UNIT-III

Meaning of Cost : An amount that has to be paid or given in order to produce something is known as money cost.

Money cost consists of three terms; explicit cost, implicit cost and normal profit.

Explicit costs- are those expenses/expenditures that are actually paid by the firm. These costs are recorded in the books of accounts. Explicit costs are important for calculating the profit and loss accounts and guide in economic decision-making. Explicit costs are also called as "Paid out costs"

Example: Interest payment on borrowed funds, rent payment, wages, utility expenses etc.

Implicit Costs-. They are also called as the earnings of those employed resources which belong to the owner himself. Implicit costs are also called as "Imputed costs". Examples: Rent on the land owned by entrepreneur own self, interest on that capital invested by entrepreneur own self.

Normal profit- is that necessary amount which should be gained by an entrepreneur to stay in the business.

Types of costs

A) Actual Cost: Actual cost is defined as the cost or expenditure which a firm incurs for producing or acquiring a good or service. The actual costs or expenditures are recorded in the books of accounts of a business unit. Actual costs are also called as "Outlay Costs" or "Absolute Costs" or "Acquisition Costs". **Examples:** Cost of raw materials, Wage Bill etc.

(B) Opportunity Cost: Opportunity cost is concerned with the cost of forgone opportunities/alternatives. In other words, it is the return from the second best use of the firms' resources which the firms forgoes in order to avail of the return from the best use of the resources. It can also be said as the comparison between the policy that was chosen and the policy that was rejected. The concept of opportunity cost focuses on the net revenue that could be generated in the next best use of a scare input. Opportunity cost is also called as "Alternative Cost".

(C) Sunk Cost: Sunk costs are those do not alter by varying the nature or level of business activity. Sunk costs are generally not taken into consideration in decision - making as they do not vary with the changes in the future. Sunk costs are a part of the outlay/actual costs. Sunk costs are also called as "Non-Avoidable costs" or "Inescapable costs". **Examples:** All the past costs are considered as sunk costs. The best example is amortization of past expenses, like depreciation.

(D) Incremental Cost: Incremental costs are addition to costs resulting from a change in the nature of level of business activity. Example: Increase in production cost due to increase production level.

(E) Explicit Cost: Explicit costs are those expenses/expenditures that are actually paid by the firm. These costs are recorded in the books of accounts. Explicit costs are important for

calculating the profit and loss accounts and guide in economic decision-making. Explicit costs are also called as "Paid out costs"
Example: Interest payment on borrowed funds, rent payment, wages, utility expenses etc.

(F)Implicit Cost: Implicit costs are those expenses incurred on the resources owned by entrepreneur. They are not recognised by the accounting system and are not recorded in the books of accounts but are very important in certain decisions. They are also called as the earnings of those employed resources which belong to the owner himself. Implicit costs are also called as "Imputed costs".
Examples: Rent on the land owned by entrepreneur, interest on equity capital etc.

(G)Accounting Costs: Accounting costs are the actual or outlay costs that point out the amount of expenditure that has already been incurred on a particular process or on production as such accounting costs facilitate for managing the taxation need and profitability of the firm. Accounting cost includes only explicit cost as these costs are written in the books.

(H) Economic Costs: Economic costs play a vital role in business decisions as the costs considered in decision - making are usually future costs. Economic cost includes both types of costs implicit as well as explicit cost.

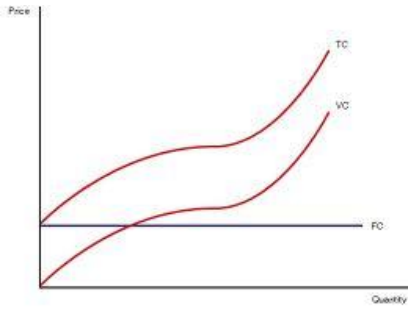
(I) Direct Cost: Direct costs are those which have direct relationship with a unit of operation like manufacturing a product, organizing a process or an activity etc. In other words, direct costs are those which are directly and definitely identifiable. The nature of the direct costs is related with a particular product/process, they vary with variations in them. Therefore all direct costs are variable in nature. It is also called as "Traceable Costs"
Examples: In operating railway services, the costs of wagons, coaches and engines are direct costs.

(J) Indirect Costs: Indirect costs are those which cannot be easily and definitely identifiable in relation to a plant, a product, a process or a department. Like the direct costs indirect costs, do not vary i.e., they may or may not be variable in nature. However, the nature of indirect costs depends upon the costing under consideration. Indirect costs are both the fixed and the variable type as they may or may not vary as a result of the proposed changes in the production process etc. Indirect costs are also called as Non-traceable costs. Example: The cost of factory building, the track of a railway system etc., are fixed indirect costs and the costs of machinery, labour etc.

