to safeguard the interests of those who have done much research and undertaken risks of innovating a particular product.

5. Industrial Monopolies or Public Monopolies:

In the general interest of the nation, when a government nationalizes certain industries in the public sector, whereby industrial or public monopolies are created. The Industrial Policy Resolution 1956, in India, for instance, categorically lays down that certain fields like arms and ammunition, atomic energy, railways and air transport will be the sole monopoly of the Central Government. In this way industrial monopolies are created through statutory measures. The monopolist is the sole seller of a particular product. Therefore, if the monopolist is to enjoy excess profit in the long run that must exist certain barriers to the entry of new firms into the

industry. Such barriers may refer to any force which prevents rival firms (competing producers) from entering the industry.

Such barriers which protect the monopolist from the encroachment of other firms may be either natural or artificial (legal). In fact, entry barrier may take different forms.

Some of the important one are the following:

(a) Natural Barriers:

There are three sources of natural barriers.

(i) Absolute cost advantage:

If production in an industry is subject to increasing return to scale or decreasing cost, long-run average cost will tend to fall with an increase in the size of the firm. Thus an increase in the size of the firm is desirable. In this context we may refer to the concept of natural monopoly. Natural monopoly exists when it is possible to produce at minimum efficient scale. Thus natural monopoly refers to an industry in which technical factors provide the efficient existence of more than one producer. As R. G. Lipsey and C. Harbury have rightly commented: "In such an industry, competition among firms will lead to the emergence of one large firm serving the whole market—since the largest firm always has lower costs, and hence can undersell any small competitors." Examples are the public utilities such as water, gas and electricity where there is acquirement for a network of pipes or cables.

(ii) Sole control over a basic raw material:

A prime cause of cost advantages seems to be the possession of a critical raw material. This is another natural barrier to entry. For example, a cement manufacturing company may have sole access to a basic raw material, viz., limestone and may thus enjoy monopoly position in the industry. Similarly, a company may own a small piece of land beneath which oil is found.

(iii) Locational advantages:

Some locations offer special advantages than others. This fact discriminates in favour of certain firms and against others. This, in its turn, makes it impossible on the part of potential new entrants to compete on equal terms with an established firm. For example, a restaurant adjacent to a bus junction can expect more sales than those situated in remote places.

For example, Hindustan Lever's soap factory near the Kidder-pore area of Calcutta is situated on the bank of river Hooghly. This proximity to a river lowers HL's costs of waste disposal, compared to other firms.

(b) Artificial Barriers:

Artificial barriers are those which are created by human beings and not by nature. Some of these are created by individuals and business firms, while others are created by governments.

Such barriers are of three types:

(i) Product differentiation:

This is an important feature of monopoly because it implies absence of close substitutes. Product differentiation enables a firm to deter the entry of new firms in the industry. This is often achieved through advertising and sales promotion. For example the Reckitt and Colman of India Ltd. is enjoying a virtual monopoly position as far as its main product, viz., Dettol is concerned. In spite of introduction of Savlon by Johnson and Jhonson Ltd., Dettol continues to be the most popular antiseptic germicidal in the country.

(ii) Legal barriers:

By using patents on production processes (as in the case of Coca Cola) and copyrights on publications (as in the case of Sampat Mukherjee's Economics Theory by New Delhi's Wiley Eastern Ltd.) legal restrictions may be imposed on the entry of new firms in an industry. Such legal devices are often used for preventing the entry of new firms in an industry.

(iii) Barriers created by government:

The government of a country can also create monopoly by giving the legal right to a company to produce a particular product or render a particular service. For example, the Acts of Parliament protect India's nationalised industries such as the Coal India Ltd., or the LIC, at least partly, from competition of private firms. The State Governments also grant monopoly rights to private firm's suah as Roy's Wine Shop in Salt Lake area of Calcutta, the only duty free shop in an airport, or the only service station in a particular locality.

2.4.5. SHORT-RUN VS. LONG-RUN BARRIERS:

Thus for monopoly to exist and monopoly profit not to disappear there must exist certain barriers to entry. Some of these barriers are permanent, others are temporary in nature. For example, cost advantages, arising from increasing returns to scale, create permanent barriers to entry. On the other hand, copyrights or patents cannot prevent the entry of new firms in the industry in the long run. Similarly, differentiated products are likely to be copied out in the long run.

2.5. OUTPUT AND PRICE DETERMINATION:

By pure or absolute or a single-firm monopoly we mean that one firm is the only seller or the dominant seller of a given commodity for which there is close substitute.

A monopoly market has the following distinguishing features:

1. A single producer or seller:

In a monopoly market there is only one single or dominant producer or seller in the industry producing or selling a particular product.

2. Absence of close substitutes:

A monopolist produces or supplies a particular commodity which is not produced or sold by any other firms. Theoretically speaking, there cannot be any substitute for the product of a monopoly firm. But, in reality, every commodity has more or less some substitutes, near or distant. However, in monopoly the substitutes available are not close.

3. Absolute control over the market supply:

As a single firm produces or supplies the commodity, a monopolist, unlike a competitor, has an absolute control over the market supply. This is considered to be foundation of monopoly power.

4. A price-maker, not a price-taker:

As the monopoly firm has an absolute control over the market supply, any increase of supply raises it. It is, indeed, a price-maker, not a price-taker. If it reduces the supply in the market, the price will rise; and vice-versa. So its demand (average revenue) curve is downward sloping from left to right. It is obvious that in such a situation marginal revenue will be less than its average revenue.

5. No entry of new firms:

In monopoly there is no entry of new firms into the industry because of legal or natural barriers. As a result excess profit, if any, does not disappear in the long run as under perfect competition.

6. Absence of competitive advertisements:

As there are no competitors, a monopoly firm is not required to spend money on competitive advertisements. Sometimes it, however, spends some amount of money on informative advertisements for better publicity and for maintaining good relation with its customers.

7. Equilibrium of firm and industry:

Since there is only one firm in the industry, under monopoly the equilibrium of firm is the same as the equilibrium of industry. It is to be noted that the cases of pure monopoly are nearly as rare as examples of pure competition as no firm has complete monopoly power. In the field of public utilities like the supply of electricity, telephone operations, water supplies and railway services we find the presence of monopolies. The Calcutta Electric Supply Corporation (India) Ltd. is also an instance of a monopoly firm.

2.5.1. OUTPUT AND PRICE DETERMINATION UNDER MONOPOLY:

A monopolist, like other producers, is also guided by the chief consideration of the maximisation of net gains or the minimisation of losses. For determining the optimal output, he is required to make a comparison between marginal cost and marginal revenue. The output of the monopolist will be set at the point at which marginal revenue is equated with marginal cost. If marginal revenue were any higher it would pay the monopolist to increase production because the additional costs generated would be lower than the revenue, and profits would rise. The reverse would be true if marginal revenue were any lower than marginal cost. The price of the monopolist is determined by demand as the firm cannot set both output and price. For its chosen output, the monopolist can read price off a market demand curve, which will lie above the marginal revenue curve. The total profits of a monopolist become, as in other cases, the maximum at the output where marginal cost becomes equal to marginal revenue.

If marginal revenue is greater than marginal cost, the monopolist will be able to increase his total profits by producing more. If, on the other hand, marginal cost is greater than marginal revenue at any level of output, he gets losses and so will reduce the output, where MC=MR. By fixing his output at the optimal level, he will fix the price of his product, which he determines from his average revenue curve. The equilibrium position of a monopolist in the short run is shown in Fig. 1, where he produces OQ_0 output because at the output MC=MR. for OQ_0 equilibrium output he charges Q_0P_0 price—the monopoly equilibrium price.

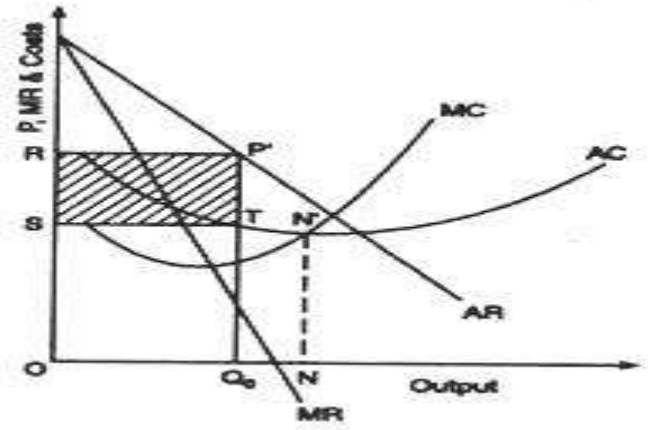

Fig 2.9. The equilibrium position of a monopolist in the short run

His supernormal or excess profit is represented by the area $RSTP_0$. This excess profit does not disappear in the long run due to entry restrictions. So there is no fundamental difference between the short-run and the long-run in a monopoly as situation, imperfect competition. But the fact remains that if a monopolist operates a profit in the short run, he will operate on a much larger scale in the long run. In other words, a single plant monopolist prices become a multi-plant one in the long run. However, there is an important point to note in this context. Since increasing of scale becomes relevant in the long run a monopolist may operate under alternative cost conditions.

Long-Run Monopoly Equilibrium:

In the long run a monopolist may produce under increasing cost or under decreasing cost or under constant cost. Equilibrium situations of a monopolist under three such cost situations can be shown in Fig. 2.10 (a,b,c).

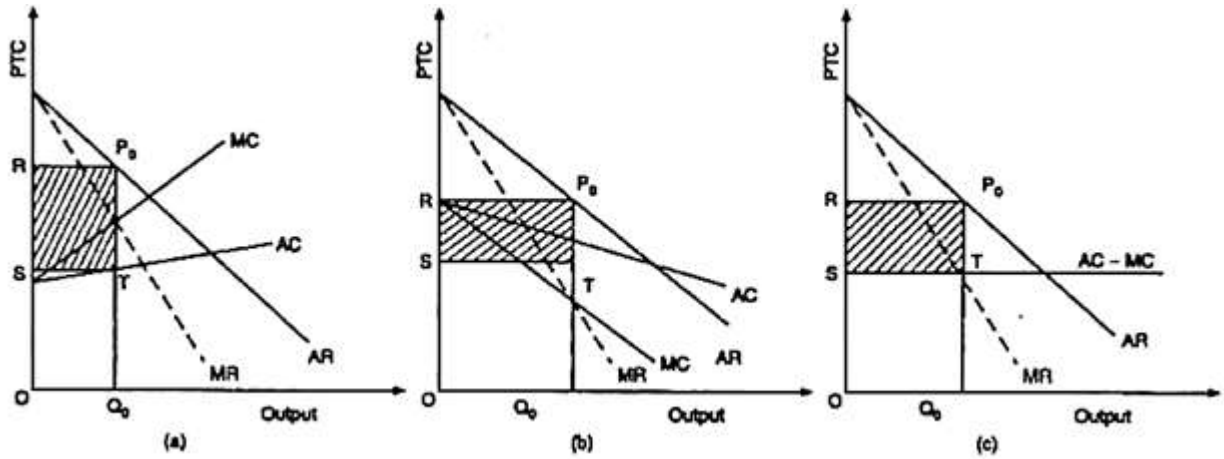

Fig.2.10: Long run monopoly equilibrium

Fig. 2.10 (a) illustrates the equilibrium under increasing cost and so both AC and MC curves are rising here. Fig. 2.10 (b) illustrates the equilibrium under decreasing cost and so both AC and MC curves have been falling. Fig. 2.10 (c) shows the equilibrium under constant cost when AC-MC. In all the three figures the equilibrium output is OQ_0 and the equilibrium price is Q_0P_0. The area OQ_0P_0R is total revenue and O_0TS is total cost of the monopolist. So, the area $RSTP_0$ in all the three figures indicates the excess profit of the monopolist in the long run. It shows that a monopolist is required to take into account some more factors in fixing output and price.

These factors are as under:

(a) Short-run and long-run pricing:

In the short run, the monopolist, like the completive firm, is to keep an eye on the variable costs. The equation MR = MC is the condition of the short-run equilibrium for the monopolist as it is for the competitive firm. But with a low short-run demand, the monopoly price may fail to cover total costs; it may equal variable cost or exceed it to some extent, but it cannot go below the average variable cost. But in the long run the monopolist can change the size of the plant in response to a change in demand or in costs. In such a situation the marginal revenue equals the long run marginal cost. In the long run a monopolist does not sell at losses. This mean that his price will be greater than or at least equal to average cost. He makes excessive profits through his power to restrict output.

(b) Demand conditions or the elasticity of demand for the product:

A monopolist is to consider the demand conditions while fixing the price of his product. If the demand for his product is elastic, he will not charge a high price, because at such time the demand for his product will be low. In such a situation he will fix the price at a low level for maximising his total profits by selling as larger a quantity of his product as possible. If, on the other hand, the monopolist's product has an inelastic demand, he will fix the price at a high level; because the sale of such a product will not fall in spite of its high price. In such a situation he will help to maximise profits by selling less units but getting larger profit per unit sold.

(c) Cost conditions:

A monopolist has also to take into consideration the cost conditions of the industry. If he produces under decreasing cost, he can reduce the average cost by producing more; so here he will produce more and sell at a low price. But, if he produces under increasing cost, he will be compelled to restrict the output to keep down the average cost: in this case he will charge a high price.

(d) Other factors:

Besides, a monopolist is to take into account other factors like the prices of the substitutes of his product, potential competition, consumers' resistance, government's regulations and interference, etc. in fixing his price, so as to be able to maintain his monopoly position.

2.6. MONOPOLISTIC COMPETITION:

2.6.1. Introduction

The concept of monopolistic competition was put-forth by an American economist Prof. E.H. Chamberlin in his popular book, "The Theory of Monopolistic Competition" published in 1933. In simple words, monopolistic competition refers to a market situation where there are many sellers of a commodity, but the product of each seller differs from each other. No seller can have any perceptible influence on the price output policies of the other seller nor can he be influenced by their action. Thus, product differentiation is the hall mark of the monopolistic competition. The product differentiation manifests itself in several ways like difference in product brand, difference in

trade mark, difference in quality and colour etc. However, many examples can be put forward to explain the concept of monopolistic competition. All the firms producing soaps, toothpastes etc. are the examples of monopolistic competition. Under monopolistic competition, a firm enjoys some features of monopoly and perfect competition. For instance, Hindustan Levers Ltd. enjoys monopoly right on the trademark "Lux". No other firm can use this trade mark.

2.6.2. DEFINITIONS:

"Monopolistic competition is a market situation in which there are many sellers of a particular product, but the product of each seller is in some way differentiated in the minds of consumers from the product of every other seller." Leftwitch

"Monopolistic competition is found in the industry where there are a large number of small sellers selling differentiated but close substitute products." Joe S. Bain

2.6.3. FEATURES OF MONOPOLISTIC COMPETITION:

1. Large Number of Sellers:

There are large numbers of firms selling closely related, but not homogeneous products. Each firm acts independently and has a limited share of the market. So, an individual firm has limited control over the market price. Large number of firms leads to competition in the market.

2. Product Differentiation:

Each firm is in a position to exercise some degree of monopoly (in spite of large number of sellers) through product differentiation. Product differentiation refers to differentiating the products on the basis of brand, size, colour, shape, etc. The product of a firm is close, but not perfect substitute of other firm. Implication of 'Product differentiation' is that buyers of a product differentiate between the same products produced by different firms. Therefore, they are also willing to pay different prices for the same product produced by different firms. This gives some monopoly power to an individual firm to influence market price of its product.

Explore More about Product Differentiation:

1. The product of each individual firm is identified and distinguished from the products of other firms due to product differentiation.
2. To differentiate the products, firms sell their products with different brand names, like Lux, Dove, Lifebuoy, etc.
3. The differentiation among different competing products may be based on either 'real' or 'imaginary' differences.

(i) Real Differences may be due to differences in shape, flavour, colour, packing, after sale service, warranty period, etc.

(ii) Imaginary Differences mean differences which are not really obvious but buyers are made to believe that such differences exist through selling costs (advertising).

4. Product differentiation creates a monopoly position for a firm.
5. Higher degree of product differentiation (i.e. better brand image) makes demand for the product less elastic and enables the firm to charge a price higher than its competitor's products. For example, Pepsodent is costlier than Babool.

3. Selling costs:

Under monopolistic competition, products are differentiated and these differences are made known to the buyers through selling costs. Selling costs refer to the expenses incurred on marketing, sales promotion and advertisement of the product. Such costs are incurred to persuade the buyers to buy a particular brand of the product in preference to competitor's brand. Due to this reason, selling costs constitute a substantial part of the total cost under monopolistic competition. It must be noted that there are no selling costs in perfect competition as there is perfect knowledge among buyers and sellers. Similarly, under monopoly, selling costs are of small amount (only for informative purpose) as the firm does not face competition from any other firm.

4. Freedom of Entry and Exit:

Under monopolistic competition, firms are free to enter into or exit from the industry at any time they wish. It ensures that there are neither abnormal

profits nor any abnormal losses to a firm in the long run. However, it must be noted that entry under monopolistic competition is not as easy and free as under perfect competition.

5. Lack of Perfect Knowledge:

Buyers and sellers do not have perfect knowledge about the market conditions. Selling costs create artificial superiority in the minds of the consumers and it becomes very difficult for a consumer to evaluate different products available in the market. As a result, a particular product (although highly priced) is preferred by the consumers even if other less priced products are of same quality.

6. Pricing Decision:

A firm under monopolistic competition is neither a price- taker nor a price-maker. However, by producing a unique product or establishing a particular reputation, each firm has partial control over the price. The extent of power to control price depends upon how strongly the buyers are attached to his brand.

7. Non-Price Competition:

In addition to price competition, non-price competition also exists under monopolistic competition. Non-Price Competition refers to competing with other firms by offering free gifts, making favourable credit terms, etc., without changing prices of their own products. Firms under monopolistic competition compete in a number of ways to attract customers. They use both Price Competition (competing with other firms by reducing price of the product) and Non-Price Competition to promote their sales.

2.6.4. Nature of Demand and Cost:

(i) Demand Curve:

Like perfect competition and monopoly, price under monopolistic competition is also determined by the intersection of demand and supply. Therefore, before studying the price determination under monopolistic competition we must have knowledge of demand and supply curves of a firm. Generally under monopolistic competition due to product differentiation, a firm faces a downward sloping demand curve. It is highly elastic but not perfectly elastic within a relevant range of prices at w which he can sell any

amount of the product. The reason is that if a producer raises the price of the product, some of his customers will stop buying his product and will shift to his rival firm who has not changed his price. On the other hand, if he lowers his price, he will attract some new customers. The shape of the demand curve is shown in Fig. 2.11.

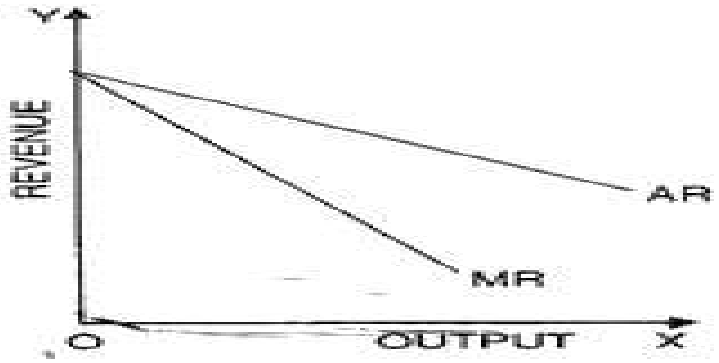

Fig.2.11.

(ii) Cost Curve:

Under monopolistic competition Average Cost (AC), Average Variable Cost (AVC), Marginal Cost (MC) is also of U-shape. We know, selling cost is the special feature of imperfect competition. Basically, selling costs are incurred on advertising of product. According to Chamberlin, selling cost curve is also y-shaped. The supply curve under monopolistic competition of the industry cannot be drawn due to product differentiation.

2.7. EQUILIBRIUM PRICE AND OUTPUT UNDER MONOPOLISTIC COMPETITION:

Short Run Equilibrium:

According to Prof. Chamberlin, the firm under monopolistic competition has to make a wider range of decisions than under perfect competition. The firm may vary its price and with it, its sales and output; it may vary the quality of its product and it may engage in sales-promotion activities such as advertisement, publicity and propaganda, etc.

Thus, there are three variables under monopolistic competition, viz;

(i) Price,

(ii) Product; and

(iii) Selling outlay.

It would be very difficult to discuss their effects simultaneously. Therefore, the equilibrium of individual firm is discussed here with reference to prices and output adjustments, assuming that the selling costs are absent. In other words, now we shall examine the individual equilibrium and then examine group equilibrium.

Individual Equilibrium:

It should be recalled here that for maximum profits two conditions are to be satisfied under perfect competition and monopoly; (1) MC = MR and (2) MC must cut MR from below. Under monopolistic competition also, a firm will make the maximum profits when these two conditions are satisfied. However, in short period, it is not necessary that all the firms should have iso-classic demand curves. The elasticity of demand curve under monopolistic competition depends upon the attachment of the buyers. So, this it will depend upon the age of the firm (and of the product). If a firm is an old one, it shall be selling its product for a long time and consequently the buyers will have a less elastic or inelastic demand for its products. On the contrary, a comparatively, new firm will have a more elastic demand curve for its product. Thus, older firms will have greater price advantage while newer firms will have lesser price advantage. Since it is assumed that product differentiation or the effects of selling costs are absent, cost curves of different firms will be identical.

It follows therefore that older firms will make abnormal profits while newer firms may have normal profits or even losses. To be very clear and simple, it is stated that there may be three equilibrium conditions of a firm in the short period under monopolistic competition, viz.

(1) It may earn abnormal profits;

(2) It may undergo losses;

(3) It may earn only normal profits.

(4) Super Normal Profit

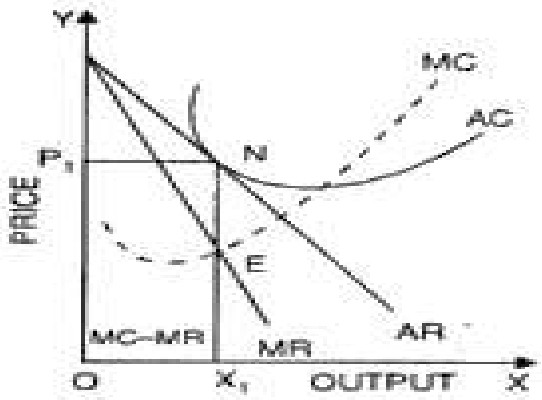

Fig. 2.12.

