

- (1) According to **MC Nair and Meriam** "Business economics consists of the use of economic modes of thought to analyse business situations".
- (2) In the words of **Spencer and Siegelman** "Business economics is the integration of economic theory with business practice for the purpose of facilitating decision - making and forward planning by the management".
- (3) According to **Mansfield** "Business economics is concerned with the application of economic concepts and economic analysis to the problems of formulating rational managerial decision".
- (4) **Brigham and Pappas** define business economics "as the application of economic theory and methodology to business administration practice".
- (5) According to **Hailstones and Rothwell**, "Business economics is the application of economic theory and analysis to practices of business firms and other institutions, such as health care facilities and government agencies".
- (6) In the words of **Hague**, "Business economics is a fundamental academic subject which seeks to understand and analyse the problems of decision - making".

[2.2] Main Characteristics of Business Economics :

The following are some of the main characteristics of business economics :

1. **Business economics is a branch and discipline of general economics :** As said earlier business economics is the application of economic tools to practices of business firms. Just as a study of the agricultural aspects of economic science is known as agricultural economics, study of industrial aspects as industrial economics, study of monetary aspects as monetary economics, so also a study of the economic aspect of the management of the firm is known as business economics. Thus, business economics is but a branch of general economic theory.
2. **Business economics is mainly micro in character** because, it concentrates only on the study of the firm. It is the problem of a business firm which form a part of the study of managerial economics; it does not deal with the working of the economy as a whole.
3. **The contents of business economics are mainly based on the theory of firm.** It analyses the problems of a firm and offers solution for the same.
4. **Business economics also studies macro economics to understand and adjust to the economic environment under which the firm operates.** In other words, although business economics draws heavily on micro economics , some aspects of

macro economics are also relevant in decision making and forward planning. Some problems of the firm are related to macro variables like national income, aggregate level of employment, general price level, etc. Likewise, a study of trade cycles, international trade and balance of payment etc. has great relevance in business economics for certain types of decision making problems.

5. **Business economics is normative rather than positive in character;** that is, it is prescriptive rather than descriptive. It deals with 'what should be done and how it should be done.' It shows the way as to how to achieve the set objective to get the optimal results. Business economics is, thus, concerned with the function of an advisory nature in decision making. It is normative in character dealing with decision making problems - how to take business decisions in order to achieve the set objectives. It advises: what ought to be done and how it should be done.
6. **Business economics is both conceptual and metrical.** It makes use of the various concepts in order to understand and analyse the decision - making problems. Likewise, it also uses the various quantitative techniques to measure the impact of different factors and policies. An intelligent application of quantitative techniques to business presupposes considered judgement and hard and careful thinking about the nature of the particular problem to be solved. Managerial economics provides necessary conceptual tools to achieve this. Moreover, it helps the decision maker by providing measurement of various economic entities and their relationship. This metrical dimension of business economics is complementary to its conceptual framework.
7. **Business economics helps business executives in taking rational decisions,** since resources with the firm are limited, they have to be allocated in the most optimum manner to achieve the set objectives. This is, then, essentially a problem of choice. Managerial economics helps in analysing the various alternatives and selecting the one which would give the optimal results.

[3] Subject-matter and Scope of Business Economics :

[3.1] Subject Matter of Business Economics :

We have seen above that decision-making and forward planning are the two major functions involved in business economics. They are related to the following aspects :

- (a) **Allocation of resources :** The resources with a firm are scarce and have alternative uses. Accordingly, these have to be utilised in a most efficient and optimum manner to attain set objectives.

- (b) **Problems of inventory control** : Problems of inventory control relate to decisions about maintaining optimum levels of stock of raw materials and finished goods over a period of time. Decisions pertaining to these have to be taken in the context of demand and supply conditions.
- (c) **Pricing problems** : Another decision- making problem is the fixation of the prices of the products of the firm. These involve decisions regarding various methods of pricing to be adopted. The choice is whether prices should be related to demand or cost or both; whether to adopt '**product - line pricing**' or '**marginal pricing**' or mark-up pricing in the fixation of prices.
- (d) **Investment problems** : Forward planning obviously involves investment problems. These relate to the problems of allocation of scarce resources, the quantum and mode of investment, sources of funds, expansion and diversification programme for the future, establishing new venture or continuing with product pattern, etc.