Fixed Costs (FC). The costs which don't vary with changing output. Fixed costs might include the cost of building a factory, insurance and legal bills. Even if your output changes or you don't produce anything, your fixed cost stays the same.
Variable Costs (VC). Costs which depend on the output produced. For example, if you produce more cars, you have to use more raw materials such as metal. This is a variable cost.
Total cost = Total fixed cost + Total variable cost
Average cost - Average cost or unit cost is equal to total cost divided by the number of goods produced. AC = TC/ Q
Marginal Costs – Marginal cost is the cost of producing an extra unit. If the total cost of 3 units is 1550, and the total cost of 4 units is 1900. The marginal cost of the 4th unit is 350.

$$\mathbf{MC = TCn - TCn_{-1}}$$

Output	TFC	TVC	TC	AFC	AVC	ATC	MC
0	1000	0	1000	-	-	-	-
100	1000	300	1300	10.0	3.0	13.0	3.0
240	1000	640	1640	4.2	2.6	6.8	2.4
390	1000	990	1990	2.6	2.5	5.1	2.3
500	1000	1300	2300	2.0	2.6	4.6	2.8



Relationship between AC and MC:

There exists a close relationship between AC and MC.

1) Both AC and MC are derived from total cost (TC). AC refers to TC per unit of output and MC refers to addition to TC when one more unit of output is produced.
2) Both AC and MC curves are U-shaped due to the Law of Variable Proportions. The relationship between the two can be better illustrated through following schedule and diagram.

Output (units)	**TC (Rs.)**	**AC(Rs.)**	**MC (Rs.)**	**Phase**
1	12	12	-	I
2	22	11	4	
3	27	9	5	
4	36	9	9	I
5	47	9.40	11	I

With the help of Table 6.8 and

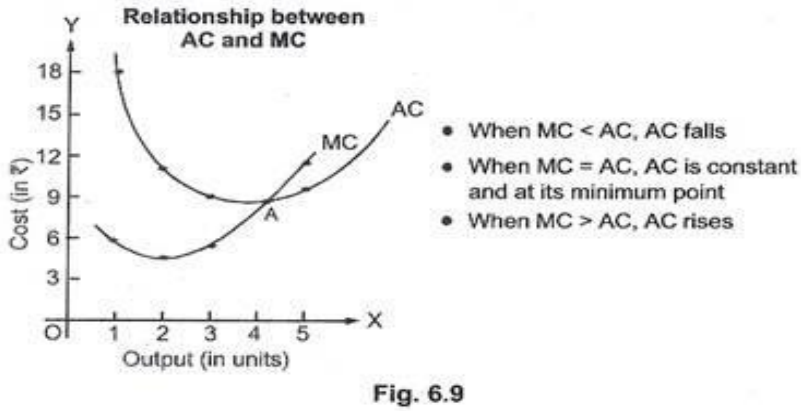


Fig. 6.9

Fig. 6.9, the relationship can be summarized as under:

1. When AC falls with increase in the output, MC is less than AC, i.e. till 3 units of output.
2. When MC is equal to AC, i.e. when MC and AC curves intersect each other at point A, AC is constant and at its minimum point.
3. When AC rises with increase in output, MC is more than AC, i.e. from 5 units of output.
4. Thereafter, both AC and MC rise, but MC increases at a faster rate as compared to AC. As a result, MC curve is steeper as compared to AC curve.

SHORT AND LONG RUN COST

Short Run Average Cost Curve: In short run firms don't as much time that all factors of production can be changed so the change only takes place in the variable factors such as raw material, labour, etc. thus in short run cost can be divided into two categories- variable costs and fixed costs. As the fixed cost gets distributed over the output as production is expanded, the average fixed cost, therefore, begins to fall. When a firm fully utilizes its scale of operation (Plant size), the average cost is then at its minimum. The firm is then operating to its optimum capacity. If a firm in the short-run increases its level of output with the same fixed plant; the economies of that scale of production change into diseconomies and the average cost then begins to rise sharply.