Under monopolistic competition, a firm earns maximum profits or is in equilibrium when MC=MR and MC cuts MR from below. In the fig. 2.12 the firm is in equilibrium at OX level of output and at the point E, at which MR and MC are equal and MC cuts MR from below. The firm is earning super-normal profits or abnormal profits since average revenue is greater than average cost, i.e., AR > AC. The main reason for these abnormal profits is that, the other rival firms are not able to produce closely competitive substitutes. Hence, they are not able to attract consumers towards their product.

2. Normal Profit:

If under monopolistic competition, the price of product is equal to AC, the firm will be earning normal profit. In Fig. 2.13. MC is equal to MR at point E. This is the equilibrium point. At equilibrium point, the equilibrium output

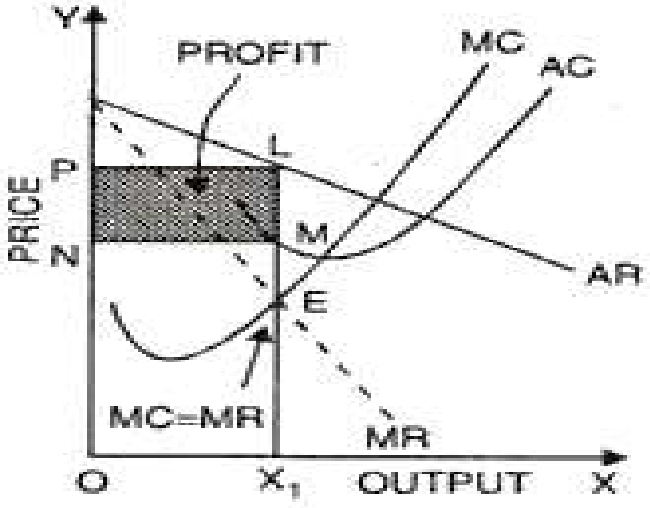

Fig.2.13.

is OX_1 and price is OP_1. At this point, AC is NX_1 and AR is also NX_1 i.e., AC=AR. Thus the firm will be earning only normal profits.

3. Sustaining Losses:

However, it is also possible that the demand may not be favourable to firm under monopolistic competition, i.e., it may not be able to attract the consumers towards its product, if it fixes price equal to its SAC. But it is compelled to sell its product at the price which is less than even its short period average cost. Hence, it may incur losses such firm, in the long-run may figure 2.14 the firm is in equilibrium at point E, where MC=MR. At this equilibrium level the output is OX_1 at price OP. Corresponding to this, the if leave the industry, it is not possible for it to change its demand relatives to its cost conditions through product differentiation and advertisement.

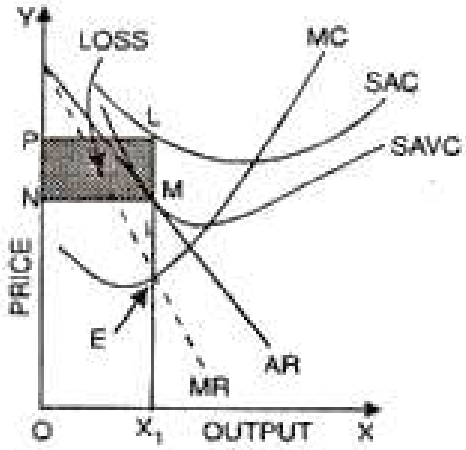

Fig.2.14.

In average cost LX_1 is greater than average revenue MX_1, since, revenue is less than cost, the firm will sustain losses equal to the shaded area PLMN.

Long Run Individual Equilibrium:

Long period refers to that time period in which each firm can change its production capacity by changing the fixed as well as variable factors. New firms can enter the industry and old firms can exit it. Basically, the firms in the long run will get the normal profits.

If, the existing firms are making super normal profits, it will attract some of the new firms in the industry. The entry of new firms will result into over production which will have a depressing effect on price. Hence all the firms in the long run will get normal profits. In fig. 2.15 output is measured on X-axis whereas price on Y-axis. LAC is the long run average cost and LMC is the long fun marginal cost curve. The firm is in equilibrium because at point

E, MC = MR. The equilibrium output is OX_1 and price is OP. Since, at this equilibrium average revenue curve is tangent to long run average cost curve at point M; hence the firms are earning normal profits.

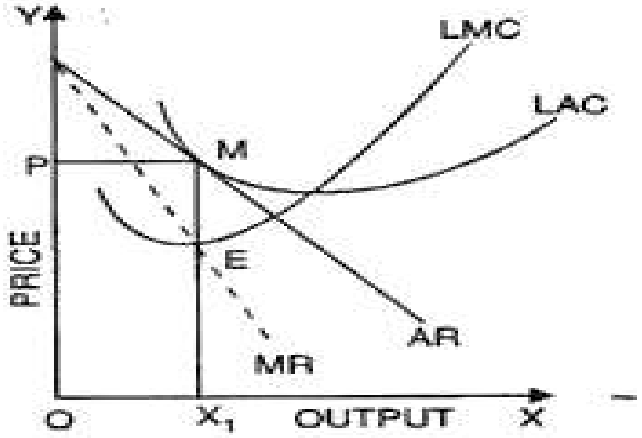

Fig.2.15.

Group Equilibrium in Monopolistic Competition:

Under monopolistic competition, the word 'group' is used for industry. There is a difference between an industry and a group. An industry generally consists of firms which produce homogeneous product, whereas a group is composed of firms which produce a differentiated product.

To study group equilibrium, we assume that:

(i) Demand and cost curves of all the firms are identical,

(ii) No firm can influence the price and output decisions of its rivals.

The Group Equilibrium is shown below with the help of Fig. 2.16.

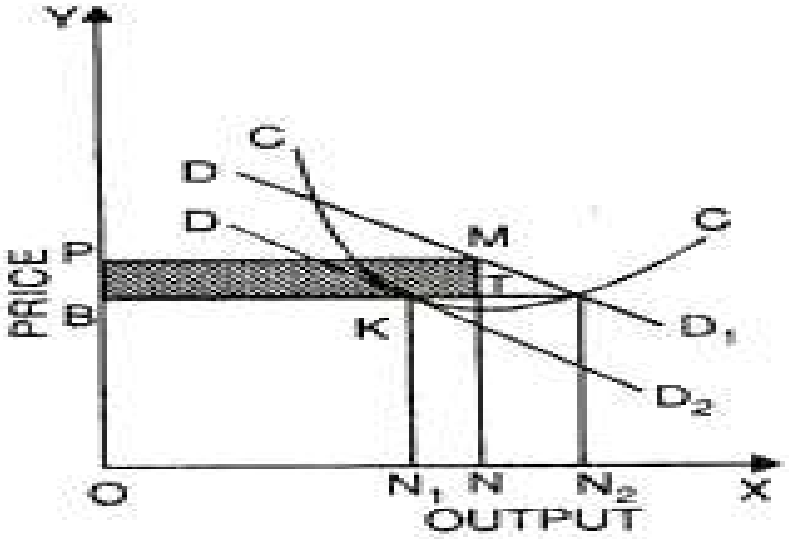

Fig.2.16.

In Fig. 2.16, DD_1 is the group demand curve and CC is the cost curve. Every firm would like to fix up OP price because at this price the difference between price and cost is the maximum and producer gets supernormal profit equal to PMTB. The other firms will be attracted to enter the market and now the market demand will be shared by a larger number of firms. In this situation demand curve will shift downwards and the new demand curve will be DD_2. The number of firms in the market will continue increasing till the new demand curve DD_2 is tangent to the cost curve. In the Fig. 6 at point 'K' demand curve is tangent to the cost curve. At this point firm will be earning only normal profit and this will be the equilibrium position of the firm. Thus under monopolistic competition, OB is the equilibrium price and ON is the equilibrium output.

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UNIT III

DISTRIBUTION THEORY

3.1. INTRODUCTION

'Distribution' refers to the sharing of the wealth that is produced among the different factors of production. In the modern time, the production of goods and services is a joint operation. All the different factors of production i.e., land, labour, capital and enterprise are combined together in productive activity. Productive activity is thus the result of the joint effort of these four factors of production which work collectively to produce more wealth. These factors need to be paid or rewarded for their services for producing the wealth.

3.1.2. DEFINITION:

Some important definitions of 'Distribution' are as follows:

1. According to Prof. Nicholson – "Distribution refers to the sharing of wealth of a nation among the different classes.

2. Prof. Chapman has said that – "The Economics of Distribution accounts for the sharing of the wealth produced by a community among the agents or the owners of agents which have been active in its production."

3.1.3. TYPES OF DISTRIBUTION:

In economics, the term 'distribution' has two components:

(i) Functional distribution,

(ii) Personal distribution.

1. Functional Distribution:

Functional distribution refers to the distinct share of the national income received by the people, as agents of production per Unit of time, as a reward for the unique functions rendered by them through their productive services. These shares are commonly described as wages, rent, interest and profits in the aggregate production. It implies factor price determination of a class of factors. It has been called as "Macro" concept.

2. Personal Distribution:

Personal distribution on the other-hand, is a 'Micro Concept' which refers to the given amount of wealth and income received by individuals in society through their economics efforts, i.e., individual's personal earnings of income through various sources.

The concept of equality and inequality of income distribution and social justice is basically concerned with the personal distribution of income. Taxation measures are designed to influence personal distribution of income and wealth in a community. The theory of distribution deals with functional distribution and not with personal distribution of income. It seeks to explain the principles governing the determination of factor rewards like—rent, wages, interest and profits, i.e., how prices of the factors of production are set.

3.2. IMPORTANCE OF DISTRIBUTION:

At present under the study of economics the study of 'Distribution' has occupied a very important place. The methods and systems of distribution has high effect on the economic life of the nation. Therefore, where the work of distribution is done with equity and justice the various channels of distribution are satisfied with its workings. The satisfied workers increases their efficiency and they increase the quality and quantity of production. Contrary to this if the methods of distribution are improper and a particular class is being exploited then there will be dis-satisfaction feeling will crop up among people. Therefore, with the study of the distribution, it is clear that in the country with scientific system of production, equity and scientific way of distribution method is also very essential.

3.3. THEORY OF DISTRIBUTION

Regarding the theory of distribution the following two principles are being adopted.

They are as follows:

(i) Marginal Productivity Theory of Distribution.

(ii) Modern Theory of Distribution.

(i) Marginal Productivity Theory of Distribution:

Marginal productivity theory of distribution is the most celebrated theory of distribution. It is the neo-classical theory of distribution and is derived from Ricardo's "Marginal principle". J.B. Clark, Marshall and Hicks are the main pro-pounders of this theory. Initially, the theory was propounded as an explanation for the determination of wages (i.e., the reward for labour) but, later on, it was generalized as a theory of factor pricing for all the factors of production.

"The theory states that the price of a factor of production is governed by its marginal productivity. To support this hypothesis, it analyses the process of equilibrium pertaining to the employment of input of various factors by an individual firm under perfect competition. In a perfectly competitive factor market, a firm can buy any number of units of factors of production, at the prevailing market price. Now, the question is: given the price of a factor, how much of each factor will he employ." According to this theory, an entrepreneur or a firm will employ a factor at a given price till its marginal productivity tends to be equal to its price. It thus follows that the reward (price) of a factor tends to be equal to its marginal productivity.

The summary of the marginal productivity theory may thus be laid down in terms of the following propositions:

"The marginal productivity of a factor determines its price. In the long-run, the price or reward of a factor tends to be equal to its marginal as well as average products. When the reward of each factor in the economy tends to be equal to its marginal productivity, there is optimum allocation of resources (factors) in different uses. Further, when all factors receive their shares according to their respective marginal products, the total product will be exhausted."

Assumptions of Marginal Productivity Theory:

The Marginal Productivity Theory of distribution is based on the following implicit and explicit assumptions:

- There is perfect competition, both in the product market as well as in the factor market.
- There should not be any technological change. Therefore, the techniques of production should remain the same, though the scales and proportions of factors may change.
- All units of a factor should be perfectly homogeneous i.e., they should be of equal efficiency. This means that all units of a factor should receive the same price. The homogeneity of factors of units should imply that they are perfectly substitutes of each other.
- The firm aims at maximisation of profit. Therefore, it should seek and observe the most efficient allocation of resources.

- The economy as a whole, should operate at the full employment level.
- There should be perfect mobility of factors of production.
- The bargaining power of the seller and the buyers of a factor of production should be equal.
- The marginal productivity of an individual should be measurable.
- There should not be any government intervention in the fixation of factor price, such as minimum wage legislation or price control etc.
- The theory essentially considers long-run analysis in order to prove that the price of a factor will tend to be equal to both average and marginal productivity.

The Concepts of Productivity:

Productivity means the quantity of the output turned out by the use of factor or factors of production.

For example:

How much wheat can be produced on 5 hectares of land under certain conditions or how much earth-digging can be done by 10 labourers?

Productivity of a factor may be viewed in two senses:

(i) Physical productivity, and

(ii) Revenue productivity.

(i) Physical Productivity:

Physical productivity of a factor is measured, in terms of physical units of output of a commodity produced by it per unit of time. When physical productivity is expressed in terms of money it is called revenue productivity.

Again physical productivity has two concepts:

(a) Average Physical product, and

(b) Marginal Physical product.

(a) Average Physical Product:

The average physical product or the average product of a factor is the total product dividend by the number of units of the factor employed in the process of production. To put this in symbolic terms

$$AP = TP/n$$

(b) Marginal Physical Product:

The marginal physical product of a factor is the increase in total product resulting from the employment of an additional unit of that factor, other factors remaining constant. The physical product or the marginal product of a particular factor is thus measured as $MP = TP_n - TP_{n-1}$.

Once the average and marginal products are calculated it is easy to measure the respective revenue productivity of the factor concerned. Here, we measure the quantity of the product in physical terms.

For example:

We may express in terms of quintals of wheat or the number of chairs produced. But we are not concerned here with the total quantity of wheat or the average yield. We are concerned here with the marginal product which means an addition made to the total output of the commodity by the addition of one unit of a factor of production.

Suppose 3 hectares of land yield 30 quintals of wheat and 4 hectares, 40 quintals. The use of the third hectare has added 10 quintals. This is the marginal physical product. The total product has been increased by 10 quintals by the employment of the third or the marginal hectare. That is why it is called marginal product. But it is the physical product and not product in terms of value.

Value of Marginal Product (VMP):

This is also called Value of Marginal Physical Product (VMPP) and is usually referred to as the marginal productivity of a factor, and is obtained by multiplying the marginal physical product of the factor by the price of output.

To put it symbolically:

Marginal Productivity of VMPP = MPP x P where, MPP stands for the marginal physical product of the factor, and P for the price of output. The marginal value product means the value of additional product obtained by the employment of another unit of a factor of production. We can get value product by multiplying the physical product i.e., the quantity of the commodity by its price in the market.

For example:

When we say that it is an addition to the total product by the addition of one more unit of a factor of production, say one hectare or one worker, or a unit of Rs. 1,000 in capital. When this marginal product is expressed not in physical terms but in terms of its value in the market, it is called Marginal Value Product.

Marginal Revenue Productivity:

The marginal revenue at any level of firm's output is the net revenue earned by selling another (additional) unit of the product. Algebraically, it is the addition to total revenue earned by selling n units of product. In other-words, Marginal Revenue Product (MRP) of a factor is the net addition to total revenue made by the employment of an additional unit of that factor, assuming other factors to be fixed under a given state of technology. Thus, marginal revenue product is obtained by multiplying the marginal revenue.

To put it symbolically:

MRP = MPP x MR

Where, MRP indicates marginal revenue product,

MPP stands for the marginal physical product and MR stands for the marginal revenue.

Thus, there is a conceptual difference between marginal revenue product (MRP) and value of marginal physical product (VMPP). In the former, we consider marginal revenue to be multiplied by the MPP and, in latter, we take price to multiply it by the MPP. In perfectly competitive market conditions for the product, however, MPP = VPP. This is because under Perfect Competition—Price = MR. But if the commodity-market has imperfect competition price or AR tends to be greater than the marginal revenue, then VMPP will be higher than MRP.

3.3.1.MARGINAL PRODUCTIVITY THEORY OF DISTRIBUTION:

Marginal Productivity Theory of Distribution is the reward of a factor equals its marginal product. Marginal product, also known as marginal physical product, is the increment made to the total output by employing an additional unit of a factor, keeping all other factors constant. If the increase in the output is multiplied by the prevailing price of the product, the result is

the marginal value product of that factor. But it is better to measure marginal product of a factor in terms of its marginal revenue product (MRP) which may be defined as the addition made to total revenue resulting from the employment of one more unit of a factor of production, other factors remaining unchanged. In other words, by the marginal productivity of a factor of production we mean the addition made to total output by the employment of the marginal unit i.e., the unit which the employer thinks just worth-while employing. At the margin of employment, the payment made to the factor concerned is just equal to the value of the addition made to the total output on account of the employment of the additional unit of a factor.

For example:

If the prevailing wage is less than the marginal productivity, then more labour will be employed. Competition among employers will raise the wage to the level of marginal productivity. If on the other-hand, the marginal productivity is less than the wage, the employers are losing and they will reduce their demand for labour. As a result, the wage rate will come down to the level of marginal productivity. In this way by competition, wage tends to equal the marginal productivity. This applies also to the other factors of production and their rewards.

Thus, it must be noted that in a position of competitive equilibrium:

(a) The marginal productivity of a factor of production is the same in all employments,

(b) The marginal productivity of a factor of production is measured by the price of the factor of production; and

(c) Marginal productivities of various factors are proportional to their respective prices.

Further, over the whole field of employment, therefore, each factor of production tends to be paid in proportion to its marginal productivity. Thus, the distribution of national income or the total aggregate output of an economy is not a scramble as the strikes or lock-outs make it appear to be. It is governed by a definite economic principle viz. marginal productivity.

CRITICISMS OF THE MARGINAL PRODUCTIVITY THEORY:

Most of the economists are of this opinion that though the marginal productivity theory is logically sound and perfect, it has many inherent shortcomings and they have criticised the theory on the following grounds:

1. The Basic Assumption Underlying the Theory is Unrealistic:

The theory is based on the assumption of perfect competition in the product as well as factor markets. Modern economists, like—Mrs. Robinson and Chamberlin have rightly pointed out that perfect competition is not a very large relative phenomenon. In reality, there is imperfect competition in the market. Further, other assumptions of the theory have also been criticised and they are as such:

2. All Units of Factor are not homogeneous:

The theory assumes that all units of a factor are homogeneous. In reality, however, all factor units can never be alike. Especially, the different labour units differ in efficiency and skill. Similarly, plots of land differ in fertility and so on.

3. Factors are not fully employed:

The theory assumes that all factors are fully employed. But, as Keynes pointed out, in reality there is a likelihood of under-employment rather than full employment.

4. Factors are not Perfectly Mobile:

Next, the theory assumes perfect mobility of factors. But in reality, factors are imperfectly mobile between regions and occupations. There is no automatic movement of factors units from one place to another. The greater the degree of specialisation in an industry, the less is the factor mobility from one industry to another.

5. All Factors are not Divisible:

The theory assumes the divisibility of factors. But lumpy factors like factory plant, machines and the manager are indivisible. In a large factory the addition or subs-traction of one factor units will have practically no effect on the total productivity. It may be true in domestic production. Thus, the equality between marginal productivity and price of a factor cannot be brought about by varying its quantities a little less or more.

6. This Theory not Applicable in the Short-run:

The theory is applicable only in the long-run, when the reward of a factor service tends to equal its marginal revenue product. But in reality, we are concerned with short-run problems. As said by Prof. Keynes—"In the long-run we are all dead." This assumption makes the problem of pricing the factor-services unrealistic.

7. This Theory is a Static Theory:

The marginal productivity theory is applicable only to a static economy as it regards no change in technology. Since the modern economy is dynamic and there are technological advances from time to time, the theory becomes inapplicable to modern conditions.

8. This Theory has been considered as One-sided:

Because it considers only demand for factors in terms of its Marginal Revenue Product but it fails to analyse the conditions of supply in the factor market. The factor price may be high when the factor is relatively scarce.

9. Marginal Productivity of all Factors cannot be Measured Separately:

In this theory it has been assumed that the marginal physical product of an individual factor can be measured by keeping other factors unchanged. Critics have said that one cannot consider the specific marginal productivity of a factor in isolation, when production is not the result of only one factor. It is the outcome of collective efforts of all factors at a time. Therefore, it is difficult to measure the marginal productivity of each factor separately. Since variation in output cannot be attributed to a single factor alone, marginal productivity appears to be a make-believe concept.

10. The Theory is based on the Law of Diminishing Returns as Applied to the Organisation of a Business:

This means that a factor like capital with improved technology has increasing returns and it also enhances the productivity of other factors like labour. This theory misses this vital point of practical consideration.

11. Wage Determination Theory:

This Theory has been criticised by Keynes and he is of this Opinion that theory is Basically Explained for Wage Determination and is Loosely Extended for Pricing of the Other Factors of Production. But other factors like rent and

capital have their distinctive factors like—rent and capital have their distinctive characteristics, so their rewards are also fixed distinctly. Again, the entrepreneur earns profit which is a residual income, which can be negative as well. Then, is it not ridiculous to lack of negative marginal product of an entrepreneur to explain loss in the business, which is improper.

12. The Theory cannot apply to Personal Distribution:

The theory only explains functional distribution. It does not deal or explains anything of personal distribution of income and inequalities of earnings.

13. The Theory Lacks Normative Aspect of the Dealings:

This theory contains only the positive aspect of the analysis. It does not consider anything or it does not have any ethical justification or social norm in determining the reward factor.

3.3.2. MODERN THEORY OF DISTRIBUTION DEMAND AND SUPPLY THEORY:

We have seen earlier that the marginal productivity theory only tells us that how many workers an employer will engage at a given level in order to earn maximum of profit. It does not tells us how that wage-level is determined. Further, the marginal productivity theory describes the problem of the determination of the reward of a factor of production from the side of demand only. It has not said anything from the supply side.

Therefore, the marginal productivity theory cannot be said to be an adequate explanation of the determination of the factor prices. The modern theory of pricing which gives us a satisfactory explanation of factor prices in the Demand and Supply Theory. As we are aware that the price of a commodity is determined by the demand for and supply of, a commodity, similarly the price of a productive service also is determined by demand for and supply of that particular factor.