[3.2] Scope of Business Economics :

The scope of business economics mainly covers two areas of decision making :

- (1) Operational Issues or Internal Issues
- (2) Environmental Issues or External Issues

(1) Operational Issues :

Operational issues are those issues which arise within the business organisation and are under the control of the management. These can be categorised as follows to demarcate the scope of business economics :

- (a) **Resource Allocation** : Business economics like the traditional economic theory is concerned with the problem of optimum allocation of scarce resources. Business analysis is applied to the problem of determining the level of output which maximises profit. In this respect, linear programming technique has been used to solve optimisation problems. Infact, linear programming is one of the most practical and powerful business decision making tool currently available.
- (b) **Demand Analysis and Demand Forecasting** : Demand analysis pays a crucial role in business decision - making. A study of demand analysis is certainly a helpful guide to managerial executives while taking production and pricing decisions. In deciding about 'what to produce' ? and 'how much to produce'?, information pertaining to the nature and quantum of demand at different prices is very essential. Likewise, the demand for a product changes in response to change in its price, price of its substitutes or complementary goods, consumer's income, his tastes and preferences, etc. These are known as demand determinants a study of which is essential for, forecasting the demand for the product as well as the present sales. Thus, the main topics covered in demand analysis are demand determinants, demand distinctions, various types of elasticity of demand, demand forecasting, etc.
- (c) **Cost Analysis** : A study of cost analysis is very useful for management decisions. Estimates of cost is an essential part of business decision and helps in the efficient and optimum allocation of resources. The objective of a firm is to produce a given output at least cost by having the optimum combination of the factors of production. Cost analysis helps in deciding about the size of the firm, the volume of output and factor proportions. The main topics covered here are various types of cost concepts and cost classification, cost - output relationship in the short and long run, production function, cost control, economies and diseconomies of scale, etc.
- (d) **Pricing Policies and Practices** : Pricing policy is an important sphere of business economics. The objective of a firm is to earn maximum profits and pricing policy is an important determinant affecting profits. In fact, the success or failure of the firm to a very large extent, depends on the correctness of its pricing decisions, because price policy affects the revenue of the firm and consequently its profits. The main topics covered here are price determination under various market structures, pricing methods, differential pricing, etc.

- (e) **Profit Planning and Break - Even Analysis** : A business firm works for profits and in the long run profits are an important criteria to measure the success or failure of a firm. But we also know that in modern times the firm works under conditions of uncertainty because of changes in demand and cost conditions, changes in the prices of inputs and products, changes in technology apart from political and social conditions and changes in government economic policies. Profit planning, therefore, is very essential under these conditions of uncertainty. The topics dealt with in this are nature and measurement of profit, break-even analysis, profit policies, etc.
- (f) **Capital Budgeting and Investment Decisions** : Capital is a scarce factor of production and is obtained at a cost. It is, therefore, necessary that decisions pertaining to capital investments are taken with great care and caution. Capital budgeting, among other things, involve estimate of capital requirements for the project, that is, the demand for capital based on its marginal productivity, cost of capital and the various sources from which it is sought to be raised, profitability of capital, that is, rate of return, choice of capital investments, selection of projects and optimal allocation of capital as between different projects etc.
- (g) **Strategic Planning** : Strategic planning provides management with a frame work on which long term decisions can be made which have an impact on the behaviour of the firm. The firm sets certain long term goals and objectives and selects the strategy to achieve the same. Strategic planning is now a new addition to the scope of business economics with the emergence of multinational corporations. **The perspective strategic planning is global.** It is different from project planning which focuses on a specific project or activity. Likewise, it is also different from operational planning which examines the details required for the implementation of a particular strategy within a certain time period. Portfolio models and corporate simulation models come in the area of strategic planning. Infact, a new area of study called "Corporate Economics" has come into existence as a result of the integration of business economics and strategic planning.

(2) Environmental or External Issues :

Environmental issues or external issues in business economics refer to general business environment in which the firm operates. These pertain to general economic, social and political atmosphere

within which the firm has to function. The environmental factors have a far reaching bearing upon the functioning and performance of the firms. The business decision makers, therefore, have to take into account the changing economic, political and social conditions in the country and give due consideration to environmental factors in the process of decision making. This is essential because business decision taken in isolation of environmental factors may not only prove infructuous but may also lead to heavy losses.

To sum up, environmental or external issues relate business economics to macro economic theory, while operational issues relate it to micro economic theory. The scope of business economics, thus, has considerably widened in modern times.