Long Run Average Cost Curve: In the long-run, all costs of a firm are variable. The factors of production can be used in varying proportions to deal with an increased output. The firm having time period long enough can build larger scale or type of plant to produce the anticipated output. The shape of the long-run average cost curve is also U-shaped but is flatter that the short-run curve as is illustrated in the following diagram:

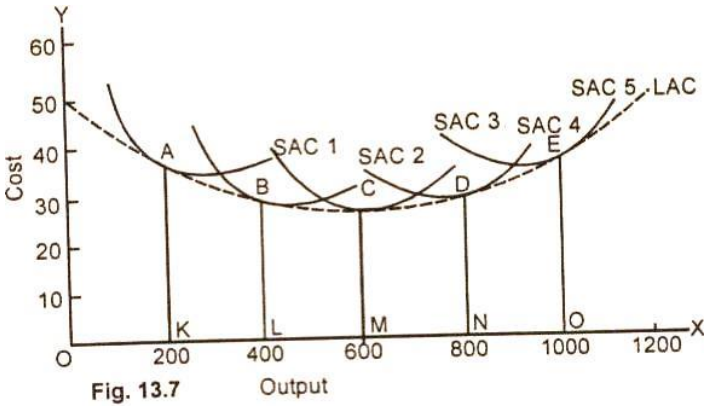


Fig. 13.7

In the diagram 13.7 given above, there are five alternative scales of plant SAC', SAC^2, SAC^3, SAC^4 and. SAC^5. *In* the long-run, the firm will operate the scale of plant which is most profitable to it. For example, if the anticipated rate of output is 200 units per unit of time, the firm will choose the smallest plant It will build the scale of plant given by SAC' and operate it at point A. This is because of the fact that at the output of 200 units, the cost per unit is lowest with the plant size 1 which is the smallest of all the four plants. In case, the volume of sales expands to 400 units, the size of the plant will be increased and the desired output will be attained by the scale of plant represented by SAC^2 at point B, If the anticipated output rate is 600 units, the firm will build the size of plant given by SAC^3 and operate it at point C where the average cost is Rs. 26 and also the lowest The optimum output of the firm is obtained at point C on the medium size plant SAC^3. If the anticipated output rate is 1000 per unit of time the firm would build the scale of plant given by SAC^5 and operate it at point E. If we draw a tangent to each of the short run cost curves, we get the long average cost (LAC) curve. The LAC is U-shaped but is flatter than tile short run cost curves. Mathematically expressed, the long-run average cost curve is the envelope of the SAC curves.

In this figure, the long-run average cost curve of the firm is lowest at point C. CM is the minimum cost at which optimum output OM. can be obtained.

We have drawn the long-run average cost curve as having an approximately U-shape. It is generally believed by economists that the long-run average cost curve is normally U shaped,

that is, the long-run average cost curve first declines as output is increased and then beyond a certain point it rises.

Why is cost curve U-shaped?

Short run average cost curve is U shaped because of the application of law of variable proportions. But the shape of the long-run average cost curve depends upon the returns to scale. Since in the long run all inputs including the capital equipment can be altered, the relevant concept governing the shape of this long-run average cost curve is that of returns to scale.

Returns to scale increase with the initial increases in output and after remaining constant for a while, the returns to scale decrease. It is because of the increasing returns to scale in the beginning that the long-run average cost of production falls as output is increased and, likewise, it is because of the decreasing returns to scale that the long-run average cost of production rises beyond a certain point.

Production Analysis

Production is the transformation of inputs into output. Thus the production is creation of utility. A business firm carries its production process with the employment of various factors of production.

MEANING AND DEFINITION OF PRODUCTION FUNCTION:

The physical relationship between inputs and output is production function. Production function is an engineering concept, but it is widely used in business economics for studying production behavior. The production function tells us with given technology what will be resultant output with different combination of inputs.

It is a mathematical expression which relates the quantity of factor inputs to the quantity of outputs that result. There are **three measures** of production / productivity.

Total product is simply the total output that is generated from the factors of production employed by a business.
Average product is the total output divided by the number of units of the variable factor of production employed.
Marginal product is the change in total product when an additional unit of the variable factor of production is employed.

According to **Professor J.M. Joshi**, "The term production function refers to the physical relationship between a firm's inputs of resources and its output of goods and services per unit of time, leaving prices aside."

Algebraic Statement of Production Function

In a mathematical formula production function can be expressed as given below:
Q = f (Ld, L, K, M, T……)

Where

Q = output in physical units of good X

Ld = land units employed in the production of Q L = labour units employed in the production of Q K = capital units employed in the production of Q

M = managerial units employed in the production of Q T = technology employed in production of Q
f = function

Assumption of Production Function

The production function is based on certain assumptions as given under:

- Function gives the maximum possible output that can be produced from a given amount of various inputs.
- Minimum quantity of inputs necessary to produce a given level of output.
- All the output and input variable and input variables are in their corresponding physical quantities and not in their value (rupee) terms.
- It is related with the given period of time.
- During short period production function is based on one fixed factor of production while other factors of production are variable.
- During long period production function has all the factors of production as variable and even the scale of production can be changed.
- Different factors of production are divisible into small units.
- Production function is based on the assumption that the state of technology is given.
- It is assumed that an individual firm adopts the best possible techniques of production.