Demand for a Factor:

First we are going to consider the demand side of the factor. Here, we should remember that the demand for a factor of production is not a direct demand. It is on indirect or derived demand, It is derived from the demand for the product that, the factor produces. For example, we can say that labour

does not satisfy our w ants directly. The demand for labour entirely depends upon the demand for goods. If the demand for goods increases, the demand for the factors which help to produce those goods will also increase.

The demand for a factor of production will also depend on the quantity of the other factors required for the process. The demand price for a given quantity of a factor of production will be higher, the greater the quantities of the co-operating productive services. If in production more of a factor of production is employed, the marginal productivity of the factor will fall and the demand price will be lower of the unit of a productive service. Further, the demand price of a factor of production also depends upon the value of the finished product in the production of which the factor is used. The demand price of a commodity is normally higher, if more valuable is the finished product in which the factor is used. Next, the more productive the factor is, the higher will be the demand price of a given quantity of the factor.

From the following diagram the given explanation given can be explained:

In the diagram given the wage is OW, the firm is in equilibrium at the point E and the demand for the factor is ON. Similarly at OW' wage the demand is ON' and at OW "the demand is ON ". MRP (Marginal Revenue Productivity) curve is the demand curve for a factor of production by an individual firm. For determining the price of a factor, it is not the demand of the individual firm that matters but it is the total demand, i.e., the sum-total of the demands of all firms in the industry. The total demand curve is derived by the total summation of the marginal revenue productivity curves all the firms. This curve DD is shown in the figure. Thus, from this figure it can be ascertained that-according to the law of diminishing marginal productivity, the more a factor is employed, the lower is the marginal productivity.

Supply Side:

The supply curve of a factor depends on the various conditions of its supply.

For example:

The supply of labour entirely depends upon the size and composition of population, the occupational and geographical distribution, labour efficiency their training, expected income, relative preference for work and leisure etc.

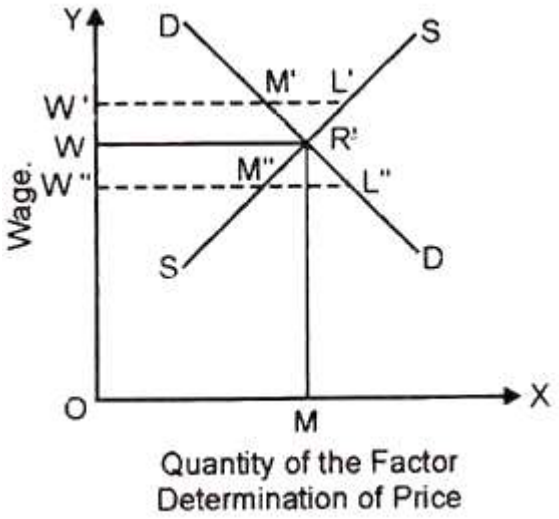

Fig.3.1.

By considering all these relevant factors, it is possible to construct the supply curve of a productive service. Further, the supply of labour does not depend only on economic factors but many non-economic considerations also. Therefore, we can say that if the price of a factor increases, it supply will also increase and vice-versa. Hence, the supply curve of a factor rises from left to right upwards.

Interaction of Demand and Supply:

We have studied up to this stage the demand curve and the supply curve of the factor of production while in price fixation both curves are needed. Therefore, the price will tend to prevail in the market at which the demand and supply are in equilibrium. This equilibrium is at the point of intersection of the demand and supply curves. In the diagram above the demand and supply curves intersect at the point R and the price of the factor will be OW at OW' demand W' M' is less than the supply W L'. In this case competition among the sellers of the service will tend to bring down the price to OW. On the other hand, at OW "price the demand W "L" is greater than the supply W "M ", hence price will tend to go up to OW at which the demand and supply will be equal.

To conclude, this is how that the price of a factor of production in the factor market is determined by the interaction of the forces of demand and supply in connection with the factor of production. Thus eminent economists

are of this opinion that this is the proper, correct and satisfactory theory of distribution.

3.4. RENT

'Rent' is used as a part of the produce which is paid to the owner of land for the use of his goods and services. But, in economics, rent has been differently defined from time to time. Thus rent refers only to make payments for factors of production which are in imperfectly elastic supply. For instance, it is the price paid for the use of land.

3.4.1. DEFINITION OF RENT:

The concept of rent has been defined as follows:

"Rent is that portion of the produce of earth which is paid to landlord for the use of original and indestructible powers of the soil." -Ricardo

"Rent is the income derived from the ownership of land and other free gifts of Nature." He further called it 'Quasi Rent' which arises on the manmade equipment's and machines in the short period and tend to disappear in the long run. – Marshall

Income alone received by land cannot be rent. It is so because different factors have different uses. As such, each factor will be used for that purpose in which its income is maximum. Opportunity cost of a factor for its use in the work yielding maximum income is the price of output that the factor concerned can earn by working in next alternative use.

3.4.2. Definition of Economic Rent:

The definitions of economic rent can be grouped into two parts as:

Classical Definitions:

"Economic rent is the payment for the use of scarce natural resources". – Jacob Oser

"Economic rent is that portion of a landlord's income which is attributable to his ownership of land." – Anatol Murad

Modern Definitions:

"Economic Rent may be defined as any payment to a factor of production which is in excess of the minimum amount necessary to keep the factor in its present occupation." – Boulding

"Rent is the difference between actual payment to a factor and its supply price or transfer earnings." – Hibdon

3.4.3. TYPES OF RENT:

The main types of rent are as under:

1. Economic Rent:

Economic rent refers to the payment made for the use of land alone. But in economics the term rent is used in the sense of economic rent. In the words of Ricardo and other classical economists, economic rent refers to the payment for the use of land alone It is also called Economic Surplus because it emerges without any effort on the part of landlord. Prof. Boulding termed it "Economic Surplus".

2. Gross Rent:

Gross rent is the rent which is paid for the services of land and the capital invested on it.

Gross rent consists of:

(1) Economic rent. It refers to payment made for the use of land.

(2) Interest on capital invested for improvement of land.

(3) Reward for risk taken by landlord in investing his capital.

3. Scarcity Rent:

Scarcity rent refers to the price paid for the use of the homogeneous land when its supply is limited in relation to demand. If all land is homogeneous but demand for land exceeds its supply, the entire land will earn economic rent by virtue of its scarcity. In this way, rent will arise when supply of land is inelastic. Prof. Ricardo opined that land was beneficial but it was also scarce. Productivity of land was indicative of the generosity of nature but its total supply remaining more or less fixed symbolized niggardliness of nature.

4. Differential Rent:

Differential rent refers to the rent which arises due to the differences in the fertility of land. In every country, there exists a variety of land. Some lands are more fertile and some are less fertile. When the farmers are compelled to cultivate less fertile land the owners of more fertile land get relatively more

production. This surplus which arises due to difference in fertility of land is called the differential rent. This type of rent arises under extensive cultivation. According to Ricardo, "In order to increase production on same type of land, more units of labour and capital are employed."

5. Contract Rent:

Contract rent refers to that rent which is agreed upon between the landowner and the user of the land. On the basis of some contract, which may be verbal or written, contract rent may be more or less than the economic rent.

3.4.4. RICARDIAN THEORY OF RENT

David Ricardo, an English classical economist, first developed a theory in 1817 to explain the origin and nature of economic rent.

Ricardo defined rent as, "that portion of the produce of the earth which is paid to the landlord for the use of the original and indestructible powers of the soil." In his theory, rent is nothing but the producer's surplus or differential gain, and it is found in land only.

Assumptions of the Theory:

The Ricardian theory of rent is based on the following assumptions:

- Rent of land arises due to the differences in the fertility or situation of the different plots of land. It arises owing to the original and indestructible powers of the soil.
- Ricardo assumes the operation of the law of diminishing marginal returns in the case of cultivation of land. As the different plots of land differ in fertility, the produce from the inferior plots of land diminishes though the total cost of production in each plot of land is the same.
- Ricardo looks at the supply of land from the standpoint of the society as a whole.
- In the Ricardian theory it is assumed that land, being a gift of nature, has no supply price and no cost of production. So rent is not a part of cost, and being so it does not and cannot enter into cost and price. This means that from society's point of view the entire return from land is a surplus earning.

Reasons for Existence of Rent:

According to Ricardo rent arises for two main reasons:

(1) Scarcity of land as a factor and

(2) Differences in the fertility of the soil.

Scarcity Rent:

Ricardo assumed that land had only one use—to grow corn. This meant that its supply was fixed, as shown in Figure 3.2. Hence the price of land was totally determined by the demand for land. In other words, all the price of a factor of production in perfectly inelastic supply is economic rent—it has no transfer earnings. Thus, it was the high price of corn which caused an increase in the demand for land and a rise in its price, rather than the price of land pushing up the price of corn. However, this analysis depends on the assumption that land has only one use. In the real world a particular piece of land can be put to many different uses. This means its supply for any one use is elastic, so that it has transfer earnings.

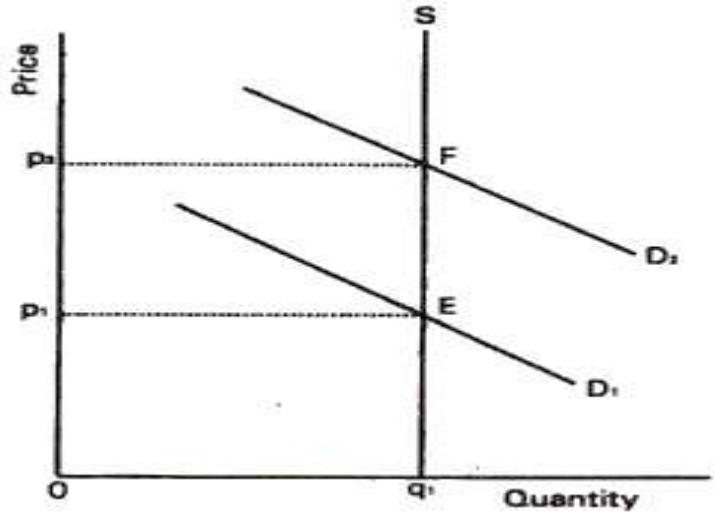

Fig.3.2. Earnings of a factor in fixed supply

Differential Rent:

According to Ricardo, rent of land arises because the different plots of land have different degree of productive power; some lands are more fertile than others. So there are different grades of land. The difference between the produce of the superior lands and that of the inferior lands is rent—what is called differential rent. Let us illustrate the Ricardian concept of differential rent.

Differential Rent on account of differences in the fertility of soil:

Ricardo assumes that the different grades of lands are cultivated gradually in descending order—the first grade land being cultivated at first, then the second grade, after that the third grade and so on. With the increase in population and with the consequent increase in the demand for agricultural produce, inferior grades of lands are cultivated, creating a surplus or rent for the superior grades. The concept of differential rent arising due to differences in the fertility of different plots of land is illustrated in Fig. 3.3.

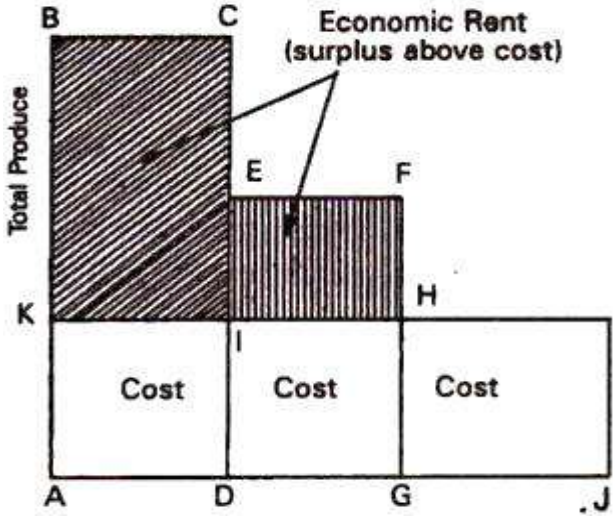

Fig.3.3 Differential Rent

Here, AD, DG and GJ are three separate plots of land of the same size, but of difference in fertility. The total produce of AD is ABCD, that of DG is DEFG and that of GJ is GHIJ. The first and second plots of land generate a surplus shows by the shaded area, which represents the rent of the first two plots of land. Since the third plot GJ has no surplus it is marginal land or no-rent land.

Rent and Price:

From the Ricardian theory we can show the relation between rent (of land) and price (of wheat). Since the market price of wheat is determined by costs of the marginal producer and since, for this marginal producer, rents are zero, Ricardo concluded that economic rent is not a determinant of market price. Rather, price of wheat is determined solely by the market demand for wheat and the availability of fertile land.

Deductions from the Theory:

If rent depends on price and on the superiority of rent-producing land over marginal land, we can deduce the following:

1. Improved methods of farming:

Improved methods of cultivation may lead to a fall in rent (demand remaining unchanged). It is because increased output on the superior grades of land will make the cultivation of inferior grades of land unnecessary.

2. Population growth:

Population growth is likely to lead to a rise in rent, since the increased demand for land will bring poor quality land into cultivation, thus lowering the output of marginal land. Thus, if the price of food increases, the rent of existing land will increase.

3. Improved transport facilities:

Improved transport facilities are likely to lead to a fall in rent. It is because the output of less fertile land of foreign countries may be able to compete more closely with the home produce. So there will be no need to cultivate inferior home areas. As a result the output of the marginal land rises and rent falls. Thus, it is difficult to say whether or not rent increases with economic progress. However, rent is likely to fall with economic progress if population growth is unable to fully neutralise the effects of technological progress and improvement in transport facilities.

Criticisms of the Theory

Ricardian theory has been criticised on the following grounds:

- Ricardo considers land as fixed in supply. Of course, land is fixed in an absolute sense. But land has alternative uses. So the supply of land to a particular use is not fixed (inelastic). For example, the supply of wheat land is not absolutely fixed at any given time.
- Ricardo's order of cultivation of lands is also not realistic. If the price of wheat falls the marginal land need not necessarily go out of cultivation first. Superior grades of land might cease to be cultivated if a fall in the price of its output causes such land being demanded for other purposes (e.g., for constructing houses).

- ❖ The productivity of land does not depend entirely on fertility. It also depends on such factors as position, investment and effective use of capital.
- ❖ Critics have pointed out that land does not possess any original and indestructible powers, as the fertility of land gradually diminishes, unless fertilisers are applied regularly.
- ❖ Ricardo's assumption of no-rent land is unrealistic as, in reality; every plot of land earns some rent, although the amount may be small.
- ❖ Ricardo restricted rent to land only, but modern economists have shown that rent arises in return to any factor of production, the supply of which is inelastic.
- ❖ According to Ricardo, rent does not enter into price (cost) but from the point of view of an individual farm rent forms a part of cost and price.

3.5. QUASI-RENT

The concept of quasi-rent was given by Alfred Marshall. He defined quasi rent as surplus earnings generated by the factors of production, except land. The earnings from machines and instruments are termed as quasi-rent. The quasi-rent refers to the income produced when the demand for products increases suddenly. It is used for a short-period of time. In economic rent, the supply of factor is fixed, such as land. However, in quasi-rent the supply of factor is temporary and can be increased or decreased after some time, such as machine. For example, there is a sudden increase in the demand of houses, but the supply of houses does not increase with that speed because of the limited building material. The sudden increase in the return from selling of houses is termed as quasi- rent. Quasi-rent is regarded as the surplus that is temporary in nature. When the building material would be available, then the surplus amount would automatically be eradicated. Similarly, same type of surplus arises in case of other goods, such as ships, machines, and automobiles. In long-run, the earnings from durable goods are equal to the current interest rate. However, they can provide surplus earnings for temporary period, which are termed as quasi-rent. In short-run, equipment is used for only one purpose and not for other purposes. This implies that the

transfer earning for such equipment is zero in the short run. Therefore, the total earnings generated from the short run equipment are termed as quasi-rent. The supply of equipment is fixed in the short-run and cannot be increased with the increase in demand. However, in long-run, the supply of equipment can be increased that would result in the extinction of surplus earnings.

Quasi rent can also be expressed in terms of revenue, which is as follows:

Quasi-rent = Total revenue – total variable cost

In the long run, all the costs are considered as variable cost. In long-run, the equilibrium can be attained when total revenue is equal to total costs. In such a case, there is no quasi-rent.

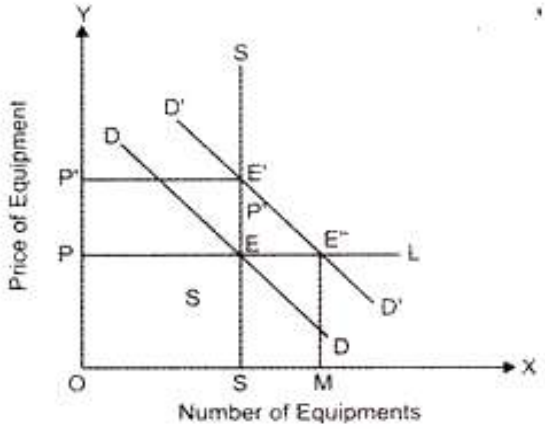

Fig.3.4. Quasi Rent

In Figure-3.4, SS represents the inelastic supply curve. The demand (DD) and supply (SS) curve intersects at point E. At point E, the price is equal to OP and quantity of equipment is OS. In the short run, the increased demand (D'D') reaches to the price level of OP' with the constant supply of OS. As the number of equipment is constant in short-run, therefore, the transfer earnings are zero and quasi-rent is equal to total earnings from the equipment. However, in long-run, the supply of equipment (PL) is perfectly elastic. Therefore, any number of equipment can be supplied at OP. Now, the supply reaches to OM and prices fall to E"M. The quasi- rent would disappear because the price gets equal to the transfer earning (OP).

3.6. MODERN THEORY OF RENT

3.6.1. Introduction

Modern theory of rent is an amplified and modified version of Ricardian theory of Rent. It was first of all discussed by J.S. Mill and after that developed by economists like Jevons, Pareto, Marshall, Joan Robinson etc. According to modern theory, economic rent is a surplus which is not peculiar to land alone. It can be a part of income of labour, capital, entrepreneur. According to modern version rent is a surplus which arises due to difference between actual earning and transfer earning.

That is:

Rent = Actual Earning-Transfer Earning.

3.6.2. DEFINE TRANSFER EARNING:

In this universe, each factor of production has varied uses. When we transfer one factor from one use to another, we have to sacrifice the income earned by it from its earlier use. Sacrifice of earning is called transfer earning. Basically, the concept of transfer earning in economics is introduced by Prof. Benham. According to him, "The amount of money which any particular unit could earn in its best paid alternative use is sometimes called its transfer earnings." A similar idea was developed by Pigou. Different economists consider transfer earnings as that amount of money which any particular unit could cam in its best paid alternative use. Thus, what a person, piece of land or capital can earn in the next best alternative use is known as transfer earnings. Thus, according to Mrs. Robinson, "The price which is necessary to retain a given unit of three factors in a certain industry may be called its transfer earning."

Suppose a piece of land can came Rs. 100/- when it is used for producing wheat and the same amount if it is used for cotton. There is no extra earning because there are no transfer earnings. If, however, the same piece of land could came Rs. 60 when put to the use of cotton. Its transfer earning would be Rs. 40 and the extra gain of Rs. 40 which is surplus could be called Rent. So, according to this theory, we can define rent as a payment of excess of the transfer earnings. In the words of Benham, "In general the

excess of what any unit gets over its transfer earnings is of the nature of rent." In the above example, true rent is Rs. 10 and transfer earning Rs. 40.

Features of Modern Theory of Rent:

The major features of the modern theory of rent are as under:

1. Rent can be a part of the income of all factors of production.
2. Amount of rent depends upon the difference between actual earning and transfer earning.
3. Rent arises when supply of the factor is either perfectly inelastic or less elastic.

Why Rent Arises:

According to modern theory, rent arises due to scarcity of land. Supply of other factors like labour, capital etc. can also be scare in relation to demand. Therefore, income earned by these factors in excess of their minimum income is called economic rent. Prof. Wieser divided factors of production into two parts viz.; specific factors and nonspecific factors.

Specific Factors:

These factors refer to those factors which have only one use. For example, a farm used for growing wheat alone. Such factors have no mobility.

Non-Specific Factors:

These factors are those which have mobility and can be put to different uses. It is only due to the reason that specific factors cannot be put to another use. Specificity of factors is the main cause of the emergence of rent. It is so because specific factors cannot be put to any other use. So, its opportunity cost is zero. In other words, its transfer earning is zero. So its entire actual earning in the existing use is rent.

Determination of Rent:

Modern economists studied the determination of rent in two forms as:

1. Rent of Land
2. General concept of Rent.

Determination of Rent of Land or Scarcity Theory of Rent:

Modern economists opined that rent arises due to scarcity of land. Scarcity of land means that demand for land exceeds its supply. Rent will be determined at a point where demand for land is equal to its supply.

Demand for Land:

Land has derived demand. It means that demand for land depends on the demand for agricultural products. If demand for food grains increases, demands for land will also increase and vice-versa. Moreover, demand for land is influenced by its marginal productivity. It means as more and more land is used its MP_1 goes on diminishing.

Supply of Land:

Supply of land is fixed. Its supply is perfectly inelastic. It means, increase in the price of land will not evoke any increase in its supply.

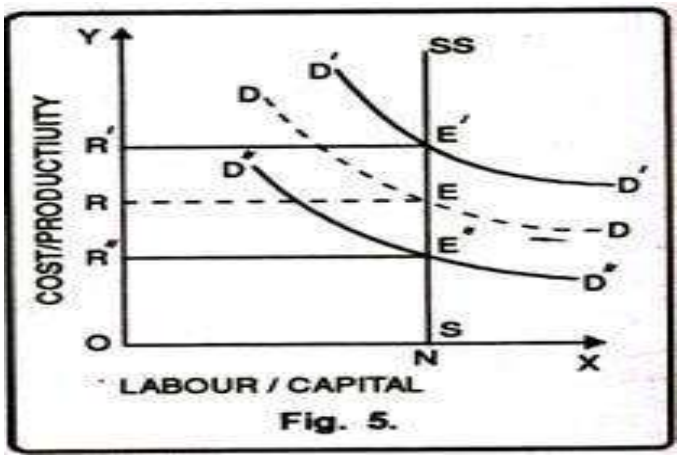

Fig.3.5. Determination of rent

In Fig.3.5 units of land have been measured on X-axis and rent on Y-axis. SS is the supply curve of land which is parallel to Y-axis indicating that the supply of land remains fixed. Rent will be determined at a point where the demand and supply of land are equal to each other. Initially DD is the demand curve which intersects the supply curve at point E. At this point, equilibrium rent OR is determined. Now, if the population rises which gives boost to the demand for food, the demand curve shifts to D'D' and the equilibrium will be at point E' and the rent will rise to the extent of OR'. Similarly, if the demand curve shifts to D" D" and labour /capital the new equilibrium point will be E" and the rent will fall to OR".