[2] The Incremental Concept :

The incremental concept or the principle of incremental reasoning is one of the most important concepts in business economics which is widely used in the process of decision making. Whenever the manager of a firm takes a new decision or makes changes in the decisions taken earlier, it affects the price, output,

investment and other variables which ultimately affect the total revenue and total cost of the firm. The incremental concept involves the impact of decision changes on costs and revenues emphasizing the consequent changes in total cost and total revenue resulting from changes in prices, products, investments or whatever may be at stake in the decision.

The two basic concepts of incremental analysis are :

(1) Incremental cost (2) Incremental revenue

(1) Incremental Cost :

Incremental cost may be defined as the change in total cost as a result of the change in the level of output, investment, price etc. Thus, incremental costs are the added costs of a change in the level or nature of activity. They may refer to any kind of change say like, adding a new product, changing distribution channels, adding new machinery etc. Incremental cost, thus, may be defined as the change in total cost consequent upon a decision taken by the firm.

It is worthwhile to note here that **incremental costs are not the same as marginal costs**. Incremental costs simply measure the difference between old and new total costs. Marginal cost has a limited meaning; it refers to the cost of an additional unit of output. It is the per unit cost of the added units. Incremental costs are more flexible than the marginal costs because incremental costs refer to any kind of change, while marginal costs are calculated for unit changes in output. **Incremental costs appear to be more relevant in decision-making at the firm level**. The incremental costs may be computed by using the following formula :

$$IC = C_2 - C_1 = \Delta C$$

Where, IC = incremental costs

C_2 = new total costs

C_1 = old total costs

ΔC = change in total costs.

Most business decisions require cost estimates that are essentially incremental in nature.

(2) Incremental Revenue :

Incremental revenue is the change in total revenue resulting from a decision regarding change in the level of output, prices etc. The formula for incremental revenue is as follows :

$$IR = R_2 - R_1 = \Delta R$$

Where, IR = incremental revenue

R_2 = new total revenue

R_1 = old total revenue

ΔR = change in total revenue

It should also be noted here that although incremental reasoning of managerial economics is closely related to the marginal reasoning of economic theory, yet there are certain differences which are as follows :

- (a) Marginal costs and revenues are always defined in terms of unit changes in output whereas incremental costs and revenues are not necessarily restricted to unit changes. The marginal analysis enables one to have a microscopic examination of such a microscopic analysis of the situation.
- (b) Incremental concepts are more flexible than marginal concepts. Marginal costs and marginal revenues are restricted to the effects of unit changes in output. But the decision-making may not be concerned with changes in output at all.

A firm while taking business decisions would consider whether it is worthwhile to take a particular decision or not, and here it would mainly be guided by the incremental principle; the decision would be worthwhile if the incremental revenue is greater than the incremental cost. The incremental principle may, thus, be stated as follows :

A particular business decision would prove to be profitable if :

- (a) it increases revenue more than the cost.
- (b) it decreases some costs to a greater extent than it increases others.
- (c) it increases some revenues more than it decreases others.
- (d) it reduces cost more than the revenue.

A business decision affects various items of costs, as a result the cost increases in case of some of the items, while it decreases in case of some other items. Likewise, a particular decision results in an increase in revenue on some items and decrease on some other items. In such a situation, the concept of incremental principle helps the firm in taking appropriate decisions. As aptly pointed out by **Henry** and **Haynes**, increase in revenue as a result of a particular business decision indicates change in total revenue; this increase in revenue is the sum total of the changes in all the items of revenue (positive and negative); likewise, increase in cost is the sum total of the changes in all the items of the cost (positive and negative). The difference between the increase in total revenue and total cost indicates the impact of the decision on the overall net profit of the firm.

Let us illustrate the incremental concept with an example :

Some business firms have a tendency to take the view that in order to make an overall profit they must earn profit in each and every item. The result is that they do not accept the orders which do not cover their full cost plus a provision for profit. Incremental principle states that this attitude of the firm is not consistent with the objective of profit maximisation in the short run, because by doing so the firm rejects the possibility of adding more to revenue than to cost. **From the view point of the firm, it is not the full cost but the incremental cost which is more relevant.**

Suppose, for example a new order obtained by a firm is estimated to bring in an additional revenue to the tune of Rs. 10,000/- and the cost pertaining to this are as follows :

Table - 1

S.No.	Item of Cost	Cost (in Rs.)
(1)	Labour Cost	3,000-00
(2)	Material Cost	4,000-00
(3)	Fixed Cost	3,600-00
(4)	Selling and administrative cost	1,400-00
	Full Cost	12,000-00

In the above example, at the outset, the order appears to be unprofitable since the firm has to incur full cost of Rs. 12,000 while the additional revenue is estimated at Rs. 10,000 involving a loss of Rs. 2,000.