Types of Production Function

There are two types of production function:

- Short run production function (**Laws of variable proportions)**
- Long run production function. (**Laws of Returns to Scale)**

LAWS OF VARIABLE PROPORTIONS:

Production of a commodity is the result of combined efforts of various factors of production. These factors of production can be classified as fixed and variable factors. To increase the quantity of production, quantity of the factors of production will have to be increased. But the increase in production in response to a given increase in factor of production is not always same. Such behavior of production is explained by Laws of Returns or law of variable proportions.

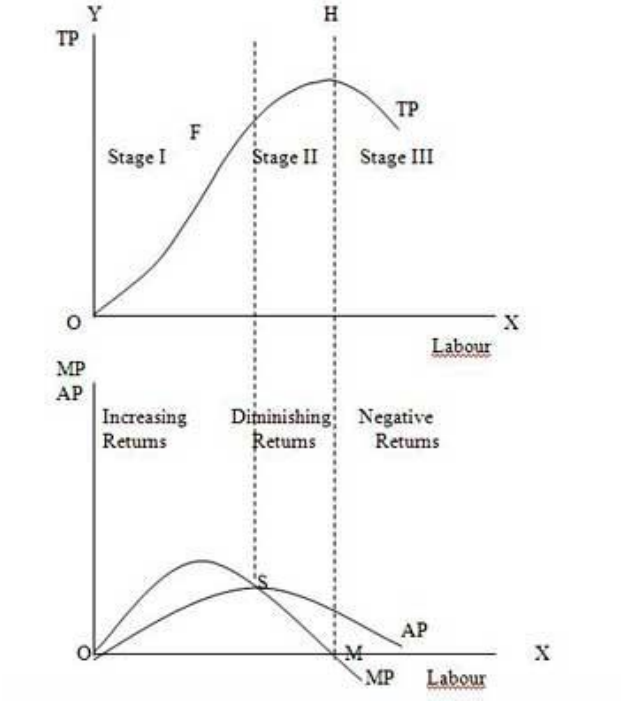
Assumptions of the Law:

(i) The state of technology is assumed be given and unchanged.
(ii) The law specially operates in the short run because some factors are fixed and the proportion between factors is disturbed.
(iii) Variable factor units are homogeneous or identical in amount and quality.
(Iv) The law is based on the possibility of varying the proportions in which the various factors can be combined to produce a product.
Three Stages of the Law of Variable Proportions: These stages are illustrated in the following figure where labour is measured on the X-axis and output on the Y-axis.

Stage 1. Stage of Increasing Returns: When increase in output is in greater proportion than increase in input, it is known as law of increasing returns. In other words, when proportionate change in production is more than the proportionate change in the quantity of variable factors of production by keeping the fixed factors constant, it is called the law of increasing returns.

Stage 2. Stage of Diminishing Returns: In this stage, total product continues to increase but at a diminishing rate until it reaches its maximum point H where the second stage ends. In this stage both the marginal product and average product of labour are diminishing but are positive. This is because the fixed factor becomes inadequate relative to the quantity of the variable factor. At the end of the second stage, i.e., at point M marginal product of labour is zero which corresponds to the maximum point H of the total product curve TP. This stage is important because the firm will seek to produce in this range.

Stage 3. Stage of Negative Returns: In stage 3, total product declines and therefore the TP curve slopes downward. As a result, marginal product of labour is negative and the MP curve falls below the X-axis. In this stage the variable factor (labour) is too much relative to the fixed factor.



To illustrate the working of this law, let us take a hypothetical production schedule of a firm:

Production Schedule

Units of Variable Input (Labour) (n)	*Total Product (TP)*	*Average Product (AP)*	*Marginal Product (MP)*	
1	20	20	20	
2	50	25	30	**Stage I**
3	90	30	40	
4	120	30	30	
5	135	27	15	
6	144	24	9	**Stage II**
7	147	21	3	
8	148	18.5	1	
9	148	16.4	0	
10	145	14.5	-3	**Stage III**

It is assumed that the amount of fixed factors, land and capital, is given and held constant throughout. To this, labour – the variable factor – is added unit-wise in order to increase the production of commodity X. The rate of technology remains unchanged.