Rent as the Difference between Actual Earnings and Transfer Earnings:

According to modern economists rent is the difference between actual earning and transfer earning. Rent can be a part of income of factors of production. But, these factors will earn rent only when their supply is less than perfectly elastic.

Thus, from elasticity point of view, there are three possibilities, i.e.:

1. Supply of factors of production is perfectly elastic.
2. Supply of factors of production is perfectly inelastic.
3. Supply of factors of production is less than perfectly elastic.

(i) When Supply is Perfectly Elastic:

When change in demand at existing rate is followed by corresponding change in supply, then the supply is said to be perfectly elastic i.e. such a factor is not scare. At the existing rate, any amount of that factor is available. Therefore, its actual earning and transfer earning will be equal.

Actual Earning = Transfer Earning Rent

= Actual Earning – Transfer Earning = Zero

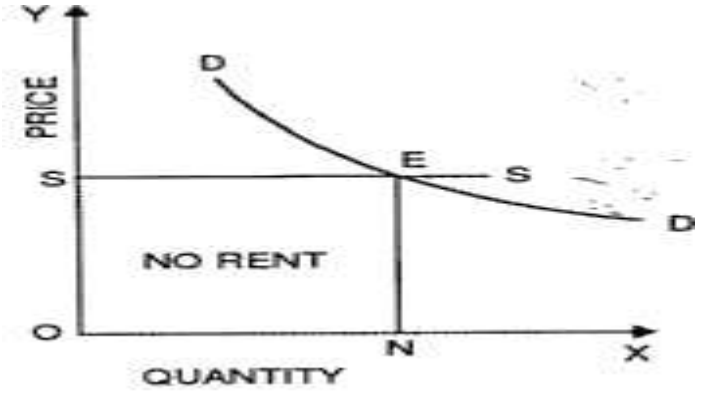

Fig.3.6. perfectly elastic

In Fig.3.6. the supply curve of the factor of production is represented by SS which is horizontal straight line. It means all factors are available at price OS. DD is the demand curve. The demand and supply curves intersect each other at point E. ON is the quantity of the factor used and price is OS. The total earnings are OSEN. Since, transfer earnings are equal to actual earnings i.e. OSEN, there is no surplus and, thus, no rent. If this firm does not pay the price, the factor units will be shifted to other uses and earn there as much, because present earnings equates the transfer earnings. In this way, we may conclude that if the supply is perfectly elastic, then there exists no surplus and hence no economic rent.

(ii) When the Supply is Inelastic:

Inelastic supply of a factor indicates that any increase or decrease in demand is not followed by the supply. In such a case, transfer earnings will

be zero and the difference between actual earning and transfer earning will be equal to actual earning. Therefore, all the actual earnings will be called rent.

Rent = Actual Earning (Since Transfer Earning is zero)

In Figure 3.7, SS is perfectly inelastic supply curve of land which indicates that if price of land falls to zero even then supply remains OS. It means the transfer earnings of land are zero. DD is the demand curve. As both the demand and supply curves intersect each other at point E, price OP is determined. Since transfer earnings are zero, the total earnings (OSEP) represent the economic rent.

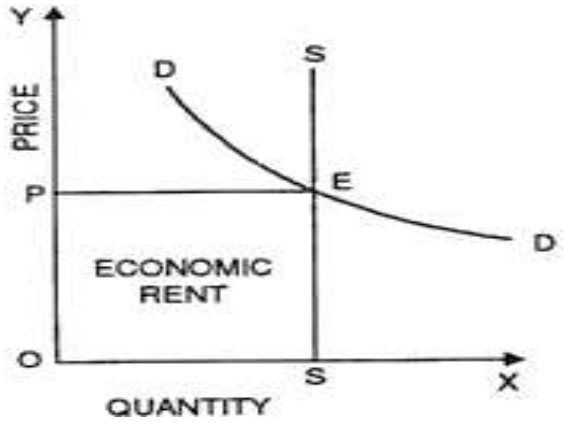

Fig.3.7. supply is inelastic

(iii) When the Supply is less than Perfectly Elastic:

Less than perfectly elastic supply means that the transfer earnings of all the factor units are not equal. Mrs. Joan Robinson used the concept of 'Transfer Earnings' to explain the amount of rent earned by a factor unit in a particular use. She defines transfer earnings as the price which is necessary to retain a given unit of a factor in a certain industry.

This can be shown with the help of the following table 3.1:

Table 3.1.

Demand for Labour	Actual Earning	Transfer Earning	Rent
20	20	20	20–20 = 0
35	25	20	25–20 = 5
40	30	20	30–10 = 10

The above table shows that when demand for labourer is 20, their transfer earning and actual earnings are equal. Therefore, Rs. 20 is the minimum wage rate below which there will be no supply of labour. Now, if demand for

labourer increases to 35 but supply does not increase to the same ratio, wage rate will rise. As a result actual earning of labourer will rise to 25 while transfer earning will be Rs. 20 per labourer. Similarly, if the demand for labourer increases to 40 but supply does not rise, wage rate of labourer will further rise. Actual earning will go upto Rs. 30 per labourer. Thus, every labourer will earn rent equal to Rs. 10.

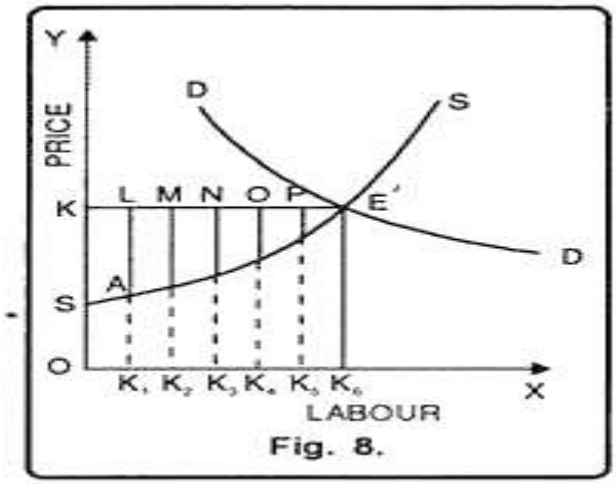

Fig. 3.8. Supply is elastic

In Fig.3.8 labour has been measured on X-axis and price on Y-axis. SS is the somewhat elastic but not perfectly elastic supply curve indicating that what quantity of the factor will be available at various prices. The transfer earning of X_1 unit of factor is AK_1 while the price is OK. Thus the surplus or rent is AL. In the same fashion, the other unit earns surplus or rent. The transfer earnings of each factor units are less than the price. All units except the last unit Kg are earning profits which are more than their transfer earnings i.e. they are earning economic rent. The total earnings are OK_6E' K and the transfer earnings are OK_6E'. If we take away the transfer earnings, we get KE'S as surplus or rent.

3.7. SITUATION RENT

Rent in the Ricardian sense also arises from differences in land situations. Assuming all land to be of the same quality and fertility, and producing the same quantity of corn, rent would arise from the difference in the cost of transporting corn of a land away from the market and that which is near the market.

As lands situated farther and farther away from the market are brought under the plough with increase in the demand for corn, the transportation charges become higher and higher. Lands nearer the market paying lower transport charges earn situation rent over the distant lands. If land A is situated near the market and lands B and Cat a graduated distance from the market and a truck load of corn costs Rs.100, 150 and 200 respectively, rent in the case of lands A and B will be Rs.100 (= 200 – 100) and 50 (= 200 – 150) respectively. C grade land will, however, earn no rent, 0 (= 200-200).

3.8. SCARCITY RENT

The emergence of land rent in the classical theory can be easily explained by imagining that a new island is discovered and some people come to settle there. We suppose that all land in this island is completely homogeneous or is of uniform quality. In other words, all pieces of land in this island are equally fertile and equally well-situated. The quantity of land available for cultivation on this island is fixed and is therefore completely inelastic to changes in the price for its use. Land is to be used for the cultivation of a single crop “com”. Land is assumed to be having no other alternative uses.

When the people come to settle on this island, they will use the land for producing corn by applying labour and capital on it. When all the available land is not yet put in use, the price of the corn will be equal to the average cost of output incurred on labour and capital, with the farmers working at the minimum point of the average cost (exclusive of land rent). The price of the corn must at least be equal to the average cost (exclusive of land rent) in the long run if the use of labour and capital is to be worthwhile. Since we are assuming perfect competition in the market for corn, the farmer’s equilibrium will be established at the lowest point of long-run average cost curve (exclusive of rent). As long as some land is idle, the production of corn will be increased by bringing new land under cultivation. .Thus until land is not scarce, i.e., some land is yet idle the price of corn cannot rise permanently above the average cost of labour and capital cost.

Since the price of corn is, in long-run equilibrium, equal to the average cost of only labour and capital, as long as all land is not yet in use, there will be no surplus left to be earned as rent on land. In other words, it means that so long as there is some available land which is not yet brought into use, farmers will not have to pay any rent to the landlords for the use of their land. Provided the competition among landlords is perfect (as is the case we are assuming here), the rent will not arise when there is still surplus land for use because the demand for land is relatively less than the supply of it. In other words, land is yet not scarce relative to demand.

Price of any things arises only when it is scarce in relation to demand. If any landlord tries to charge any rent when there is still some land lying idle with other landlords, farmers will go to take up that land for cultivation. The landlord need not be paid rent for the use of land since its only alternative use is keeping it idle. To sum up, so long as land is not scarce, rent cannot arise, since price will equal minimum average (labour and capital) cost.

Suppose that the population continues increasing so that the demand for corn becomes so large that all available land is brought under cultivation. If the population of the island further increases beyond this, it will raise the demand for the product which will bring about rise in the price level above the minimum average (labour and capital) cost per unit of output giving rise to rent on land. Since it has arisen in due to scarcity of land, it has been called scarcity rent.

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UNIT IV

WAGES

4.1. Introduction

A wage is payment made by an employer to an employee for work done in a specific period of time. Some examples of wage payments include compensatory payments such as minimum wage, prevailing wage, and yearly bonuses, and remunerative payments such as prizes and tip pay-outs. Wages are part of the expenses that are involved in running a business. It is an obligation to the employee regardless of the profitability of the company. Payment by wage contrasts with salaried work, in which the employer pays an arranged amount at steady intervals (such as a week or month) regardless of hours worked, with commission which conditions pay on individual performance, and with compensation based on the performance of the company as a whole. Waged employees may also receive tips or gratuity paid directly by clients and employee benefits which are non-monetary forms of compensation. Since wage labour is the predominant form of work, the term "wage" sometimes refers to all forms (or all monetary forms) of employee compensation. The wage is the monetary measure corresponding to the standard units of working time (or to a standard amount of accomplished work, defined as a piece rate). The earliest such unit of time, still frequently used, is the day of work. The invention of clocks coincided with the elaborating of subdivisions of time for work, of which the hour became the most common, underlying the concept of an hourly wage.

Wage is a reward for the services rendered or remuneration for the work done and it is as old as the society itself. In the primitive days, wages were paid in kind, most common of them was grains and the food. But with the advent of industrialisation wages form a complex problem and in almost all industrialised countries it became a sensitive area of public policy. Very soon the quantum of wages assumed a common cause of friction between the employers and the wage-earners. Frequent disputes between employer and wage-earners resulted in strikes over the demand for wage-increase. The determination of adequate wages that should be justifiably payable to die workmen by the employer, was not merely an economic problem but a

multidimensional phenomenon, necessarily involving relevant factors like place to industry, prices of the product, living standards, basic needs of die wage-earner and the governmental policy in a given society. The natural instinct of the employer to keep the wage-bill to a minimum and workers struggle to secure a wage-increase to meet both ends, created a chaotic situation which demanded an immediate State's intervention to protect the weaker section of the society, namely, workers, in view of its low bargaining capacity.

4.2. MONEY WAGE:

In economics, the price paid to labour for its contribution to the process of production is called wages. Labour is an important factor of production. If there is no labour to work, all other factors, be it land or capital, will remain idle. Thus, Karl Marx termed labour as the "creator of all value". However, labour alone cannot produce as most of the production is the result of joint efforts of different factors of production. Therefore, the share of the produce paid to labour for its production activity is called wage.

4.2.1. DEFINITIONS:

"A wage may be defined as the sum of money paid under contract by an employer to worker for services rendered." -Benham

"Wages is the payment to labour for its assistance to production." -A.H. Hansen.

4.2.3. TYPES OF WAGES:

In real practice, wages are of many types as follows:

1. Piece Wages:

Piece wages are the wages paid according to the work done by the worker. To calculate the piece wages, the number of units produced by the worker are taken into consideration.

2. Time Wages:

If the labourer is paid for his services according to time, it is called as time wages. For example, if the labour is paid Rs. 35 per day, it will be termed as time wage.

3. Cash Wages:

Cash wages refer to the wages paid to the labour in terms of money. The salary paid to a worker is an instance of cash wages.

4. Wages in Kind:

When the labourer is paid in terms of goods rather than cash, is called the wage in kind. These types of wages are popular in rural areas.

5. Contract Wages:

Under this type, the wages are fixed in the beginning for complete work. For instance, if a contractor is told that he will be paid Rs. 25,000 for the construction of building, it will be termed as contract wages.

4.2.4. CONCEPTS OF WAGES:

The following are the two main concepts of wages:

A. Nominal Wage:

B. Real Wage:

A. Money Wages or Nominal Wages:

The total amount of money received by the labourer in the process of production is called the money wages or nominal wages.

B. Real Wages:

Real wages mean translation of money wages into real terms or in terms of commodities and services that money can buy. They refer to the advantages of worker's occupation, i.e. the amount of the necessaries, comforts and luxuries of life which the worker can command in return for his services.

An example will make the things clear. Suppose 'A' receives Rs. 500 p.m. as money wages during the year. Suppose also that midway through the year the prices of commodities and services, that the worker buys, go up, on the average, by 50%. It means that though the money wages remain the same, the real wages (consumption basket in terms of commodities and services) are reduced by 50%. Real wages also include extra supplementary benefits along with the money wages.

4.2.5. DISTINCTION BETWEEN REAL WAGES AND MONEY WAGES:

Adam Smith has distinguished the money wages and real wages on the following basis:

1. Relation with Price:

Keeping all other things constant, there exists inverse relation between real wages and price i.e. with the increase in price level real wages tend to decline and vice-versa.

2. Money and Real Wages:

Ceterus paribus, an increase in money wages will lead to an increase in real wages. It is due to the reason that with the increase in money wages, a labourer can purchase more goods and services than before.

3. Basic Difference:

According to Adam Smith, money wages are paid in terms of the quantity of money whereas real w ages are paid in terms of necessaries of life. Therefore money w ages are expressed in terms of money and that of real wages in terms of goods and services.

4.3. CAUSES OF DIFFERENCES IN WAGES:

The followings are some of the causes of difference in wages:

1. Difference in efficiency:

All persons are not equally efficient. They differ in abilities, efficiency, skill and attitude. Some people are more efficient and some are not efficient at all. An efficient worker gives better output than others. Different types of work require different abilities. Efficiency requirement in jobs varies from occupation to occupation. For example, the job of a District Magistrate requires more efficiency and responsibility than a clerk. The efficiency of a doctor is more than a nurse. Such differences in abilities, intelligence, efficiency and responsibility account for differences in wages in different occupations.

2. Immobility of labour:

Labour is generally immobile. The presence of non-competing groups in society makes the labour more immobile. Sometimes people are not prepared to accept higher wages if it involves a change of place. Transport difficulties

also play a vital role in the immobility of labour. Political barriers against the free movement of labour from one country to another result in the difference in wages in different countries.

3. Presence of non-competing group:

There are different groups of labour which are not competitive. These are called non-competing groups of labour. In our country this is generally due to caste system. The work of one caste cannot be done by others. For example, a sweeper finds difficulty in getting the work which is meant for higher classes. Different occupations require labour of various qualities. The work of a doctor is different from that of an engineer. The teacher cannot do the work of a lawyer. So people belonging to a particular group can only compete for that work. For this reason, a sweeper cannot apply for the post of a District Magistrate. Poverty is also another reason which creates non-competing groups in society. The children of a labourer have very little opportunity of getting high paid jobs. The existence of non-competing groups prevents mobility of labour and thereby creates difference in wages.

4. Nature of work:

The nature of work influences the wage differences. Dangerous, disagreeable, hazardous and risky work carry higher money wages to attract larger supply of labour. For example, the labour working in the coal mines are getting more wages than a peon in the office. Soldiers are getting more wages than ordinary police personnel. The salary of the mining engineer is more than a civil engineer. Safe, pleasant, comfortable and occupation of greater risk gives higher wages.

5. Training and extra qualification:

Trained and skilled workers get more wages than ordinary workers. Extra qualifications and special training demand higher wages for a job. If an occupation requires expensive specialized training high wages will be offered.

6. Steadiness of employment:

If work in an occupation is seasoned or irregular, higher wages will be offered whereas in regular employment low wages are given. The wage rate is lower in government jobs than in companies or private sectors.

7. Future prospects:

If future promotion prospects in a job are better, then the initial wages are low. People prefer this type of future prospective jobs, though the wage rate is lower. On the other hand, wages are higher in the jobs where there is no future prospects.

8. Presence of labour unions:

Wages in different occupations like factories, mines, companies are determined by the bargaining strength of labour unions. If the labour union is strong enough, the workers are getting higher wages.

9. Scope for extra earnings:

If the job has a scope for supplementary earnings, the regular income may be lower. For example, a doctor may accept the job with lower wage, because he can do private practice.

10. Wages of women:

Wages paid to women are less than men especially a male labourer is getting more wages than a female labourer. This is only seen in contract manual labourer. But this case is not seen in other government and private sector occupation. For example, doctors, teachers, office workers, engineers, IT workers in companies etc.

11. Experience:

Experienced workers are normally paid more than the less experienced or inexperienced workers. It is through experience that man gradually knows things. Experience makes the worker wiser and more perfect. Therefore, everywhere experience counts and is being rewarded. Differences in wage rates exists due to varying experiences of different workers.

4.4. THEORIES OF WAGES

The wage-fund theory held that wages depended on the relative amounts of capital available for the payment of workers and the size of the labour force. Wages increase only with an increase in capital or a decrease in the number of workers. The following points highlight the top six theories of wages. The theories are: 1. The Subsistence Theory of Wages 2. Standard of

Living Theory 3. Wage Fund Theory 4. Residual Claimant Theory 5. Marginal Productivity Theory 6. Modern theory of wages.

1. SUBSISTENCE THEORY OF WAGES:

The subsistence theory of wages was first formulated by Physiocratic School of French economists of 18th century. Further, this theory was developed and improved upon by the German economists. LaSalle styled it as the Iron Law of Wages or the Brazen Law of Wages. Ricardo and Malthus also contributed to the theory of wages. Karl Marx made it the basis of his theory of exploitation.

Assumptions:

According to Ricardo, this theory is based on the following two assumptions:

1. Population increases at a faster rate.
2. Food production is subject to the law of diminishing returns.

According to this theory, wages of a worker in the long run are determined at that level of wages which is just sufficient to meet the necessaries of life. This level is called the subsistence level. The classical economists called it the neutral level of wages. In this way, the pro-pounders of the theory believed in the bargaining power of the workers. In such a situation, trade unions play an important role in increasing wages.

Wages of labour are equal to subsistence level in the long ran. If wages fall below this level, workers would starve. It will reduce their supply. Thus, the wage rate will rise to the subsistence level. On the other hand, if wages tend to rise above the subsistence level, workers would be encouraged to bear more children which will increase the supply of workers, which in turn will bring wages down to the subsistence level. It can be shown with the help of the following figure:

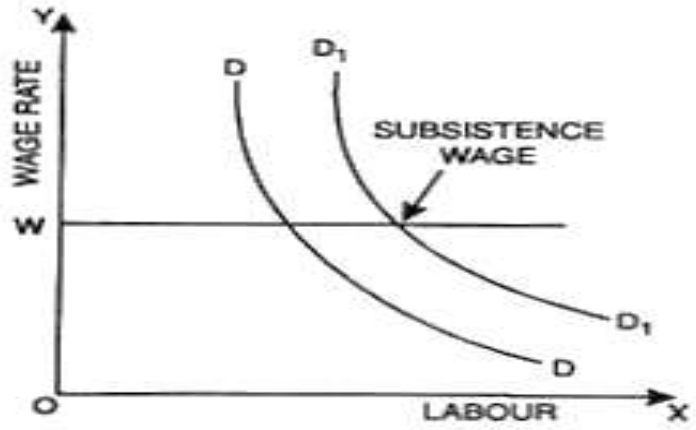

Fig.4.1. Subsistence wage theory

In Fig. 4.1 demand and supply of labour has been measured on OX-axis and wage rate on OY-axis. OW is the subsistence level of wages. At OW wage rate supply of labour is perfectly elastic. Since, supply of labour is perfectly elastic, wage rate neither can fall below OW nor can increase above the level of OW. Although demand increases from DD to D_1D_1 yet the wage rate remains the same at OW.

Criticism:

Following are the main defects of the subsistence theory of wages:

1. One Sided Theory:

This theory examines the wage determination from the side of supply and ignores the demand side.

2. Pessimistic:

Subsistence theory of wages is highly pessimistic for the working class. It presents a dark picture of the future of the society.

3. Long Period:

This theory is based on the assumption of long run. It does not explain the determination of wages at a particular period of time.

4. No Historical Evidence:

This theory has been criticized on the grounds that it has not been correct in conclusions. The case of western countries is different from the conclusions of this theory.

2. STANDARD OF LIVING THEORY:

This theory is an improved and refined version of subsistence theory. According to this theory, wage is determined by the standard of living of the workers. Standard of living refers to the bare necessaries of life and also education, and recreation to which the worker is habituated.

Merits:

This theory has two merits:

1. This theory gives importance to the efficiency and productivity of the worker.

2. When workers are paid a high wage rate for a considerable period of time, they become accustomed to a high standard of living and they will try to maintain the same high standard of living.

Criticisms:

In spite of its merits, the theory has been subjected to many criticisms:

1. Individuals do not have any fixed standard of living. Critics point out that there is no such thing as a standard of living to which a worker is accustomed.