However, suppose that the firm has an excess capacity which can be utilised to execute the said order. Now if this order adds only Rs. 1000 as fixed cost and Rs. 2000 as labour cost and no extra selling and administrative cost, the incremental cost of accepting and executing the order shall be as follows :

Table - 2

S.No.	Item of Cost	Cost (in Rs.)
(1)	Labour Cost	2,000-00
(2)	Material Cost	4,000-00
(3)	Fixed Cost	1,000-00
	Full Cost	7,000-00

It would, thus, be clear from the above table that although at first sight the acceptance of the order showed a loss of Rs. 2,000 (Rs. 12,000 – Rs. 10,000) but on the basis of the above calculation in table-2, there is an additional profit of Rs. 3,000 (Rs. 10,000 – Rs. 7,000).

It should, however, be noted here that the firm has to be very careful and cautious in implementing the incremental principle. The principle does not say that the firm should accept all the orders at prices which cover the incremental cost. In the above example, the acceptance of the order is profitable because the firm has excess capacity and there is no proportionate increase in the other items of cost. But this may not happen every time. As a matter of fact, the principle does not specifically say anything about the general price policy or in the matter of accepting the order. It only suggests that there would be change in cost by the acceptance or rejection of the new order; it does not and cannot advise the firm as to the acceptance of the order which gives more profit than the one which gives less profits. Basically the principle provides guidance for decision making which can give maximum profits. Thus, a business decision can be said to be appropriate only when it adds more to the revenue than to the cost or when it reduces cost more than the revenue.

Significance of the Concept :

The incremental concept is of great significance in managerial economics. Many firms take a view that the maximise profits they must be able to make profits on every unit of output, that is to say, every unit proposals which do not meet with this criteria. But it is just possible that the additional unit may be adding less to cost than to revenue and by not accepting the possibility of additional unit of production, the firm is losing additional profit. According to incremental concept, the firm's behaviour is not in consonance with its goal of profit maximisation. The relevant cost for managerial decision is, therefore, not the full cost but the incremental cost of output.

Practical Application of the Incremental Concept :

The incremental concept occupies a significant place in the process of business decision. **James Early's** study in America reveals that excellently managed large firms, big industrial and commercial corporations do make formal use of incremental analysis. In these firms, the accounting system itself is so geared that they can easily get all the information pertaining to incremental revenue and incremental cost. On the other hand, **Haynes'** study of small firms reveals that most of them were not very much familiar with the

concepts of incremental cost and incremental revenue and that their accounting system too did not make any specific note pertaining to incremental concept. It is, thus, not possible to generalise as to the use of incremental principle. All the same, it cannot be denied that it is an important tool which helps the firm in taking appropriate business decisions.

[3] The Concept of Opportunity Cost :

The concept of opportunity cost is an important concept in business economics and is widely used in the process of decision-making. Opportunity cost means the next best alternative that is sacrificed or foregone. The opportunity cost of a product or service is measured in terms of revenue which could have been earned by employing that product or service in some other alternative uses. As **Marshall** has put it, **"the real ultimate cost of anything is the loss of that alternative which must be sacrificed when resources of a given kind are devoted to a particular object"**. Economics call it as **opportunity cost** - a concept is of great practical importance.

Thus, what labour would get in one employment would depend on what it can get elsewhere; likewise what rates of interest capital would be entitled to in one industry would depend on what it can earn elsewhere. In this way, the cost is the **cost of displaced alternatives**. The cost of producing a thing would be determined not by the value of the thing that has not been produced, but could have been produced by the displaced factors of production. **The unborn is the cost of the born**. In the words of **Benham**, 'the opportunity cost of anything is the next best alternative that could be produced instead, by the same factors or by an equivalent group of factors, costing the same amount of money. The cost of producing a thing would be determined not by the value of the thing that has been produced but could have been produced by the displaced factors of production. In other words, the cost of producing a commodity is fundamentally the sum total of retention prices that have to be paid to the various factors for retaining them in a particular firm or industry, and this must at least be equal to what they can earn in other alternative occupations.

The concept of opportunity cost will be clearly understood from the following examples :

- (a) The opportunity cost of the capital investment made in business by the entrepreneur himself is the interest that could have been earned if that capital had been employed in some other business.
- (b) The opportunity cost of the time which an entrepreneur devotes to his own business is the amount of remuneration which he could have earned by working in some other occupations.
- (c) The opportunity cost of using a machine to produce one product is the loss of those products which could have been produced from that machine.
- (d) The opportunity cost of using a machine which can be used only for one specific purpose and which cannot be used for any other purpose is zero, because here no alternatives are foregone.