THE LAWS OF RETURN TO SCALE:

Economists use the phrase "returns to scale" to describe the output behaviour in the long run in relation to the variations in factor inputs.

The law of return to scale is long run concept. In the long run volume if production can be changed by changing all factor of production. It shows the behaviour of output when all factor are altered in the same proportion.

In the short run, thus, we have returns to variable factors. In the long run, we have returns to scale. The long run production function implies that all components of inputs (*Ld, L, K, M, T*) are varied to increase production.

Assumptions

The law follow certain assumptions;

(1) Technology of production is unchanged.
(2) All units of factors are homogeneous.
(3) Returns are measured in physical term.
(4) Return to scale is related to long period.
(5) Prices of factors of production are assumed to remain constant.

STAGES OF LAW OF RETURN TO SCALE:

1. **Increasing returns** to scale occur when the % change in output > % change in inputs
2. **Decreasing returns** to scale occur when the % change in output < % change in inputs
3. **Constant returns** to scale occur when the % change in output = % change in inputs

1. Increasing Returns to Scale: This situation occurs if a percentage increases in all inputs results in a greater percentage change in output. For e.g. a 10 % increase in all inputs causes a 20% increase in output.

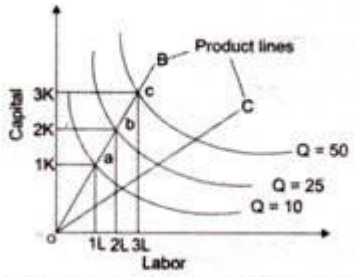


Figure-13: Increasing Returns to Scale

In Figure-13, a movement from a to b indicates that the amount of input is doubled. Now, the combination of inputs has reached to 2K+2L from 1K+1L. However, the output has Increased from 10 to 25 (150% increase), which is more than double. Similarly, when input changes from 2K-H2L to 3K + 3L, then output changes from 25 to 50(100% increase), which is greater than change in input. This shows increasing returns to scale.

CAUSES OF INCREASING RETURNS TO SCALE

- **Technical and managerial indivisibility:** Implies that there are certain inputs, such as machines and human resource, used for the production process are available in a fixed amount. These inputs cannot be divided to suit different level of production. For example, an organization cannot use the half of the turbine for small scale of production.
  Similarly, the organization cannot use half of a manager to achieve small scale of production. Due to this technical and managerial indivisibility, an organization needs to employ the minimum quantity of machines and managers even in case the level of production is much less than their capacity of producing output. Therefore, when there is increase in inputs, there is exponential increase in the level of output.

- **Greater Specialization**: As the scale of production increases, the efficiency of labour increases due to division of labour and specialization of labour. Similarly, when the scale of production increases, it becomes possible to use specilaised machines and the services of specialized and expert management. This results in productivity of inputs leading to increasing returns to scale.
- **Concept of Dimensions**: Refers to the relation of increasing returns to scale to the concept of dimensions. According to the concept of dimensions, if the length and breadth of a room increases, then its area gets more than doubled.

For example, length of a room increases from 15 to 30 and breadth increases from 10 to 20. This implies that length and breadth of room get doubled. In such a case, the area of room increases from 150 (15*10) to 600 (30*20), which is more than doubled.

Constant Returns to Scale: Constant returns to scale refers to the production situation in which output increases exactly in the same proportion in which factors of production are increased.

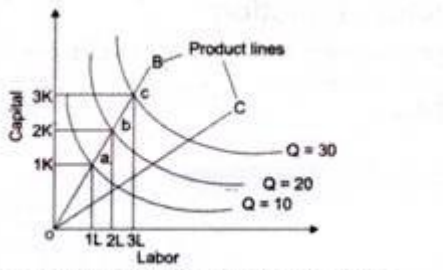


Figure-14: Constant Returns to Scale

- In Figure-14, when there is a movement from a to b, it indicates that input is doubled. Now, when the combination of inputs has reached to 2K+2L from IK+IL, then the output has increased from 10 to 20.

- Similarly, when input changes from 2Kt2L to 3K + 3L, then output changes from 20 to 30, which is equal to the change in input. This shows constant returns to scale. In constant returns to scale, inputs are divisible and production function is homogeneous.

CAUSES OF CONSTANT RETURNS TO SCALE

- **Limits of Economies of scale:** Increasing returns to Scale cannot go on indefinitely. There is a limit to these economies of scale When the economies of scale are exhausted and diseconomies are yet to start, there may be a briefs phase of constant returns to scale.
- **Economies of Scale:** It refers to the situation which increases in the scale of production give rise to certain benefits to the producers.