2. When wages depend on standard of living, the latter should not change. But workers' standard of living remains fixed for sometimes but wages change frequently.

3. No doubt, wages are determined by standard of living. It is also true that standard of living is determined by wages.

3. WAGE FUND THEORY:

This theory was developed by J.S.Mill. According to him, the employers set apart a certain amount of capital to pay wages for labourers. This is fixed and constant. This is called as wages fund. Wage is determined by the amount of wages fund and the total number of labourers.

According to J.S.Mill, "wages depend upon the demand and supply of labour or as it is often expressed as proportion between population and capital. By population is here meant the number only of the laboring classes or rather of those who work for hire and by capital, only circulating capital"

Wage rate=Wage fund / Number of labourers

An increase in wage rate is possible only by an increase in wage fund or by a reduction in the number of labourers. Thus there exists a direct relation between wage rate and wages fund and inverse relation between wage rate and number of labourers. This theory also states that trade unions are powerless in rising the general wage rate.

Criticisms:

1. Wage fund theory states that the wage rate is found by dividing the wage fund by the number of workers. But it does not tell us about the sources of wages fund and the method of estimating it.
2. Wage fund theory is unscientific and illogical because it first decides the wages fund and then determines wages. But in reality, wages should be found first and from that wage fund should be calculated. This theory neglects the quality and efficiency of the workers in determining the wage rate. This is considered to be a basic weakness of the theory.
3. This theory neglects the quality and efficiency of the workers in determining the wage rate. This is considered to be a basic weakness of the theory.
4. This theory assumes that wages can increase only at the expense of profit. This is not correct. The operation of the law of increasing returns will lead to a great increase in total output which may be sufficient to raise both wages and profits.
5. The wages fund theory has been criticised by the trade unions for its assumption that wages cannot be increased through bargaining.
6. Wages fund theory has failed to explain the differences in wage rate.
7. This theory believes that wages are paid out of circulating capital. But when the process of production is short, wages are paid out of current production. When the process of production is long, wages are paid out of capital.

4. RESIDUAL CLAIMANT THEORY:

This theory was propounded by Walker. According to this theory, rent and interest are contractual payments. After deducting rent and interest from total product, the employer will deduct his profits. What remains after deducting rent, interest and profits is wages. It is possible to increase wages by increasing the total product by improving the efficiency of the workers.

This theory has several defects:

1. This theory assumes that the share of landlords, capitalists and entrepreneurs are fixed and it is absolutely wrong.
2. It is not the worker who is the residual claimant but the entrepreneur.
3. It does not explain the influence of trade union in wage determination.
4. The supply side of labour has been totally ignored by the theory.

5. MARGINAL PRODUCTIVITY THEORY OF WAGES:

Marginal productivity theory of wages is an important theory of wages. This theory was first of all propounded by Thunnen. Later on, economists like Wicksteed, Walras, and J.B Clark etc. modified the theory. The marginal productivity theory states that labour is paid according to his contribution in production. A producer hires the services of labour because he possesses the ability to contribute in production. If worker contributes more to production he is paid more wages and if he contributes less, w ages also will be low.

Definition of marginal productivity:

"Marginal productivity of labour refers to change in total revenue by putting one more labourer, keeping all the other factors constant." Dooley

"As a result of competition between employees for labour and between workers for employment, a wage-rate is determined that is equal to the marginal productivity of the labour-force, the employers as a whole are willing to employ." Prof. S.E. Thomas

Assumptions:

The marginal productivity theory of wages is based on certain assumptions as stated below:

1. All labourers are equally efficient.
2. Constant technology
3. Perfect competition prevails both in factor and product markets.
4. There is full employment in the economy.
5. Law of diminishing marginal returns apply on the marginal productivity of labour.
6. Labour is perfectly mobile.

Explanation of the Theory:

Under the conditions of perfect competition, wages are determined by the value of marginal product of labour. Marginal product of labour in any industry refers to the amount by which output increases when one more labour is employed. Value of marginal product of labour is the price which the marginal product can fetch in the market. Under the conditions of perfect competition, an employer will go on employing more labourers but, due to the operation of the law of diminishing returns, the marginal product of labour will diminish until a point comes when the value of the increase in the product will be equal to the wages paid to that labourer.

The marginal productivity theory can be explained with the help of the following figure:

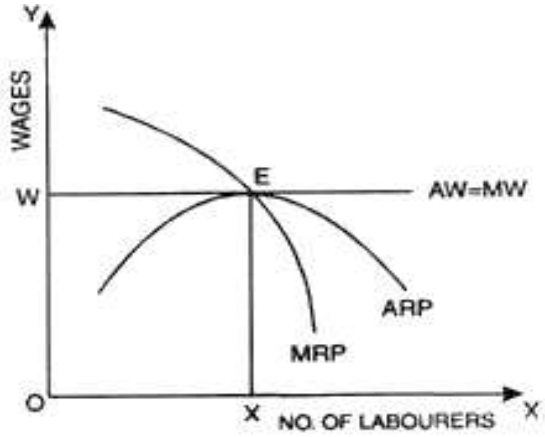

Fig.4.2. Marginal productivity theory

In Fig. 4.2 number of labourers is measured on OX-axis and wage rate on OY-axis. ARP and MRP are average revenue productivity and marginal revenue productivity curves respectively. The equilibrium wage rate will be determined at a point where both the ARP and MRP are equal to each other. In the figure, the equilibrium wage rate (OW) is determined at point E because at this point both the ARP and MRP are equal. The firm at OW wage rate will employ OX number of labourers. If the firm employs more workers than OX, it will have to face more losses or fewer profits. Therefore, the ideal situation for a firm is to employ workers up to the point where ARP and MRP are equal.

Criticism:

The marginal productivity theory of wages also suffers from certain defects as:

1. Unrealistic Assumptions:

The foremost defect of the theory is that it is based on unrealistic assumptions like perfect competition, homogeneous character of labour etc. All these assumptions do not prevail in the real world.

2. Incomplete:

Again, this theory fails to take into account that labour is also a function of wages. Less productivity may be the effect of low wages which adversely affects the efficiency of labour and in turn reduces the labour productivity. Thus, the theory is incomplete in all respects.

3. Static Theory:

Lord J.M Keynes criticized the theory as it is based on static conditions. It is only true when there occurs no changes in the economy. But in real practice it cannot be so. Change is the law of nature, though it may come gradually.

4. One Sided:

The marginal productivity theory is one sided. It takes into consideration only the demand side and ignores the supply side.

5. Fails to determine Wages:

This theory only guides the employer to employ workers up to the level where their marginal productivity equals price. But, it does not tell how the wages are determined.

6. Long Period:

The theory concerns itself with the long run. It explains that wages will be equal to MRP and ARP in the long run but, the long run like tomorrow never comes. In other words, it does not deal with the short-run.

6. MODERN THEORY OF WAGES:

Modern theory of wages regards wages as a price of labour and all other prices determined by the usual supply and demand analysis. According to this approach, wages are determined by the interaction of market forces of demand and supply.

Demand for Labour:

The demand for labour comes from the entrepreneurs as it is used for the production of goods and services. Thus, the demand for labour depends upon the productivity of labour i.e., the higher the productivity of labour, the greater will be the demand for it from employers. Thus, demand for labour depends upon the marginal productivity of labour; since the marginal productivity of labour will slope downwards after a stage, the demand curve of labour will also slope downward.

Factors Affecting the Demand for Labour:

1. Technological Changes:

Technological changes influence the marginal productivity of labour. Therefore, these changes also influence the demand for labour.

2. Derived Demand:

Demand for labour is a derived demand. It means that demand for labour depends upon the demand for goods and services which it produces. If at any given time the demand for a particular commodity produced by the labour is high, it is natural that the demand for labour shall also be high. Hence, the greater is the consumer demand for the product, the higher will be the demand for the labour to produce that commodity.

3. Proportion of Labour:

The demand for labour also depends upon the proportion in which labour is mixed with other factors of production. When a small amount of labour is engaged in the production of a product, the demand for that type of labour is inelastic. For instance, the demand for labour for operating automatic machines or latest machines in large scale factories is inelastic.

4. Cost of other Factors:

The demand for labour depends upon the cost of other factors of production which can be used as substitute for labour. If substitute factors are costly, the entrepreneur will naturally substitute labour in place of costly factor. In such a case the demand for labour will be high. If the prices of substitute factors which can be used in place of labour have declined, the substitute factor will be used in place of labour. Hence, the demand for labour will decline.

In Fig. 4.3 number of labourers has been measured on OX-axis and the wage rate on Y-axis. DD is the industry's demand curve. It slopes downward from left to right indicating that when wages are low, demand for labourers increases and when the wage rate tends to increase, demand for labour decreases.

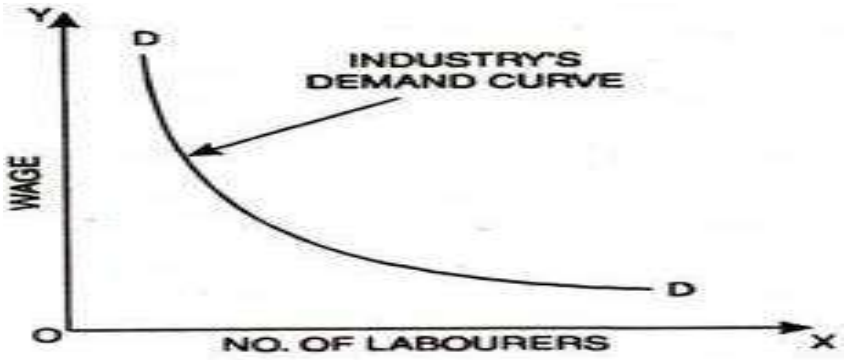

Fig.4.3. Demand for labour

Supply of Labour:

Supply of labour in an economy depends upon both economic as well as non-economic factors. Economic factors influencing the supply of labour comprises of existing employment, desire to increase monetary income, bargaining power of the labourers, size of population, income distribution etc. while the non-economic factors consist of family affection, social conditions, domestic environment etc. Psychological factors also affect the supply of labour. It is only due to the psychological factors that a worker decides how much time he should devote to work and how much to leisure. Moreover, the supply of labour also depends on the elasticity. The supply of labour for a firm is perfectly elastic, so, the firm at current wages can employ as many workers as it wishes. On the contrary the nature of supply of labour for an industry is not infinitely elastic. Thus, it cannot employ more and more labourers at the current wage rate. The industry can do so by attracting labourers from other industries by offering them higher wages. Following diagram clears this point more vividly.

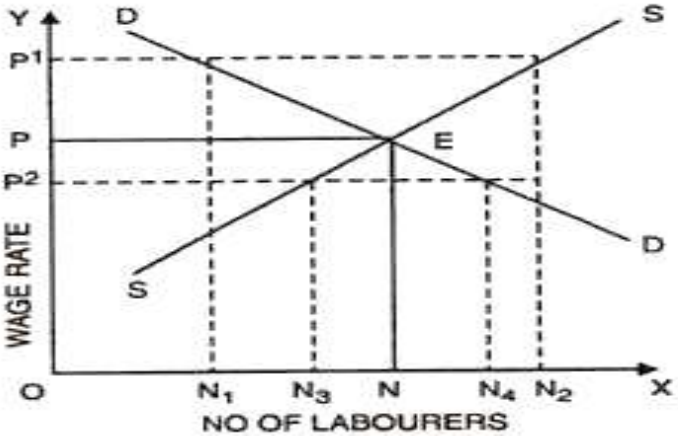

Fig.4.4 supply of labour

In Fig. 4.4 hours supplied has been taken on X-axis and wages on Y-axis. SS is the backward bending supply curve. OW relates to the initial wage rate. When the wage rate is OW', the hours supplied are OX_1. The maximum working hours are OX at wage rate OW. Now suppose the wage rate increases to OW", in that case hours supplied will decrease to OX_1. Thus, we may conclude that like other factors of production, supply curve of labour is also upward sloping from left to right.

FACTORS AFFECTING SUPPLY:

1. Size of Population:

The supply of labour depends upon several factors. In the first place, the supply at any given time depends upon the number of labourers in the country. This, in itself is a result of the size of population and that proportion of this population which is called working population. The size of population is determined by the difference in birth rate and the death rate. The proportion of total population which is called working population depends upon occupational distribution, level of technical advancement, conservation and mobility of labour.

2. Efficiency of Labour:

The supply of labour does not merely depend upon the size of population. It also depends upon the efficiency of labour. Efficiency depends upon several factors like hours of working, service and working conditions, wage rates, economic incentives and other conditions that have a bearing upon the working ability of labour.

3. Mobility of Labour:

The supply of labour also depends upon the mobility of labour. If the labour is less mobile either because the means of transport are not developed or there is conservatism among the labourers, or because there are climatic, language or traditional hindrances, then it follows that supply of labour shall be highly limited.

4.5. TRADE UNION AND WAGES

Trade unions are capable of increasing wages for the workers of a particular industry. Trade (labour) unions are organisations of employees established to bargain with employers concerning wages, houses and conditions of employment. Unions are democratic institution whose central purpose is improving the economic conditions of their members. Unions exist in most democratic societies as a basis for providing workers with a means of representative and with a voice in determining their wages and making conditions. Generally, it is believed that unions tend to raise the wages of their members. However, some economists dispute the ability of unions to raise the wages of workers above general market equilibrium levels.

Trade unions exist to protect the interests of their members by providing the numerous workers with a collective, and hence an effective voice in dealing with the few employers on such other conditions of work as safety, hours holidays and non-wage benefits. A trade union is primarily concerned with the level of wages and other forms of remuneration paid to its members. In order to raise wage, a trade union (i.e., a group of workers who combine to protect their interests) needs to negotiate with and put pressure on employers. By combining in unions, workers can begin to match the power that employers have over them. Collective bargaining, where group of workers appoint representatives to bargain with the representatives of employers, is an attempt to alter the balance of power, in the worker-employer relationship. Trade unions desire to raise the wages and improve working conditions of their members. They accomplish this by using their market power. As Paul Samuelson has put it, "Unions gain market power by obtaining a legal monopoly on the provision of labour services to a particular firm or industry.

Using this monopoly, they compel firms to provide wages, benefits and working conditions that are above the competitive levels". For example, if non-union plumbers earn Rs 10 per hour in Calcutta, a union might bargain with a large construction firm to set the wage at Rs 15 per hour for that firm's plumbers. Such an argument will, however, last only if the firm's access to alternative labour supplies can be restricted. This means that under a typical collective bargaining agreement "firms agree not to hire non-union plumbers, not to contract out plumbing services, and not to sub-contract to non-union firms. Each of these provisions helps prevent erosion of the union's monopoly lock on the supply of plumbers to the firm".

In some industries like autos and steel, unions even try to unionise the entire industry so that the firm A's unionised workers need not compete with firm B's non-union workers. All these steps are necessary to protect high union wage rates. Unions affect both wages and employment. In this context, we may refer to two cases, depending on whether labour is hired competitively or monopolistically.

1. Monopsony (a single buyer):

Suppose a trade union enters a competitive labour market and raises the wage rate about the equilibrium level. By doing so it sets a minimum wage below which no one will work. This very fact changes the supply curve of labour. The industry can hire as many workers as are prepared to work at this union-determined wage, but none at a lower wage. Thus, the industry (and each firm) faces a labour supply curve which has two segments. It is horizontal at the level of the union wage up to the quantity of labour willing to work at that wage and upward sloping thereafter. (The same thing will happen if the government sets a minimum wage above the equilibrium level). Fig. 4.5 shows how a trade union that faces many buyers of labour can raise wages above the competitive level. Competitive equilibrium is at point E. When the union sets a standard wage w_1 (which is above the equilibrium level) the labour-supply curve becomes perfectly elastic up to the quantity Z_2, which is the amount of labour willing to work at the wage w_1.

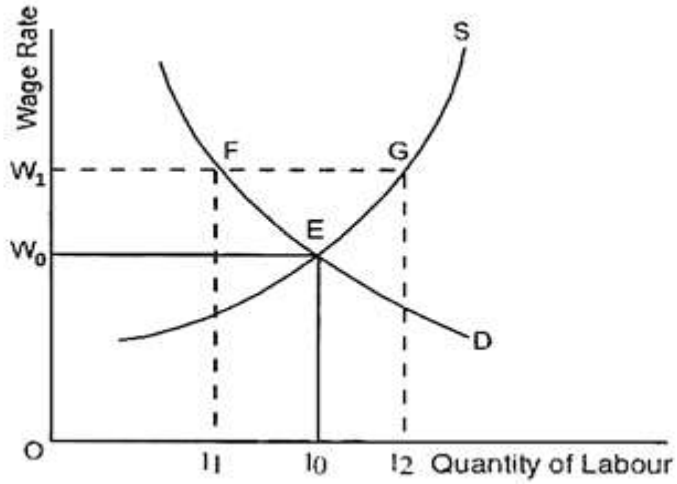

Fig.4.5 Wage Determination

The new supply curve of labour is completely elastic (horizontal) up to point G (i.e., w_1FG) and then rises upward (GS). Equilibrium is at F, with l_2 workers employed, and $l_2 - l_1$ willing to work at the going wage rate but enable to find employment. Thus, if this method of raising wages is followed there will be disequilibrium in the labour market. There will exist a large number of workers who would like to work at a lower wage but are not permitted by the trade unions to do so.

This very fact creates a problem for the union if it seeks to represent all employees in the industry or occupation. Thus, there is likely to be a conflict of interests between the unions' employed members and the unemployed ones. The excess supply of labour will tend to create pressure to cut the wage rate, but the union has to be firm and determined to resist this pressure if its objective (i.e., the higher wage) has to be maintained over a period of time. As Lipsey put it, **"**A union can raise wages above the competitive market level, but only at the costs of lowering employment and creating an excess supply of labour with its consequent pressure for wage-cutting".

2. Bilateral Monopoly — a monopsony facing a monopolist:

We may now consider a different type of situation. Here, we consider the effects of introducing a union into the monopsony labour market. Now, the monopsony employer's organisation faces a monopoly union, which means that the two sides will have to settle the wage through collective bargaining. The final outcome of this bargaining process will depend on the objective that each side sets and the relative skill of each side in bargaining

for its objective. Let to itself, the employer's organisation will set the monopsony wage.

Now, the question is: what is the range over which the wage may be set after the union enters the market? To answer this question we have to know what the union would do if it had the power to set the wage unilaterally. The result will clearly indicate the union's objectives in the actual collective bargaining process.

Let us suppose, then, that the union can set a minimum wage at which its numbers will work. Now, employers do not stand to gain by deciding not to employ extra workers for fear of driving the wage up or of reducing the number of workers hired (or the quantity of labour demanded) in the hope of pushing the wage rate down. Thus, here, as in the case of a wage-setting union in a competitive market, the union presents the employer with a competitive elastic labour- supply curve (up to the maximum number of workers willing to accept work at the union wage). As shown in Fig. 4.6, by presenting the monopsonist with a fixed wage, the union can raise wages and employment above the monopsonistic level.

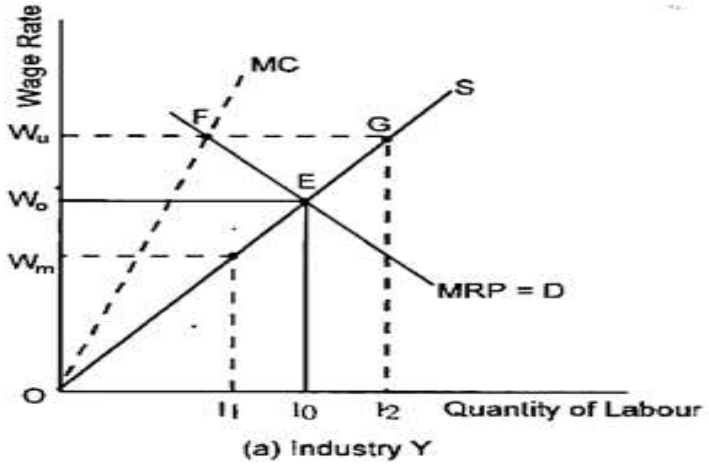

Fig.4.6. Wage Determination by collective bargaining

In a monopsony situation (where labour is supplied competitively) l_3 workers are employed at a wage of w_m. If now a union sets its wage at w_0, the supply curve follows the horizontal line from w_0 to E, and then rises along the line S. So equilibrium is at point E and the level of employment is l_0. If the union sets a wage above w_0, it has to tolerate a lower level of employment than l_0. For example, at a wage of w_u, the labour supply curve is w_uFGS. This yields the same level of employment, l_1, as when the market was dominated by the

monopsonist, but at the much higher wage of w_u. At that wage rate, the number of workers unemployed would be $l_1 - l_2$. These people are willing to work at a lower wage but are not permitted by the union to do so. So, in reality, wages are not determined by market forces of demand and supply put by collective bargaining between the trade union and the employer. And collective bargaining in the labour market is an example of bilateral monopoly. The employer would like to establish the monopsonistic wage and the union would not want a wage below the competitive level.

The union may attempt raise wages further by sacrificing its employment objective (i.e., by tolerating more unemployment). If the union is quite satisfied with the level of employment as low as would occur at the monopsonistic wage, it could target for a wage much higher than the free market wage. However, the actual outcome of collective bargaining depends on such things as "what target wage the two sides actually set for themselves, their relative bargaining skills, how each side assesses the cost of concessions, and how serious a strike would be for each".

Supply Restriction:

Trade unions can also raise g, wages by restricting the supply of labour as shown in Fig. 4.7. If this method is followed, trade unions can maintain any given target wage without creating a pool of workers, who are available to work at the going wage rate but are unable to find jobs.