- **Divisibility of Inputs:** Constant returns to scale may occur in certain productive activities where the factors of production are perfectly divisible. For example, we may double the output by setting up two plants (factories) which use the same quantity and the same type of workers, machinary, raw materials and other inputs.

Diminishing Returns to Scale: It occurs if a given percentage increase in all inputs results in a smaller percentage increase in output.

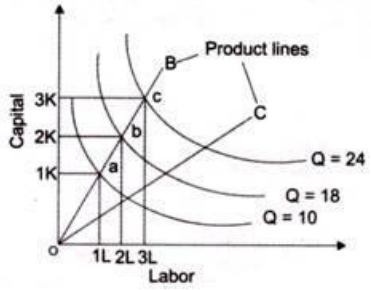


Figure-15: Diminishing Returns to Scale

In Figure-15, when the combination of labor and capital moves from point a to point b, it indicates that input is doubled. At point a, the combination of input is 1k+1L and at point b, the combination becomes 2K+2L.

However, the output has increased from 10 to 18, which is less than change in the amount of input. Similarly, when input changes from 2K+2L to 3K + 3L, then output changes from 18 to 24, which is less than change in input. This shows the diminishing returns to scale.

CAUSES OF DECREASING RETURNS TO SCALE.

- **Complexity of management:** Increase in the scale of production on beyond a point may create the problem of proper management, leading to a decrease in managerial efficiency. Large scale of production creates the problem of lack of proper, larger bureaucracy, red tapism, lengthy Chain of Communication and command between the top management and men on the production line. As a consequence of all these, the overall efficiency of management decreases.
- **Entrepreneur is a fixed factor:** According to some economist decreasing returns to scale arise because entrepreneur is a fixed and indivisible factor. An increase in scale may come to a point where the abilities and Skills of the entrepreneur may be fully utilised. An increase in the scale beyond this point may decrease the efficiency of the entrepreneur. This gives rise to diseconomies of scale.
- **Exhaustibility of Natural Resources:** Another factor responsible for the diminishing returns in some activities is the limitation of natural sources. For example, if we double the fishing fleet, the number of fish Catch will not double because the availability of fish may decrease when fishing is carried out on an increasing scale.

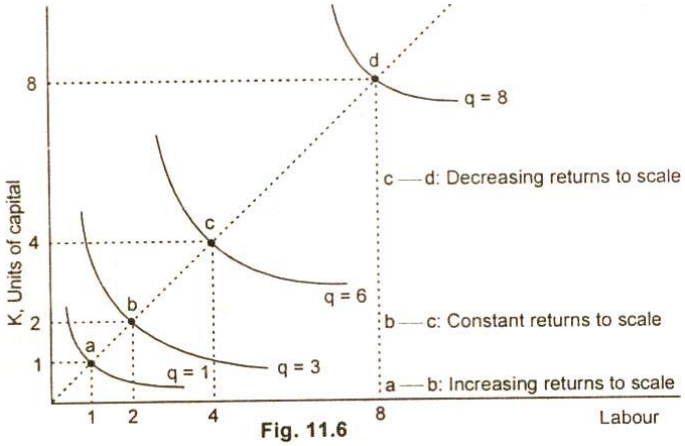


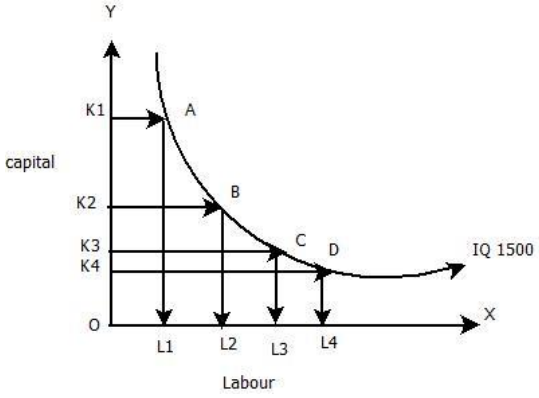
Fig. 11.6

ISOQUANT CURVE/ ISO PRODUCT CURVE

An isoquant represents all those combinations of inputs, which are capable of producing same level of output. Isoquants are also called equal-product or iso-product curves.

Various combinations of X and Y to produce a given level of output, say 100 units.

Factor Combination	Factor (X)	Factor (Y)
A	1	12
B	2	8
C	3	5
D	4	3
E	5	2



ECONOMIES OF SCALE: INTERNAL AND EXTERNAL

When a company follows large scale production by increasing the production with the use of more capital and technology at the same time lowering the costs, it will gain certain advantages. These advantages which are gained by the companies are called as "Economies of Scale".

INTERNAL ECONOMIES: Internal Economies are the economies which are related to the particular firm. The internal economies which are attained by the firm are again classified into different types based on their functions. They are as follows:

1. Technical Economies: Technical economies have their influence on the size of the firm. Generally, these economies accrue to large firms which enjoy higher efficiency from capital goods or machinery. Bigger firms having more resources at their disposal are able to install the most suitable machinery.

2. Marketing Economies: When the scale of production of a firm is increased, it enjoys numerous selling or marketing economies. In the marketing economies, we include advertisement economies, opening up of show rooms, appointment of sole distributors etc. Moreover, a large firm can conduct its own research to effect improvement in the quality of the product and to reduce the cost of production. The other economies of scale are advertising economies, economies from special arrangements with exclusive dealers. The large-scale firms advertise their products on large scales and they are offered advertising facilities at lower prices by advertising firms and newspapers. In this way, all these acts lead to economies of large scale production.

3. Labour Economies: As the scale of production is expanded their accrue many labour economies, like new inventions, specialization, time saving production etc. A large firm employs large number of workers. Each worker is given the kind of job he is fit for. The personnel .officer evaluates the working efficiency of the labour if possible. Workers are skilled in their operations which save production, time and simultaneously encourage new ideas.

4. Managerial Economies: Managerial economies refer to production in managerial costs and proper management of large scale firm. Under this, work is divided and subdivided into different departments. Each department is headed by an expert who keeps a vigil on the minute details of his department. A small firm cannot afford this specialisation. Experts are able to reduce the costs of production under their supervision. These also arise due to specialization of management and mechanisation of managerial functions.

5. Economies of Transport and Storage: A firm producing on large scale enjoys the economies of transport and storage. A big firm can have its own means of transportation to carry finished as well as raw material from one place to another. On the other hand the large-scale firms are also offered concessional transportation facilities by the transport companies because of the large-scale transportation handling. Moreover, big firms also enjoy the economies of storage facilities. The big firm also has its own storage and go down facilities. Therefore, these firms can store their products when prices are unfavourable in the market.

6. Purchasing Economies: The firms producing output on a large scale purchase raw material in bulk quantity. As a result of this, the firms get a special discount from suppliers. This is a monetary gain to the firms.

EXTERNAL ECONOMIES:

External economies refer to all those benefits which accrue to all the firms operating in a given industry. Generally, these economies accrue due to the expansion of industry and other facilities expanded by the Government.

1. Economies of Concentration: Economies of concentration occur when many firms are situated in the same place. The concentration of industries leads to the development of transport facilities, financial institutions, financial facilities, subsidiary companies at the place where the firms are located. This will help the firms to grow more and work efficiently. We can, therefore, conclude that concentration of industries lead to economies of concentration.

2. Economies of Information: When the number of firms in an industry expands they become mutually dependent on each other. In other words, they do not feel the need of independent research on individual basis. Many scientific and trade journals are published. These journals provide information to all the firms which relates to new markets, sources of raw materials, latest techniques of production etc.

3. Economies of Specialization: Economies of Specialization occurs when the number of firms in the same industry is more. For example: If the textile industry is developed at one place, then it is possible for the companies to introduce a specialization in the production process. In this case, some firms may specialize in the production of cotton variety, some other firms may specialize in silk, jeans, etc because of this specialization of firms, the quality of the products will increase.

4. Credit Economies: The large-scale firms are offered loans by the banks at a low interest rate and other favourable terms.