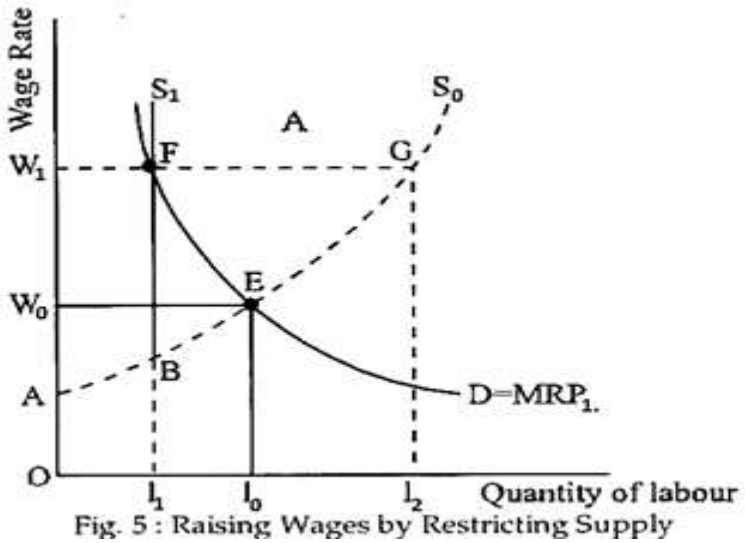

Fig. 5 : Raising Wages by Restricting Supply

Fig.4.7. Raising wages by Restricting supply

With free entry into the occupation, the supply curve S_0 and the demand curve D intersect at point E to set an equilibrium wage of w_0 with employment of Z_0. If entry is restricted to the quantity h, the supply curve is ABS_1. Labour market reaches equilibrium at point F and the new equilibrium wage rate is w_1. There is no excess supply at point F. If, instead, the wage had been fixed at w_1 without controlling entry, there would be excess supply of labour of l_2-l_1. These people, who are willing to work at a lower wage but not permitted by the trade union to do so, are tempted to work for less than the union wage, and thus can weaken the union's ability to maintain a high wage rate.

Indeterminacy:

In collective bargaining between firms and unions, there is usually a substantial range over which wages may be set. Such a situation is shown in Fig. 4.8. The figure shows that there is often more than one mutually acceptable outcome to the bargaining process.

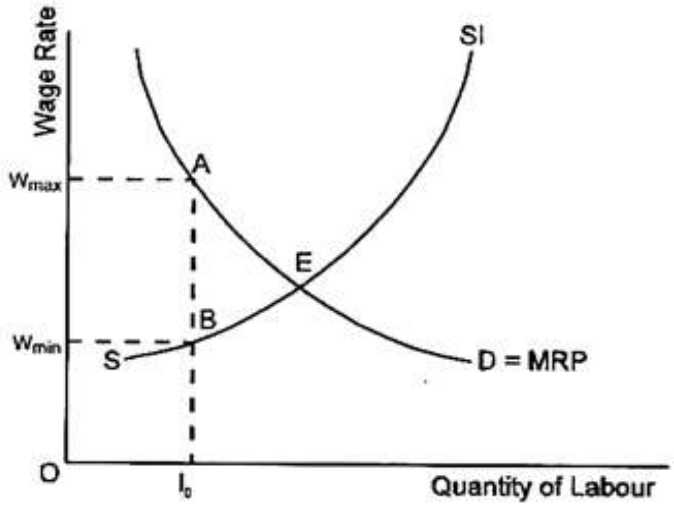

Fig.4.8. Collective Bargaining between the Union and one Employer

The supply Curve of persons who would like to work in the industry under consideration is given by S_l, but the union is assumed to have restricted entry to l_0. The single employer (one firm or an employers' association) has a MRP curve for this labour. The supply curve indicates that l_0 workers could be willing to work for w_{min}. The MRP curve indicates that the employer would be willing to employ l_0 workers at any wage up to w_{max}. Both sides would prefer any wage between w_{min} and w_{max} rather than have no agreement at all.

Theoretical Indeterminacy of Collective Bargaining:

In most collective bargaining negotiations, the workers press for higher wages while management seeks to keep wages and compensation at low levels. Such a situation is known as bilateral monopoly — where the buyer faces one seller. The final outcome of collective bargaining cannot be predicted from costs and demands alone. Psychology, politics and numerous non-economic considerations play role here. Under recessionary conditions, when costs are high and profits are low, firms may have a strong incentive to develop new technology that will eliminate the unneeded workers by replacing their jobs with machines.

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UNIT V

INTEREST AND PROFIT

5.1. INTRODUCTION

5.1.1. MEANING OF INTEREST:

Interest is a payment made by a borrower to the lender for the money borrowed and is expressed as a rate percent per year. It is usually expressed as an annual rate in terms of money and is calculated on the principal of the loan. It is the price paid for the use of other's capital fund for a certain period of time. In the real economic sense, however, interest implies the return to capital as a factor of production. But for all practical purposes, "interest is the price of capital." Capital as a factor of production, in real terms, refers to the stock of capital goods (machinery, raw-materials, factory plant etc.). In the money economy, however for all practical purposes capital refers to finance or money capital i.e., the monetary fund's lent or borrowed for any purpose of expenditure from any source.

5.1.2. DEFINITION OF INTEREST:

In economics, Interest has been defined in a variety of ways. Commonly, Interest is regarded as the payment of the use of service of capital.

1. As Prof. Marshall has said – "The payment made by borrower for the use of a loan is called Interest."

2. According to Prof. J. S. Mill – "Interest is the remuneration for mere abstinences."

3. As Prof. Keynes has said – "Interest is the reward of parting with liquidity for a specified period."

5.2. TYPES OF INTEREST:

There are two types or kinds of Interest:

(a) Net Interest,

(b) Gross Interest.

(a) Net Interest:

The payment made exclusively for the use of capital is regarded as net Interest or pure Interest. According to Prof. Chapman—"Net Interest is the payment for the loan of capital when no risk, no inconveniences apart from that involved in saving and no work is entailed on the lender."

According to Prof. Marshall, "Net Interest is the earnings of capital simply or the reward of waiting simply."

Thus, Net Interest = Gross Interest – (payment for risk + payment for inconvenience + cost of administering credit)

i.e., Net Interest = Net Payment for the use of capital.

(b) Gross Interest:

Gross Interest according to Briggs and Jordan has said—"Gross Interest is the payment made by the borrowers to the lenders is called Gross Interest or Composite Interest."

It includes payments for the loan of capital payment to cover risks for loss which may be:

(i) A personal risks or

(ii) Business risks, payment for inconveniences of the investment and payment for the work and worry involved in watching—investments, calling them in and investing.

According to Prof. Marshall: Gross Interest is that "Interest of which we speak when we say that interest is the earning of capital simply or the reward of waiting simply, is net Interest but what commonly passes by the name of interest, includes other elements besides this and may be called gross interest."

By seeing the above definitions when we add elements of payment for risk, payment for inconvenience and the cost of administering credit to the net Interest, it becomes gross interest.

Thus, Gross Interest = Net Interest + payment of risk + payment for inconvenience + cost of administrating credit

5.3. ELEMENTS OF GROSS INTEREST:

As we have seen earlier that the actual amount paid by the borrower to the capitalist as the price of capital fund borrowed is called gross interest. Gross interest includes, besides net interest, the following elements:

1. Payment or Compensation for Risk:

The lender has always to bear the risk—the risk that the loan may not be repaid. Besides this, borrower, takes the loan at the time when his requirement is urgent but when he returns it, it is quite possible that the time

may not be suitable from lender's point of view. To cover this risk, the lender charges more, in addition to the net interest. Thus, when loans are made without adequate security, they involve a high elements of risk, so a high rate of Interest is charged.

2. Compensation for Inconvenience:

When somebody lends the money, he has to bear inconveniences till the period when he gets back the sum, i.e., a lender lends only by saving that is by restricting consumption out of his income which obviously involved some inconveniences which is to be compensated. A similar inconvenience is that the lender may be able to get his money back as and when he may need it for his own use. Hence, a payment to compensate this sort of inconvenience may be charged by the lender. Thus, the greater the degree of inconvenience caused to the lender, higher will be the rate of Interest charged.

3. Cost of Administering the Credit or Payment for Management Services:

A lender of capital funds has to spend money and energy in the management of credit. For example: In the lending business, certain legal formalities have to be fulfilled, say fees for obtaining money-lender's licence, stamp duties etc. Proper accounts must be maintained. He has to maintain a staff as well. For all these sorts of management services, reward has to be paid by the borrower to the lender. Therefore, gross interest also includes payment for management expenses.

4. Compensation for the Changing Value of Money:

Under this when prices are rising, the purchasing power of money declines over a period of time and the creditor loses. To avoid such loss and high rate of Interest may be demanded by the lender.

Therefore,

Gross Interest = Net Interest + Payment for risk + Payment for management services + Compensation for the changing value of money.

In economic equilibrium, the demand and supply for capital determines the net rate of interest. But in practice, gross interest rate is charged. Gross interest rates are different in different cases at different places and different times and for different individuals.

5.4. FACTORS INFLUENCING THE RATE OF INTEREST:

Interest rates vary from person to person and from place to place. There are many factors which causes variations in Interest rates such as:

1. Different Types of Borrowers:

There are different types of borrowers in the market. They offer different types of securities. Their borrowing motives and urgency are different. Thus, the risk elements differ in different cases, which have to be compensated for.

2. Due to Differences in Gross Interest:

Variations in the rate of Interest are due to differences in gross interest such as risk and inconveniences involved, cost of keeping records and accounts and collection of loans etc. The greater the risk and inconvenience and the cost of management of loans, the higher will be the rate of Interest and vice-versa.

3. The Money Market is not homogeneous:

There are different types of lenders and institutions, specialising in different types of loans and the loan-able funds are not freely mobile between them. The ideals of these institutions are also different. Again, there are moneylenders and indigenous bankers in the unorganised sector of the money market who follow their distinct lending policies and charge different interest rates.

4. Duration of Loan or Period of Loan:

Rate of Interest also depends upon the duration or period of loan. Larger term loans carry higher rate of Interest than short-term loans. In a long-term loan, the money gets locked up for a longer duration. Naturally, the lender wants to be compensated by a higher rate of Interest.

5. Nature of Security:

Interest rate varies with the type of security. Loans against the security of gold carry less interest rates than loans against the security of gold carry less interest rate than loans against the security of immovable property like land or house. The more liquid are the assets the lower is the interest rate and vice-versa.

6. Goodwill or Credit of the Borrower:

Interest rate also depends upon the credit or goodwill of the borrower. Persons of better goodwill and known integrity and credibility can get loans on easy terms.

7. Amount of Loan:

The greater the amount of loan, the lower is the rate of Interest and vice-versa.

8. Interest Policy of the Monetary Authorities:

Monetary policy of the authorities may also lead to differences in Interest rates, e.g., the Reserve Bank of India has adopted differential interest rates policy for the deployment of credit to the priority sectors.

9. Difference Due to Distance:

Distance between the lender and the borrower also causes differences between Interest rates. People are willing to lend at a lower rate of Interest nearer home than at a long distance.

10. Market Imperfections:

Differences in Interest rates are also due to market imperfections that may be found in a loan market. Money-lenders indigenous banks, mutual funds, commercial banks etc. follow different lending policies and charges various Interest rates.

11. Differences in Productivity:

Productivity of capital differs from work to work or from venture to venture. People are willing to borrow at a higher rate of Interest for productive purposes or productive ventures and vice-versa.

5.5. THEORIES OF INTEREST

1. Liquidity Preference Theory of Interest 2. Loanable Funds Theory of Interest

1. LIQUIDITY PREFERENCE THEORY OF INTEREST

The Liquidity Preference Theory presented by J. M. Keynes in 1936 is the most celebrated of all. According to Keynes, the rate of interest is a purely monetary phenomenon. It is the reward for parting with liquidity for a specific period of time.

Thus, like the price of a commodity, the rate of interest is determined by the demand for and the supply of money. It is, therefore, necessary to introduce the concepts of demand for money and supply of money. The supply of money refers to the stock of money in circulation and is a fixed quantity at a particular point of time. It is the sum of currency (notes and coins) and commercial bank deposits. It remains fixed in the short rim because it is determined and controlled by the central bank of a country. So it plays a passive role in interest rate determination. By contrast, the demand for money plays an active role in determining the equilibrium rate of interest. Therefore, a background knowledge of demand for money is essential in order to understand Keynes' theory.

The Demand for Money:

Wealth can be held in various forms— money, fixed interest securities (bonds), shares, property, jewellery, valuable paintings etc. Keynes first analysed, in detail, the reasons why people will hold wealth in the form of money. At a fixed point of time, a certain stock of money is held, i. e., people wish to hold a certain amount of wealth in 'liquid' form. 'Liquidity' refers to the ease with which assets can be changed into cash without loss or delay. It is property which is enjoyed by all assets to some extent. Obviously money is the most liquid of all assets. The demand for money was, therefore, termed by Keynes 'liquidity preference'. J. M. Keynes gave three reasons for holding money the transactions motive, the precautionary motive and the speculative motive.

1. Transactions Motive:

Individuals and business firms hold money in order to carry out day-to-day transactions. Each individual or firm has a time gap between receipts (income) and payment (expenditure) and will need to hold money to cover this. The average amount held will depend primarily on the system of payments, i.e., on the frequency of the receipts. For example, if a weekly paid person receives Rs. 300 a week and he has spent it all by the next pay-day, his average cash holding is Rs. 150, i.e., the amount he had at the beginning (Rs. 300) and the amount he has at the end (zero), divided by 2. If he receives

monthly salary of Rs. 1,200 then, assuming that his spending habits do not alter, his average cash holding will rise to Rs. 600, i.e., (Rs. 1200 + 0) ÷ 2. The amount of cash held for transactions and precautionary purposes also depends on incomes and prices. If income increases, then more money will be held. Similarly, if prices rise, more money will be required to purchase the same amount of goods and services.

2. Precautionary Motive:

People and business firms hold some money as a reserve to meet unforeseen contingencies, such as sickness or accidents or the need to take advantage of an opportune to buy something which is being offered at a specially reduced price for only a limited period, e.g., during a sale.

3. Speculative Motive:

The classical economists considered it irrational for people to hold wealth in the form of money other than that held for transactions and/or precautionary purposes. It is because any money left over could be invested in interest-earning assets like bonds. Keynes, however, argued that it was not necessarily irrational to hold idle money balances.

He pointed out that at times it might be preferable to hold idle money (cash) than to buy government securities (bonds). If a person holds money, he loses interest but he does not suffer capital loss (due to fall in the value of his assets) either. In fact, it costs money to hold money. Therefore, the rate of interest is called the opportunity cost of money holding. By holding money an individual loses the opportunity to earn interest. (Here we ignore the effect of inflation and leave aside any reduction there-from). By holding securities, however, he earns a fixed sum as interest, but its market value can (and does) vary. Therefore, in certain situations, money is preferable to securities. For example, if a person pays Rs. 100 for a Rs. 100 bond whose rate of interest is 10%, then at the end of the year he receives Rs. 10 (or Rs. 110 in all, i.e., including the principal). But if in the meantime the value of the bond has fallen to below Rs. 90, the loss on this amount more than offsets the interest. The market value of a bond is inversely related to the market rate of interest. Thus, if the rate of interest goes up, the market value of a bond will fall.

The market value is shown in the following formula:

Market value = Original value x Original rate of interest Market rate of interest

In the case of a Rs. 100 bonds whose original rate of interest is 10%, Rs. 10 interest will be paid at the end of the year. If the market rate of interest rises to 20% and the bondholder wishes to sell it for some reason, he will not find a buyer ready to give him Rs. 100 for it. The reason is very simple.

If the buyer pays Rs. 100 and at the end of the year receives Rs. 10 as interest, then his investment has yielded interest of only 10%, whereas elsewhere he could have gained 20%. The buyer can at best offer Rs. 50 for the bond, so that when he receives the Rs. 10 interest, his investment has earned 20% (which is indeed the market rate of interest). Thus, because the market rate of interest has risen, the market value of the bond has fallen.

The converse is also true if the market rate of interest falls, the market value of a bond will rise. If, in an example, the rate of interest falls to 5%, the value of the bond will rise to Rs. 400. It is because the return from this bond at 5% interest will now be Rs. 20.

According to Keynes, the speculative demand for money will be determined by people's expectations regarding the market rate of interest. If the rate of interest is very low and people expect it to rise (or the. value of bonds to fall), then they will consider it more judicious to hold money rather than bonds. If, on the other hand, the rate of interest is very high and people expect it to fall, then they will prefer to hold bonds instead of money.

Thus, there is an inverse relation between the rate of interest and the demand for money. At high rates of interest people hold less money and vice versa. Another reason is that if the rate of interest is high, it is 'more expensive' to hold money, i.e., the interest which is foregone by not investing the money is at a high level.

For these two reasons, the demand for idle money balances is inversely related to the rate of interest. Keynes assumed that the demand for money for the other two motives is not affected by changes in the rate of interest, i.e., is perfectly inelastic with regard to the rate of interest. Therefore, if all three elements in the demand for money are added together to derive the total demand curve for money, the result would be a curve of the type shown in

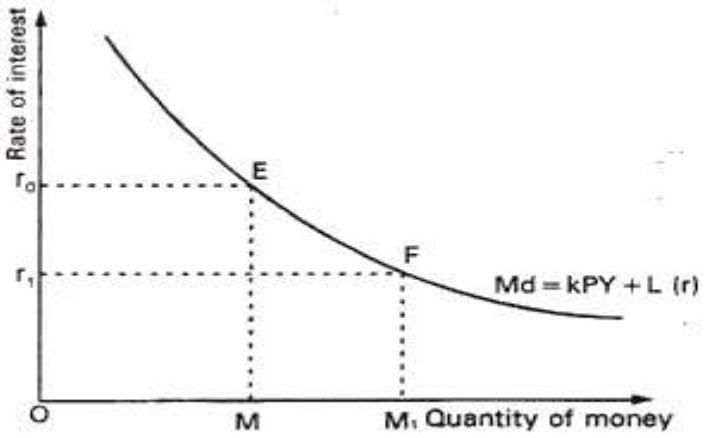

Fig.5.1. demand curve for money

Fig. 5.1. (A demand curve for money is also known as a 'liquidity preference curve'.) The curve shows that if the rate of interest falls, e.g., from O_0 to Or_1, the demand for money increases, from OM to OM_1. According to Keynes, at some low rate of interest the demand for money becomes perfectly elastic because if the rate falls below this level, no one would be prepared to buy bonds.

Determination of the Rate of Interest:

The rate of interest, which is the 'price' of money, is determined by demand and supply in a competitive situation. We have seen that the demand curve for money is downward sloping. We assume that the supply curve will be perfectly inelastic with regard to the rate of interest, i.e., that the supply is determined by the monetary authorities and does not vary with the rate of interest in the short run. Thus, in Fig. 5.2. (a) The supply of money is represented by the perfectly inelastic supply curve, M.

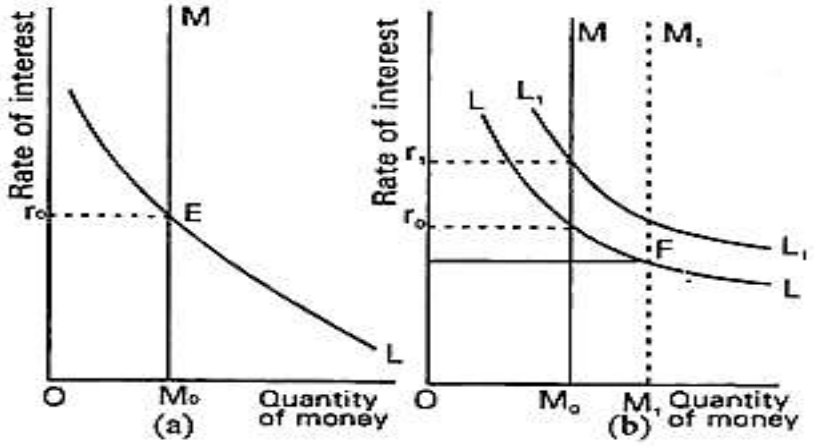

Fig. 5.2. (A). Determination of the rate of interest

The equilibrium rate of interest is Or_0 because it is the only rate of interest at which the money market is in equilibrium, e.g., the demand for money is equal to its supply. What is the logic of this equilibrium? If the rate of interest goes above the equilibrium level there will be excess supply of money or excess demand for bonds. The price of bonds will rise or the rate of interest will fall. On the other end, if the rate of interest goes below the equilibrium level, there will be excess demand for money, i.e., people will need more money to hold that is currently being supplied by the central bank. To meet this demand people will sell bonds. There will be excess supply of bonds. Bond price will fall or, what comes to the same thing, the rate of interest will rise.

Shifts of Supply and Demand Curves:

Both the demand and supply curves may shift to left or right if circumstances change. For instance, if incomes rise the demand for money will shift to the right, because people will need more money for transaction purposes. Consequently, the rate of interest will rise. This is indicated by the curve L_1 which intersects the supply curve of money at point E so as to cause the rate of interest to rise to Or_1.

By contrast, the supply curve will shift if the monetary authority (i.e., the central bank) increases or reduces the supply of money. The effect of an increase in the supply of money is illustrated in Fig. 5.2. (b). If supply of money is increased from OM_0 to OM_1 the rate of interest will fall from Or_0 to Or_1. The reason is that at the old rate of interest the supply of money has become greater than demand and people use the surplus money to buy bonds. The increased demand for bonds causes the price (or the value) of bonds to rise. The rate of interest will, therefore, fall.

Criticisms of the Theory:

Keynes' liquidity preference theory has been severely criticised.

These are discussed here:

- In the construction of the figure, speculative demand for money is included and the other two sources of demand are ignored. It implies that they are known and subtracted from total money supply. But they can be known only when income is in equilibrium, i.e., Y – C + I or S = I. Hence, liquidity preference theory requires as a pre-condition saving-

investment equality, already postulated by classical scholars. Hence, the rate of interest is neither a purely monetary phenomenon nor a purely real phenomenon.

- So far as the main content of the Keynesian interest theory is concerned, it is the determination of the rate of interest through equality between demand for, and supply of, money. But one of the components of total money demand—known as speculative demand—is assumed to depend on rate of interest. Hence, the logical circularity in the model can be mentioned as one of its principal sources of weakness.
- Keynes ignored real factors like productivity of capital and thriftiness in the determination of interest rate.
- As Jacob Viner has remarked: "Without saving there can be no liquidity to surrender." According to Keynes, interest is a reward for parting with liquidity and in no way an inducement for saving, but it is ridiculous to think of surrendering liquidity if one has not already saved money.

Liquidity Trap:

Liquidity trap refers to a situation where the rate of interest is so low that people prefer to hold money (liquidity preference) rather than invest it in bonds (to earn interest). Keynes pointed out that at low rates of interest the demand curve for money (or liquidity preference curve) becomes completely (infinitely) elastic. So the liquidity preference curve is not downward sloping throughout. This usually happens during depression. During depression any attempt by the central bank to reduce the rate of interest by increasing the stock of money will be futile. In such a situation, no change in money supply is sufficient to alter the rate of interest. So it is not possible to stimulate more investment. In fact, any increase in the stock of money by the central bank will be held by the people in the form of liquid balance. This will prevent the rate of interest from falling further. See Fig. 5.3 where the completely elastic position (EFMd) of the liquidity preference curve is called liquidity trap.