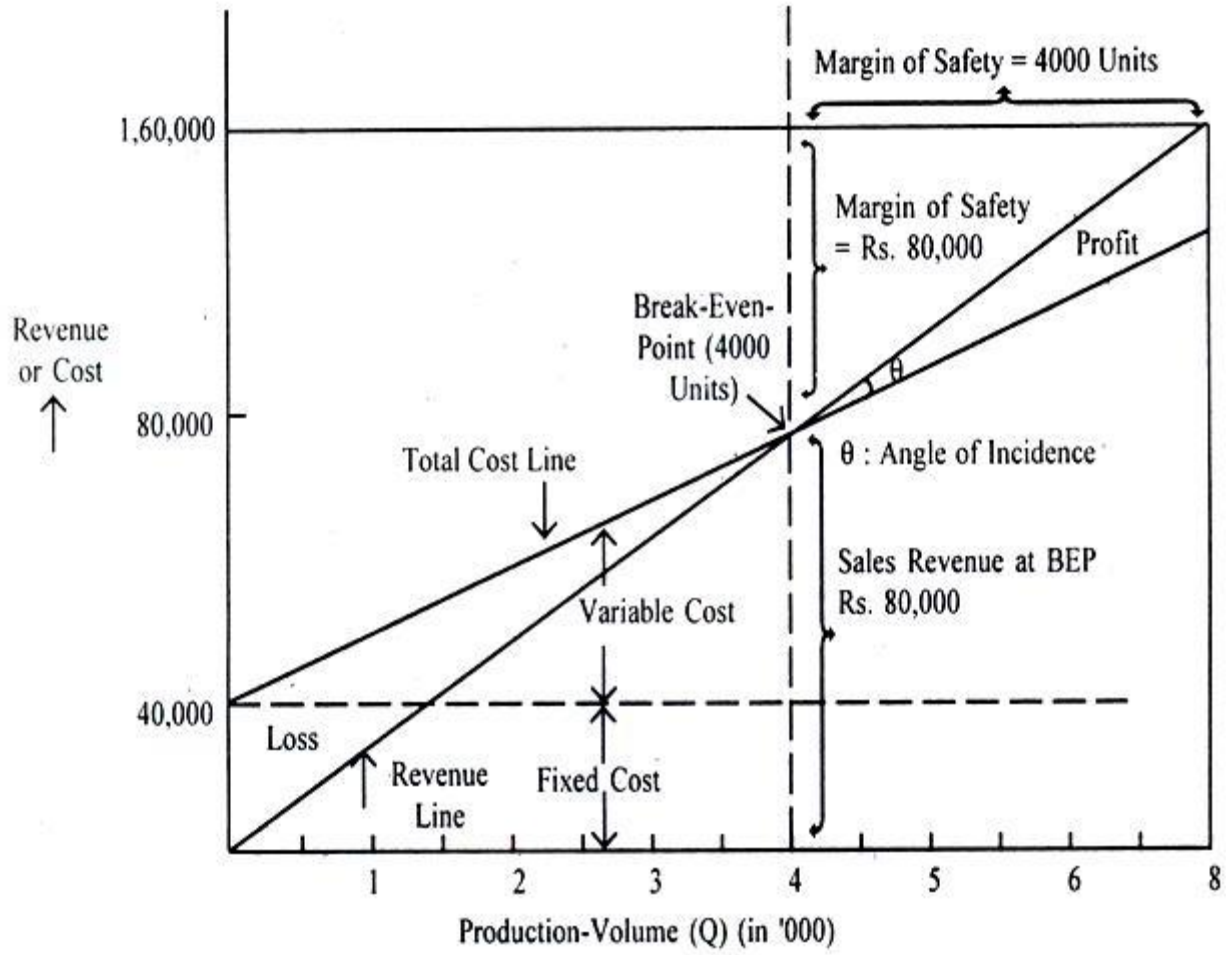
BREAK EVEN ANALYSIS

Meaning: The **break-even point** (BEP) is the point at which total cost and total revenue are equal: there is no net loss or gain, and one has "broken even." The break-even level or break-even point (BEP) represents the sales amount—in either unit or revenue terms—that is required to cover total costs (both fixed and variable). Total profit at the break-even point is zero. Break-even is only possible if a firm's prices are higher than its variable costs per unit. If so, then each unit of the product sold will generate some "contribution" toward covering fixed costs.[1]

$$\text{Break-even(in Sales)} = \frac{\text{Fixed Costs}}{\text{C/P}}.$$

Where C is contribution = Sales – Variable costs

Graphical representation :



Margin of safety (MOS): *Margin of safety* is used in break-even analysis to indicate the amount of sales that are above the break-even point. In other words, the *margin of safety* indicates the amount by which a company's sales could decrease before the company will become unprofitable.

Angle of Incidence: Angle of incidence (0) is the angle between the total cost line and the total sales line. If the angle is large, the firm is said to make profits at a high rate and vice-versa.

Limitations of Break even analysis:

- Break-even analysis is only a supply-side (i.e., costs only) analysis, as it tells you nothing about what sales are actually likely to be for the product at these various prices.
- It assumes that fixed costs (FC) are constant. Although this is true in the short run, an increase in the scale of production is likely to cause fixed costs to rise.
- It assumes average variable costs are constant per unit of output, at least in the range of likely quantities of sales. (i.e., linearity).
- It assumes that the quantity of goods produced is equal to the quantity of goods sold (i.e., there is no change in the quantity of goods held in inventory at the beginning of the period and the quantity of goods held in inventory at the end of the period).