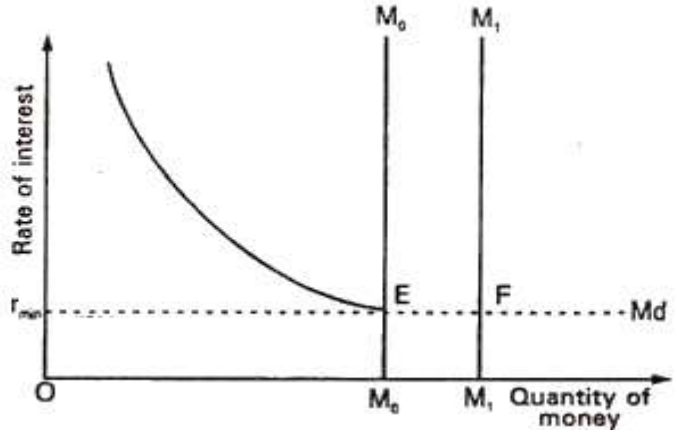

Fig. 5.3. Liquidity Trap

The implication is that monetary policy loses its effectiveness if there is a liquidity trap in the demand curve of money. Keynes argued that the only way to stimulate investment in a depressed economy (which is experiencing liquidity trap) is to use a positive fiscal policy. Such a policy works through an increase in government expenditure or reduction in taxes in order to increase aggregate effective demand. The reason is simple. People feel that the rate of interest has fallen enough. It cannot fall further. Thus, if it rises in near future the price of bonds (purchased now) will fall. So purchase of bonds is risky. Money-holding is not that costly because the rate of interest is low. Thus, people prefer to hold as much money as possible, with the expectation that the rate of interest will rise in future. As soon as it rises they will buy bonds. In such a situation any additional money supplied by the central bank will be absorbed by the people and this will prevent the rate of interest from falling further.

The Possibility of Zero Rate of Interest:

Interest is treated as a price paid by borrowers to lenders and will depend on the supply for and demand of loanable money for various purposes. Generally, a large supply of capital relating to the demand means low rates of interest and a large demand relative to supply means high interest rates. According to some writers, the rate of interest would fall to zero in a static economy where the demand for loanable funds is nil. In a static economy, there is no fresh investment, the demand for loanable funds is nil and so the rate of interest would be zero.

From the point of view of the demand for loans, zero rate of interest means that the marginal net product of capital is nil. This means that we cannot increase society's total product further by employing more capital. We have reached a state in which our productivity is maximum. It means that all our wants have been satisfied. So the demand for capital will be zero. But, it is not likely that the demand for loan-capital will be ever zero. But, in reality, we cannot think of a state of society in which people will have no wants, and no desires. So long as they remain, there will always be endless possibilities for employing capital. The rate of interest, therefore, cannot be zero.

There are certain dynamic forces like inventions and discoveries, growth of population, etc. which keep always up the demand price of loan-capital. Similarly, from the supply side, a zero rate of interest means that people will go on lending without expecting any return in exchange. But the liquidity preference will not drop to zero for a number of reasons. As the rate of interest falls, more money will be absorbed by people to satisfy transactions demand for money. Moreover, the zero interest rate means that the liquidity-preference also becomes zero; people lend money without any interest. But such a situation is most unlikely to appear in reality. There are always reasons why the liquidity-preference would never drop to zero.

As the holding of cash-money has the distinct advantages over the holding of other assets, people will always prefer cash money to other assets. It means that the liquidity- preference cannot drop down to zero, and from this it follows that the rate of interest will never fall to zero. All these set a limit much above zero to the practical decline in the rate of interest. In the Keynesian theory it is also seen that the rate of interest cannot fall below a certain level where the demand for liquidity becomes infinitely elastic and that situation has already been described as the liquidity trap, a term first used by D. Robertson.

2. LOANABLE FUND THEORY:

The neo-classical theory of interest or loanable funds theory of interest owes its origin to the Swedish economist Knut Wicksell. Later on, economists like Ohlin, Myrdal, Lindahl, Robertson and J. Viner have considerably contributed to this theory. According to this theory, rate of interest is determined by the demand for and supply of loanable funds. In this regard this theory is more realistic and broader than the classical theory of interest.

Demand for Loanable Funds:

Loanable funds theory differs from the classical theory in the explanation of demand for loanable fund.

According to this theory demand for loanable funds arises for the following three purposes viz.; Investment, hoarding and dissaving:

1. Investment (I):

The main source of demand for loanable funds is the demand for investment. Investment refers to the expenditure for the purchase of making of new capital goods including inventories. The price of obtaining such funds for the purpose of these investments depends on the rate of interest. An entrepreneur while deciding upon the investment is to compare the expected return from an investment with the rate of interest. If the rate of interest is low, the demand for loanable funds for investment purposes will be high and vice- versa. This shows that there is an inverse relationship between the demands for loanable funds for investment to the rate of interest.

2. Hoarding (H):

The demand for loanable funds is also made up by those people who want to hoard it as idle cash balances to satisfy their desire for liquidity. The demand for loanable funds for hoarding purpose is a decreasing function of the rate of interest. At low rate of interest demand for loanable funds for hoarding will be more and vice-versa.

3. Dissaving (DS):

Dissaving's is opposite to an act of savings. This demand comes from the people at that time when they want to spend beyond their current income. Like hoarding it is also a decreasing function of interest rate.

Supply of Loanable Funds:

The supply of loanable funds is derived from the basic four sources as savings, dishoarding, disinvestment and bank credit.

They are explained as:

1. Savings (S):

Savings constitute the most important source of the supply of loanable funds. Savings is the difference between the income and expenditure. Since, income is assumed to remain unchanged, so the amount of savings varies with the rate of interest. Individuals as well as business firms will save more at a higher rate of interest and vice-versa.

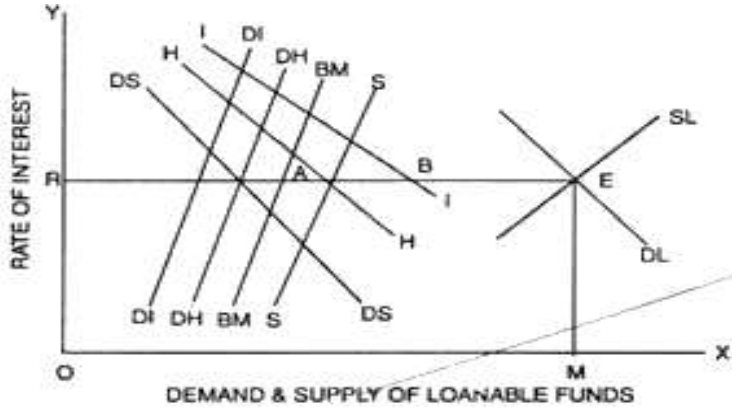

Fig.5.4.

2. Dishoarding (DH):

Dishoarding is another important source of the supply of loanable funds. Generally, individuals may dishoard money from the past hoardings at a higher rate of interest. Thus, at a higher interest rate, idle cash balances of the past become the active balances at present and become available for investment. If the rate of interest is low dishoarding would be negligible.

3. Disinvestment (DI):

Disinvestment occurs when the existing stock of capital is allowed to wear out without being replaced by new capital equipment. Disinvestment will be high when the present interest rate provides better returns in comparison to present earnings. Thus, high rate of interest leads to higher disinvestment and so on.

4. Bank Money (BM):

Banking system constitutes another source of the supply of loanable funds. The banks advance loans to the businessmen through the process of

credit creation. The money created by the banks adds to the supply of loanable funds.

Determination of Rate of Interest:

According to loanable funds theory, equilibrium rate of interest is that which brings equality between the demand for and supply of loanable funds. In other words, equilibrium interest rate is determined at a point where the demand for loanable funds curve intersects the supply curve of loanable funds. It can be shown with the help of a Figure. The rate of interest is determined at the point of intersection of the two curves—the supply of loanable funds curve (SL) and the demand for loanable funds curve, DL. Fig. 5.4 shows that the equilibrium rate of interest is EM; at this rate, the demand for loanable funds is equal to the supply of loanable funds i.e. OM.

Criticism:

Although, loanable funds theory is superior to classical theory, yet, critics have criticised it on the following grounds:

1. Full Employment:

Keynes opined that loanable funds theory is based on the unrealistic assumption of full employment. As such, this theory also suffers from the defects as the classical theory does.

2. Indeterminate:

Like classical theory, loanable funds theory is also indeterminate. This theory assumes that savings and income both are independent. But savings depend on income. As the income changes savings also change and so does the supply of loanable funds.

3. Impracticable:

This theory assumes savings, hoarding, investment etc. to be related to interest rate. But in actual practice investment is not only affected by interest rate but also by the marginal efficiency of capital whose affect has been ignored.

4. Unsatisfactory Integration of Real and Monetary Factors:

This theory makes an attempt to integrate the monetary as well as real factors as the determinants of interest rate. But, the critics have maintained

that these factors cannot be integrated in the form of the schedule as is evident from the frame work of this theory.

5. Constancy of National Income:

Loanable funds theory rests on the assumption that the level of national income remains unchanged. In reality, due to the change in investment, income level also changes accordingly.

5.6. PROFIT

The term profit has distinct meaning for different people, such as businessmen, accountants, policymakers, workers and economists. Profit simply means a positive gain generated from business operations or investment after subtracting all expenses or costs. In economic terms profit is defined as a reward received by an entrepreneur by combining all the factors of production to serve the need of individuals in the economy faced with uncertainties. In a layman language, profit refers to an income that flow to investor. In accountancy, profit implies excess of revenue over all paid-out costs. Profit in economics is termed as a pure profit or economic profit or just profit.

Profit differs from the return in three respects namely:

a. Profit is a residual income, while return is a total revenue

b. Profits may be negative, whereas returns, such as wages and interest are always positive

c. Profits have greater fluctuations than returns

According to modern economists, profits are the rewards of purely entrepreneurial functions. According to Thomas S.E., “pure profit is a payment made exclusively for bearing risk. The essential function of the entrepreneur is considered to be something which only he can perform. This something cannot be the task of management, for managers can be hired, nor can it be any other function which the entrepreneur can delegate. Hence, it is contended that the entrepreneur receives a profit as a reward for assuming final responsibility, a responsibility that cannot be shifted on the shoulders of anyone else.”

For understanding the profit as a business objective, you need to learn two most important concepts, such as economic profit and accounting profit.

5.7. TYPES OF PROFIT

Different people have described profit differently. Individuals have associated profit with additional income revenue, and reward. However, none of the description of profit is said to be right or wrong; it only depends on the field which the word profit is described.

On the basis of fields, profit can be classified into two types, which are explained as follows:

i. Accounting Profit:

Refers to the total earnings of an organization. It is a return that is calculated as a difference between revenue and costs, including both manufacturing and overhead expenses. The costs are generally explicit costs, which refer to cash payments made by the organization to outsiders for its goods and services. In other words, explicit costs can be defined as payments incurred by an organization in return for labor, material, plant, advertisements, and machinery.

The accounting profit is calculated as:

Accounting Profit= TR-(W + R + I + M) = TR- Explicit Costs

TR = Total Revenue

W = Wages and Salaries

R = Rent

I = Interest

M = Cost of Materials

The accounting profit is used for determining the taxable income of an organization and assessing its financial stability. Let us take an example of accounting profit. Suppose that the total revenue earned by an organization is Rs. 2, 50,000. Its explicit costs are equal to Rs. 10, 000. The accounting profit equals = Rs. 2, 50,000 – Rs. 10,000 = Rs. 2, 40,000. It is to be noted that the accounting profit is also called gross profit. When depreciation and government taxes are deducted from the gross profit, we get the net profit.

ii. Economic Profit:

Takes into account both explicit costs and implicit costs or imputed costs. Implicit that is foregone which an entrepreneur can gain from the next best alternative use of resources. Thus, implicit costs are also known as opportunity cost. The examples of implicit costs are rents on own land, salary of proprietor, and interest on entrepreneur's own investment.

Let us understand the concept of economic profit. Suppose an individual A is undertaking his own business manager in an organization. In such a case, he sacrifices his salary as a manager because of his business. This loss of salary will opportunity cost for him from his own business.

The economic profit is calculated as:

Economic profit = Total revenue-(Explicit costs + implicit costs)

Alternatively, economic profit can be defined as follows:

Pure profit = Accounting profit-(opportunity cost + unauthorized payments, such as bribes)

Economic profit is not always positive; it can also be negative, which is called economic loss. Economic profit indicates that resources of a business are efficiently utilized, whereas economic loss indicates that business resources can be better employed elsewhere.

5.8. THEORIES OF PROFIT

Profits of businesses depend on the successful management of risks and uncertainties by entrepreneurs. These risks can be cost risks due to change in wage rates, prices, or technology, and other market risks. Different economists have presented different views on profit. Some of the most popular theories of profit are shown in Figure-5.5:

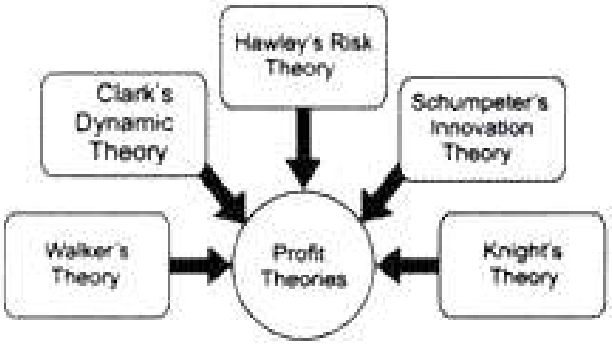

Fig.5.5. Theories of profit

5.8.1. HAWTREY'S RISK THEORY

According to Prof. R.G. Hawtrey, "The trade cycle is a purely monetary phenomenon." It is changes in the flow of monetary demand on the part of businessmen that lead to prosperity and depression in the economy. He opines that non-monetary factors like strikes, floods, earthquakes, droughts, wars, etc. may at best cause a partial depression, but not a general depression.

In actuality, cyclical fluctuations are caused by expansion and contraction of bank credit which, in turn, lead to variations in the flow of monetary demand on the part of producers and traders. Bank credit is the principal means of payment in the present times. Credit is expanded or reduced by the banking system by lowering or raising the rate of interest or by purchasing or selling securities to merchants. This increases or decreases the flow of money in the economy and thus brings about prosperity or depression. The expansion phase of the trade cycle starts when banks increase credit facilities. They are provided by reducing the lending rate of interest and by purchasing securities. These encourage borrowings on the part of merchants and producers. This is because they are very sensitive to changes in the rate of interest.

So when credit becomes cheap, they borrow from banks in order to increase their stocks or inventories. For this, they place larger orders with producers who, in turn, employ more factors of production to meet the increasing demand. Consequently, money incomes of the owners of factors of production increase, thereby increasing expenditure on goods. The merchants find their stocks being exhausted. They place more orders with producers. This leads to further increase in productive activity, income, outlay, and demand, and a further depletion of stocks of merchants. According to Hawtrey, "Increased activity means increased demand, and increased demand means increased activity. A vicious circle is set up, a cumulative expansion of productive activity."

As the cumulative process of expansion continues, producers quote higher and higher prices. Higher prices induce traders to borrow more in order

to hold still larger stocks of goods so as to earn more profits. Thus optimism encourages borrowing borrowing increases sales, and sales raise optimism.
According to Hawtrey, prosperity cannot continue limitlessly. It comes to an end when banks stop credit expansion. Banks refuse to lend further because their cash funds are depleted and the money in circulation is absorbed in the form of cash holdings by consumers.

Another factor is the export of gold to other countries when imports exceed exports as a result of high prices of domestic goods. These factors force the banks to raise interest rates and refuse to lend. Rather, they ask the business community to repay their loans. This starts the recessionary phase. In order to repay bank loans, businessmen start selling their stocks. This sets the process of falling prices. They also cancel orders with producers. The latter curtail their productive activities due to fall in demand. These, in turn, lead to reduction in the demand for factors of production. There is unemployment. Incomes fall. Falling demand, prices and incomes are the signals for depression. Unable to repay bank loans, some firms go into liquidation, thus forcing banks to contract credit further. Thus the entire process becomes cumulative and the economy is forced into depression.

According to Hawtrey, the process of recovery is very slow and halting. As depression continues, traders repay bank loans by selling their stocks at whatever prices they can. As a result, money flows into the reserves of banks and funds increase with banks. Even though the bank rate is very low, there is "credit deadlock" which prevents businessmen to borrow from banks due to pessimism in economic activity. This deadlock can be broken by following a cheap money policy by the central bank which will ultimately bring about recovery in the economy.

Criticisms:

Monetarists like Friedman have supported Hawtrey's theory. But the majority of economists have criticised him for overemphasising monetary factors to the neglect of non-monetary factors in explaining cyclical fluctuations.
Some of the points of criticism are discussed below:

(1) Credit not the Cause of Cycle:

None can deny that expansion of credit leads to the expansion of business activity. But Hawtrey believes that an expansion of credit leads to a boom. This is not correct because the former is not the cause of the latter. As pointed out by Pigou, "Variations in the bank money supply is a part of the business cycle, it is not the cause of it." At the bottom of the depression, credit is easily available. Even then, it fails to bring a revival. Similarly, contraction of credit cannot bring about a depression. At best, it can create conditions for that. Thus expansion or contraction of credit cannot originate either boom or depression in the economy.

(2) Money Supply cannot continue a Boom or Delay a Depression:

Haberler has criticised Hawtrey for "his contention that the reason for the breakdown of the boom is always a monetary one and that prosperity could be prolonged and depression stayed off indefinitely if the money supply were inexhaustible." But the fact is that even if the supply of money is inexhaustible in the country, neither prosperity can be continued indefinitely nor depression can be delayed indefinitely.

(3) Traders do not depend Only on Bank Credit:

Hamberg has criticised Hawtrey for the role assigned to wholesalers in his analysis. The kingpin in Hawtrey's theory is the trader or the wholesaler who gets credit from banks and starts the upturn or vice-versa. In actuality, traders do not depend exclusively on bank credit but they finance business through their own accumulated funds and borrowing from private sources.

(4) Traders do not react to changes in Interest Rates:

Further, Hamberg also does not agree with Hawtrey that traders react to changes in interest rates. According to Hamberg traders are likely to react favourably to a reduction in the interest rate only if they think that the reduction is permanent. But they do not react favourably during the depression phase because traders expect a further reduction every time the interest rate is reduced. On the other hand, if traders finance their stocks with their own funds, interest rate changes will have little effect on their purchases.

(5) Factors other than Interest Rate More Important:

It is an exaggeration to say that the decisions of traders regarding accumulation or depletion of stocks are solely governed by changes in interest rate. As a matter of fact, factors other than the rate of interest are more important in influencing such decisions. They are business expectations, price changes, cost of storage, etc.

(6) Inventory Investments do not Produce True Cycles:

Hamberg further points out that in Hawtrey's theory cumulative movements in economic activity are the result of changes in stocks of goods. But fluctuations in inventory investment can at best produce minor cycles which are not cycles in the true sense of the term.

(7) Does not Explain Periodicity of Cycle:

The theory also fails to explain the periodicity of the cycle.

(8) Ignores Non-Monetary Factors:

Hawtrey's theory is incomplete because it emphasises only monetary factors and totally ignores such non-monetary factors as innovations, capital stock, multiplier-accelerator interaction, etc.

5.8.2. UNCERTAINTY THEORY

An important theory associates profit with risk and uncertainty. According to F.H. Knight, profit is a reward for uncertainty bearing. Even before Knight, F.B. Hawley and A.C. Pigou had pointed out that entrepreneurs earn profits because they have to bear the risks of production. But Knight has greatly developed the theory of profits based on uncertainty. He has distinguished between risk and uncertainty on the one hand and predictable and unpredictable changes on the other. According to him, dynamic changes give rise to profits only if changes and their consequences are of unpredictable character. Only those changes whose occurrence cannot be known beforehand give rise to profits.

Profits, Unpredictable Changes and Uncertainly:

As we have noted above, if there were no changes or if the changes were foreseen and predictable, there would have been no uncertainty about the future and therefore no profits. Profits arise because of the uncertainty of

future. If the future conditions could be completely foreknown in the present, then competition would certainly adjust things to the ideal state where all prices would equal costs and profits would not emerge. Thus it is our ignorance about the future and uncertainty of it that give rise to profits.

In other words, it is the divergence of actual conditions from those which have been expected and on the basis of which business contracts have been made that give rise to uncertainty and profits. Prof. A.K Dass Gupta rightly maintains, "Uncertainty is thus a permanent feature of economic system. It is one of the limitations of human ingenuity that it cannot unearth the contents of the future. Trained instructs of businessmen coupled with statistical information may go a long way, but in so far as the course of nature (both physical and human) is anything but rhythmical, the future would always remain more or less of mystery." He further writes, "so long as entrepreneurs start operations with imperfect knowledge about the state of the market and so long as the anticipated marginal product of the hired factors deviates from their actual product, so long a surplus would persist."

We thus see that entrepreneurs have to undertake the work of production under conditions of uncertainty. In advance they have to make estimates of the future conditions regarding demand for the product and other factors which affect price and costs. In view of their estimates and anticipations, they make contract with the suppliers of factors of production in advance at fixed rates of remuneration.

They realise the value of the output produced by the hired factors after it has been produced and sold in the market. But a good deal of time is spent in the process of producing and selling the product. It follows, therefore, that a good time gap elapses between the contracts made by the entrepreneur with the factors of production at fixed rates and the realisation of sale proceeds from the output made by them. As mentioned before, these contracts are based upon anticipations about the future conditions. But between the times of contracts and sale of the output many changes may take place which may upset anticipations for good or for worse and thereby give rise to the profits, positive and negative.

Now, if the conditions prevailing at the time of sale of output could be known or predicted when the entrepreneurs enter into contractual relationships with the factors of production about their rates of remuneration, there would have been no uncertainty and, therefore, no profits. Thus uncertainty, that is, ignorance about the future conditions of demand and supply, is the cause of profits. It should be noted that positive profits accrue to those entrepreneurs who make correct estimate of the future or whose anticipations prove to be correct. Those whose anticipations prove to be incorrect will have to suffer losses.

We thus see that profit is a residual and non-contractual income which accrues to the entrepreneurs because of the fact of uncertainty. The entrepreneur is un-hired factor; he hires others for work of production. It is, therefore, entrepreneur who bears uncertainty and earns profits as a reward for that. J.F. Weston who has been a prominent exponent and supporter of uncertainty theory of profit explains the emergence of profits in the following way: "Under uncertainly total product may not be equal to total costs (explicit and implicit) because plans are not fulfilled.

How this occurs is briefly indicated. Two classes of owners of productive services are distinguished.

First, those with rates of compensation fixed in advance of the determination of the results of operations are called hired factors and receive contractual returns.

Second, those with rates of compensation dependent upon the results of operation are referred to as un-hired factors who receive non-contractual or residual returns. Whatever the basis upon which contractual relationships have been entered, actual results will not have been accurately foreseen because of uncertainty. Hence whatever the basis upon which contractual commitments have been made events actually do not turn out that way. This is the significance of economic profit. It is not possible to plan in advance exactly what total product or total costs will be."

What Causes Uncertainty?

Now, the question is what changes cause uncertainty. There are two types of changes which take place and are responsible for conditions of uncertainty.

First type of changes refers to innovations (for example, introduction of a new product or a new cheaper method of production etc.) which are introduced by the entrepreneurs themselves.

These innovations not only create uncertainty for the rivals or competitors who are affected by them but they also involve uncertainty for the entrepreneur who introduces them because one cannot be certain whether a particular innovation will be definitely successful.

The second types of changes which cause uncertainty are those which are external to the firms and industries.

These changes are:

(1) Changes in tastes and fashions of the people,

(2) Changes in Government policies and laws especially taxation,

(3) Wage and labour policies and laws,

(4) Movements of prices as a result of inflation and depression,

(5) Changes in income of the people,

(6) Changes in production technology etc. All these changes cause uncertainty and bring profits, positive or negative, into existence.

Insurable and Non-Insurable Risks:

We have seen above that entrepreneurs work under conditions of uncertainty and that they bear uncertainty and earn profits as a reward for that. Here a distinction drawn by F.H. Knight between insurable and non-insurable risk is worth mentioning. Because of the changes that are continuously occurring in the economy entrepreneur has to face many risks. But all risks do not cause uncertainty and give rise to profits. It is only non-insurable risks that involve uncertainty and the entrepreneur earns profits for bearing these non-insurable risks. Now, the question arises as to what kind of risks are insurable and what non-insurable. The entrepreneur faces risks like fire, theft, accident etc. which may cause him huge losses. But these risks of fire, theft, accident etc. can be insured against on the payment of a fixed premium. Insurance premium is included in the cost of production. Thus no uncertainty arises due to insurable risks as far as individual entrepreneurs are concerned and therefore they cannot give rise to profits.

Now, only those risks can be insured the probability of whose occurrence can be calculated. Thus an insurance company knows by its calculation on the basis of past statistics that how much percentage of the factories will catch fire in a year. On the basis of this information, it will fix the rate of premium and is able to insure the factories against the risk. But there are risks which cannot be insured and therefore they have to be borne by the entrepreneurs. These non-insurable risks relate to the outcomes of the price-output decisions taken by the entrepreneurs.

Whether it will pay him to increase output, reduce output and what will be the outcome in terms of profits or losses as a result of his particular output decision. Again, whether it will pay him to lower price or to raise it and when he takes a particular price decision whether he would make profits or losses. Similarly, he has to face risks as a result of his decisions regarding mode of advertisement and outlay to be made on it, product variation etc. For taking all these decisions he has to guess about demand and cost conditions and always there is risk of suffering losses as a result of decisions.

No insurance company can insure the entrepreneurs against commercial losses which may emerge out of decisions regarding price, output, and product variation and also against the losses which may fall upon the entrepreneurs due to the structural, cyclical and other exogenous changes which take place in the economy. It is, therefore, clear that it is non-insurable risks that involve uncertainty and give rise to profits. To quote Knight, "It is 'uncertainty' distinguished from insurable risk that effectively gives rise to the entrepreneurial form of organisation and to the much condemned 'profit' as an income form."

Conclusion:

All the theories of profits explained above have some element of truth. No single theory can adequately explain the existence of profits in all cases. Thus, economic profits can arise as a result of disequilibrium caused by dynamic changes in the economy and frictions in the instantaneous adjustment to the new conditions. They can arise due to the existence of monopoly in the product and factor markets, due to the introduction of innovations by the entrepreneurs, due to higher risk and correctly estimating

the uncertain future and due to higher managerial efficiency and skills. B.S. Keirstead rightly writes, “Profits may come to exist as a result of monopoly or monopsony as a reward for innovation, as a reward for the correct estimate of uncertain factors either particular to the industry or general to the whole economy”.

5.8.3. DYNAMIC THEORY

Prof. J.B. Clark propounded the dynamic theory of profit in the year 1900. To him profit is the difference between the price and the cost of production of the commodity. Profit is the result of progressive change in an organized society. The progressive change is possible only in a dynamic state. According to Clark the whole economic society is divided into organized and unorganized society. The organized society is further divided into static and dynamic state. Only in dynamic state profit arises. In a static state, the five generic changes such as the size of the population, technical knowledge, the amount of capital, method of production of the firms and the size of the industry and the wants of the people do not take place; everything is stagnant and there is no change at all. The element of time is non-existent and there is no uncertainty. The same economic features are repeated year after year.

Therefore there is not risk of any kind to the entrepreneur. The price of the good will be equal to the cost of production. Hence profit does not arise at all. The entrepreneur would get wages for his labour and interest on his capital. If the price of the commodity is higher than the cost of production, competition would reduce the price again to the level of the cost of production so that profit is eliminated. The presence of perfect competition makes the price equal to the cost of production which eliminates the super normal profit. Thus Knight observes, “Since costs and selling prices are always equal, there can be no profit beyond wages for the routine work of supervision”. It is well known that the society has always been dynamic. Several changes are taking place in a dynamic society.

According to Clark five major changes are constantly taking place in a society. They are:

(1) Changes in the size of the population,

(2) Changes in the supply of capital,

(3) Changes in production techniques,

(4) Changes in the forms of industrial organisation, and

(5) Changes in human wants.

These dynamic changes affect the demand and supply of commodities which leads to emergence of profit. Sometimes individual firms may introduce dynamic changes. For example, a firm may improve its production technique, reduce its cost and thereby increase its profit. The typical dynamic change is an invention. This enables the entrepreneur to produce more and reduce costs, leading to emergence of profit.

Criticism:

1. It is wrong to say that there is no profit in static state because every entrepreneur is paid profit irrespective of the state of an economy.

2. This theory does not fully appreciate the nature of the entrepreneurial function. If there are no profits in a static state, it means there is no entrepreneur. But without an entrepreneur it is not possible to imagine how different factors of production would be employed.

3. Mere change in an economy would not give rise to profits if those changes are predictable. It is only the unpredictable, provision can be made for such changes and the expenditure can be included in the cost of production.

4. This theory assumes the existence of perfect competition and static state. But they are far from reality.

5. This theory states that profit arises because of dynamic changes. But Knight says that it is only unforeseen changes that give rise to profit.

6. This theory associates profit for imitating progressive changes in the economy. But in reality profit is paid to entrepreneur for other important functions like risk taking and uncertainty bearing.

7. According to Taussig, “dynamic theory has created unnecessary and artificial distinction between “profits” and wage of management”.

5.8.4. SCHUMPETER INNOVATION THEORY

Joseph Schumpeter considered trade cycles to be the result of innovation activity of the entrepreneurs in a competitive economy. In his view trade cycles are an inherent part of the process of economic growth of a capitalist society. Schumpeter develops his model of the trade cycle as consisting of two stages. The first stage deals with the initial impact of the innovation which entrepreneurs introduce in their production process. The second stage follows as a result of the reactions of competitors to the initial impact of the innovation. Schumpeter starts his analysis by assuming the equilibrium state of the economic system where all the factors of production are fully employed. Every firm is producing efficiently with average costs equal to price. Product prices are equal to both average and marginal costs. Profits in the Schumpelerian sense are zero. There is no net saving and no net investment. Schumpeter calls this equilibrium state of the economy as a "circular flow" of economic activity which just repeats itself period after period like the circulation of blood in the animal organism. The circular flow of economic activity gets disturbed when an entrepreneur successfully carries out an innovation. According to Schumpeter, the primary function of an entrepreneur is innovation activity which yields him real 'profit'. By an innovation he means "such changes in the production of goods as cannot be effected by infinitesimal steps or variations on the margin."

An innovation may consist of:

(1) The introduction of a new product;

(2) Adoption of a new method of production;

(3) The opening up of a new market; food

(4) The conquest of a new source of raw materials or semi-manufactured goods; and

(5) Re-organisation of production processes within a firm. Innovations are the commercial applications of inventions by entrepreneurs.

An entrepreneur is not a man of ordinary ability in that he introduces in his business something which is entirely 'new' to the existing economic system. He is not a capitalist but an organizer who can mobilise the needed cash for introducing his innovation.

The innovator-entrepreneur requires two things to perform his function; one, technical knowledge for the introduction of innovations, and two finance for the completion of his task. In Schumpeter's view, a reservoir of untapped technical knowledge exists in a capitalist society on which he can draw for shaping his innovation. Regarding funds, Schumpeter believes that an entrepreneur can attract bank credit easily.

Introduction of an innovation spells a start for the business cycle. As the innovator-entrepreneur begins bidding away resources from other industries, money incomes increase and prices begin to rise thereby stimulating further investment. As the innovation steps up production, the circular flow in the economy swells up. Supply exceeds demand. The initial equilibrium is disturbed. There is a wave of expansion of economic activity. This is what Schumpeter calls the "primary wave". This primary wave is followed by a "Secondary wave" of expansion. This is due to the impact of the original innovation on the competitors.

As the original innovation proves profitable, other entrepreneurs follow it in "swarm-like clusters." Innovation in one line induces innovations in related lines. Money incomes and prices rise. There is a cumulative expansion of economic activity. Since the purchasing power of consumers increases, the demands for the products of the non-innovating industries also go up and their prices are pushed up. As potential profits in these industries increase, a wave of expansion in the whole economy follows. This is the secondary wave of credit inflation that gets superimposed on the primary wave of expansion. Over optimism and speculation add to the enthusiasm for expansion under boom conditions.

The period of prosperity ends as soon as 'new' products induced by the waves of innovations replace old ones. Since the demand for old products goes down, their prices fall and consequently their producer-firms are forced to contract their output. Some of them may be forced into liquidation. When the innovators begin repaying their bank loan out of the newly-earned profits, the quantity of money in circulation is reduced as a result of which prices tend to fall and profits decline.

In this atmosphere, uncertainty and risks increase. Depression sets in. The impulse for further innovation is sapped up. The painful process of readjustment to the point of "previous neighbour-hood of equilibrium" begins. The economy is on its way downward into depression. The economy cannot continue in depression for long. Innovation-minded entrepreneurs continue their search for profitable innovations. The natural forces of recovery bring about a revival. Schumpeter points out that the deflationary forces generated by depression are gradually offset by certain other forces one of which is the 'dilution or diffusion of effects'. This is the effect of bankruptcies, shut-downs and collapses of individual markets on general economic activity. The impact of these events goes on falling as these occur. Another factor reducing the effect of depression is that the collapse of some firms enables remaining firms to expand their operations to eater to the market fed by the collapsing firms. These offsetting influences have a restorative effect. Further, the decline in aggregate consumption throughout the downswing will be less than that in income which results in the depletion of inventories to the point where there is a need to replenish them.

FEATURES OF INNOVATION THEORY:

1. Circular Flow:

Schumpeter starts his analysis of development process with the concept of circular flow. It implies a condition where economic activity produces itself continuously at constant rate through time. Thus, it means a continuous activity and no destruction. It is the characteristic of an economy in stationary state. The circular flow is similar to circulation in blood in an animal organism. Circular flow is based upon a state of perfect competitive equilibrium in which coasts are equal to receipts and prices to average costs. The Schumpeter, "The circular flow is a stream that is fed from the continually flowing springs of labour power and land and flow in every economic period into the reservoir which we call income, in order to be transformed into satisfaction of wants".

The main features of circular flow are as under:

- All economic activities are essentially repetitive and follow a familiar routine course.

- All the producers know the aggregate demand for goods and adjust the supply of output accordingly. This means demand and supply are in equilibrium at each point of time.
- The economic system has the optimum level of output and its maximum use and there is no possibility of wastage of resources.
- The firms working in a system are in a state of competitive equilibrium.
- Under the stationary equilibrium, the prices are equal to the average cost.

Theory of Economic Development:

The above stated features imply that circular flow is used in a static setting. To make it dynamic and consistent with development, changes must take place in flow system. These changes can be brought through innovations.

Innovations:

Innovation may be defined as a change in existing production system to be introduced by the entrepreneur with a view to make profits and reduce costs. The innovation is closely linked with Schumpeterian concept of development. He defined development as a "Spontaneous and discontinuous change in the channels of flow, disturbance of equilibrium which forever alters and displaces the equilibrium state previously existing". When changes take place in the economy, circular flow is disturbed and the development process starts. He assumed that change is the basic element of dynamic process, and those changes come in the form of innovations.

Any innovation may consist of:

(a) The introduction of a new product

(b) The introduction of a new method of production

(c) The opening up of a new market

(d) The conquest of a new source of supply of raw materials or semi manufactured goods.

(e) The carrying out of the new organisation of any industry like the creation of a monopoly.

The new combinations of these factors are essential for the development process to start. It is to be energised by the development agents and such

agents are innovators or entrepreneurs. The entrepreneur is considered as the hero in the Schumpeterian development.

2. Role of the Entrepreneur:

Entrepreneur or innovator is the key figure in Schumpeter analysis of the process of development. He occupies the central place in the development process because he initiates development in a society and carries it forward. Entrepreneurship is different from managerial activity. A manager simply directs production under existing techniques but entrepreneurship, requires the introduction of something new. An entrepreneur is also different from a capitalist. The capitalist simply furnishes the funds while the entrepreneur directs the use of these funds.

As in economic system, there is high degree of risk, thus entrepreneur is motivated:

(a) The desire to find a private commercial kingdom.

(b) The will to conquer and prove his superiority.

(c) The joy of creating, getting things done or simply of exercising one's energy and ingenuity.

Three things are necessary for the performance of the entrepreneurial function:

(a) Technical know-how should be available to the entrepreneur for introducing new products and new combinations of production factors.

(b) Capital resource can enable the entrepreneurs to have command over factors of production. For this, he needs purchasing power in the form of credit and capital which he can borrow from banks and other financial institutions.

Thus, credit and bank plays a vital role in economic development. Credit enables the entrepreneur to buy producer's goods which he needs for conducting new experiments and innovations. The invention in one field of the economic activity will induce inventions in the related fields. Thus, credit creation becomes an important part of the development model.

Role of Profits:

An entrepreneur innovates to earn profits. Profits are conceived "as a surplus over costs: a difference between the total receipts and outlay, as a

function of innovation". Profits arise due to dynamic changes resulting from an innovation. They continue to exist till the innovation becomes general.

Breaking the Circular Flow:

Schumpeter regards economic development as a dynamic and discontinuous process. The society progresses through trade cycles. In order to break the circular flow, the innovating entrepreneurs are financed by bank credit expansion. Since investment in innovation is risky, they must be paid bank interest on it. Once the innovations becomes successful and profitable, other entrepreneurs follow it in "swarm like clusters". Innovations in one field may induce other innovations in related fields. For example, the emergence of a motor car industry, may in turn, stimulated a wave of new investments in the construction of highways, rubber tyres and petroleum products etc. But the spread is never cent percent.

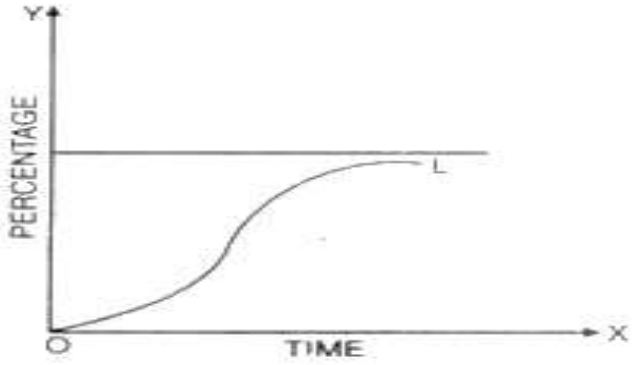

Fig.5.6.

The spread of innovation can be explained with the help of a figure. 5.6 Where percentage of firm is taken along Y-axis and time is along X-axis. The curve OL represents that firms adopt an innovation slowly to start but soon the adoption of innovation gains momentum but it never reaches 100 percent adoption by firms.

3. Business Cycle or Cyclical Process:

The next component of development according to Schumpeter is the business cycle. Schumpeter's approach to business cycle or crisis is historical, statistical and analytical. He believes that business cycle or crisis is not merely the result of economic factors but also of non-economic factors. Schumpeter concludes that crisis is the "process by which economic life adapts itself to the new economic conditions". After explaining Schumpeter's

approach to business cycle or crisis, we shall now proceed to discuss the working of business cycle. How booms and depression appear and collapse? Bank credit is an essential element of Schumpeter's model. According to Schumpeter, the creation of bank credit is assumed to accelerate money incomes and prices in the economy.

It creates a cumulative expansion throughout the economy. With the increase in the purchasing power of the consumers, the demand for the products increases in relation to supply. The rising prices and the high rates of profits stimulate producers to raise investments by borrowing from the banks. The credit inflation starts with the entrance of new entrepreneurs in the field of production, which superimposes on the primary wave of innovations. This may be called boom or prosperity period. In this stage, the economic activities reach their maximum heights and the idle or unemployed resources are minimised. During the boom period, the new products start appearing in the market with the entrance of new entrepreneurs. These products displace the old ones and thus decrease their demand in the market. Consequently, the prices of old products fall. With a view to liquidating their stocks, the old firms start selling their goods at a low price and hence most of the firms incur losses and some firms are even forced to run into loss.

Investment declines and unemployment starts, leading to a fall in the aggregate demand. As the entrepreneurs start repaying bank loans, the quantity of money in circulation is reduced and prices start falling. Profits too decline and come to zero point. Uncertainty and risk increase. A wave of pessimism sweeps the entire economy and the boom period ends with the appearance of the phase of depression. Schumpeter believes in the existence of the long wave of upswings (or boom) and downswings (or depression). Once the upswing ends, the long wave of downswing begins and the painful process of readjustment to the "point of previous neighbourhood of equilibrium" starts.

The economic forces of recovery come into operation and ultimately bring about a revival. Once again the economy comes across the equilibrium, and the new boom period starts with a new set of innovations. This process of capitalist development may be regarded as "creative destruction" wherein the

old economic structures of society after destruction are ultimately replaced by the new economic structures.

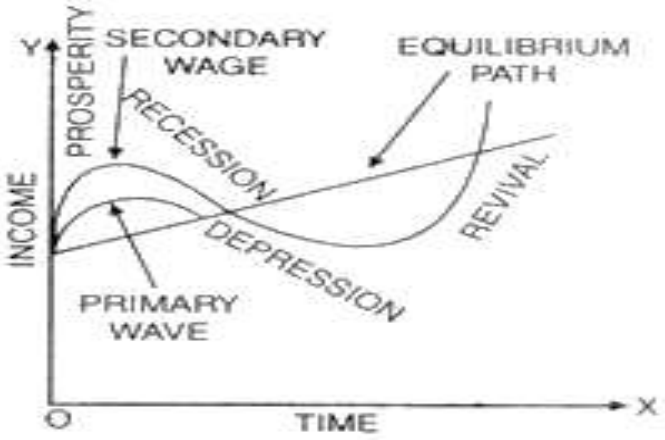

Fig.5.7.

Schumpeter's cyclical process of economic development has been illustrated in the above diagram where the secondary wave is superimposed on the primary wave of innovation. In the prosperity period, as the above figure reveals, the economic development proceeds more rapidly due to over optimism and speculation. The business cycle continues to fall below the level of equilibrium with the beginning of the recession and ultimately reaches the point of depression. In the end, the retake of economic activities leads to revival of the economy. In the Schumpeterian analysis of development entrepreneurs have to play the central role in business cycles. They initiate the economic development in the spontaneous and discontinuous manner. The cyclical swings are the cost of economic development under capitalism.

4. The Decay of Capitalism:

The continuous technical progress results in an unbounded increase in total and per capita output. As long as technological progress takes place, the rate of profit is positive. Hence, there can be no drying up of sources of investible funds nor any vanishing of investment opportunities. "There is, therefore, no prior ceiling to the level of per capita income in a capitalist society. Nevertheless, the economic success of capitalism will eventually lead to its decay". The very success of capitalism undermines the social institutions which protect it and inevitably creates conditions in which it will not be able to live and which strongly point to socialism as the heir apparent.

Capitalism can maintain itself only so long as entrepreneurs behave like knights and pioneers.

Due to its drawbacks, capitalism disintegrates and yields place to socialism, Schumpeter gives the following reasons for the disintegration of capitalism:

(a) The Obsolescence of Entrepreneurial Function:

Prof. Schumpeter observes that the success of early captains of industry have made innovation a routine activity. It tends to degenerate into a dis-personalised, routine activity carried on in a big business through highly trained managers. The new lords of business are managers, depersonalised owners and private bureaucrats. This reduces the industrial bourgeois to a class of wage earners and 'thus' undermines the function and the position of the entrepreneur as the "warrior knight".

(b) Destruction of Institutional Frame Work:

Another factor responsible for weakening the foundations of capitalism is the destruction of its institutional frame work. The entrepreneur by his own success tends to destroy not only his economic and social functions but also the institutional framework within which he works. The tendency towards concentration and increase in the size of production units destroy capitalistic institutions like private property and freedom of contract. In case of big concerns, the proprietors are small and large shareholders who are dematerialised and de-functionalised by professional and salaried managers and thus, the proprietary interest is replaced by large and small stock holders.

(c) Destruction of Protecting Political Strata:

The destruction of protecting political strata will administer the last blow to capitalist system. With the progress of capitalism, not only the functions of the entrepreneur and the institutional frame work of capitalism crumble but the group that protected early capitalism politically is also destroyed.

The very success of capitalism is destroyed by the royal power. The progress of capitalism makes industrialists and merchants economically powerful and they begin to dominate in political field.

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