It will, thus, be clear that opportunity cost requires that sacrifice must be clearly ascertained. If there are no loss of alternatives or alternatives are not foregone, there would be no opportunity cost.

The concept of opportunity cost is related with the concepts of explicit cost and implicit cost. Explicit costs are the actual costs incurred by a firm. These costs refer to the money payments made to the factors of production; these are contractual obligations and are recorded in the books of accounts. Implicit costs, on the other hand, are costs that are not recorded in the books of accounts; for example, land for the factory site provided by the owner of the firm or the capital supplied by owner himself etc., that is these are costs of self - employed and self- owned resources of the firm. The opportunity cost includes both implicit and explicit costs and is generally higher than the accounting cost.

Incremental Cost and Opportunity Cost - A Comparison :

We may briefly compare incremental cost and opportunity cost as follows :

- (a) Incremental cost is a difference in cost due to a decision. By subtracting incremental cost from incremental revenue, one can find the gain from the proposed change in the activity. Opportunity cost, on the other hand, includes all the economic costs (rather than difference in cost) of a scarce factor. It is subtracted from the total revenue of the chosen alternative to find the gain from the proposed use of the input.
- (b) The incremental cost concept is used to show the contrast between sunk costs (that is, the costs that do not change with the change in activity) and the costs that change with a change in the level of business activity. Opportunity cost, on the contrary, focuses attention on the net revenue that could be generated in the next best alternative use of scarce resource.

Limitations of the Concept :

The concept of opportunity cost, however, is subject to the following limitations :

- (i) In a large number of cases, a specific factor has no opportunity cost. Thus, for example, a barren land has hardly any attractive alternatives.
- (ii) Immobility of factors of production makes this concept limited in application.
- (iii) Again, the foregone alternatives may not be quantitatively measured. For instance, a land lord may not know how much of rent he would be getting by cultivation of sugarcane instead of cotton.
- (iv) The concept is based on the assumption of perfect competition which is hardly found in real life.

[4] The Concept of Time Perspective :

A business economist has to take various decisions in the context of a definite time period. Certain decisions have to be taken in the context of long run perspective when all factors are variable. Thus, for example, a decision to set up a new plant at a new place affects the investment in all the factors; while when a decision is taken in the context of a short term perspective, there is a change only in certain factors. For example, a decision to increase the output in the existing firm will require an increase only in variable factors like labour, raw materials etc., while fixed factors like machinery and equipment etc. will remain unchanged.

However, the above difference between long term and short term time perspective is hardly seen in practice. Business economists do not see the time distinction in terms of whether all the inputs are variable or not. To a business economist, short period is synonymous with immediate future and long period with remote future. According to them, the principle of time perspective states that a decision should take into account both the short run and long run effects on revenues and costs and maintain a right balance between long run and short run perspective.

Thus, for example, which items of the cost will not be affected depends upon the decision taken with reference to time perspective. There are a number of series of short term perspectives and as the time perspective is widened, more and more items of cost become variable. A particular decision taken by a firm which in the context of short term perspective is profitable may prove to be still more profitable or less profitable in the initial stages of long run perspective.

[5] The Discounting Principle :

The discounting principle occupies an important place in business economics and is particularly helpful in taking investment decisions. While making new investments, it is necessary for the firm to have an estimate of the expected rate of return on the capital invested; or to put it differently, the firm has to decide as to what should be the rate of discount to equate the future value of its capital with that of its present value. In other words, the discounting principle, in a way, is an extension of the concept of time preference. Since future is unpredictable, there is a lot of uncertainty about it. Besides the return in future is less attractive than the same return of today. And so the future must discount both the elements of delay and risk of the future.

The concept of discounting principle is based on the rational that individuals give more importance to the present than to the future; they prefer present satisfaction to a future satisfaction of an equal amount and of equal certainty. In other words, future satisfaction when viewed from the present undergoes a discount in the same way as people regard a bird in hand is worth two in the bush. Thus, the concept of discounting principle is based on the fundamental fact that a rupee of today is worth more than a rupee of tomorrow. The reason for this is that a rupee earned today can be profitably invested and one can earn interest or dividend out of it. But, if that rupee is foregone, say for year, than earning in the form of interest or dividend from its investment has also to be foregone and so it has been said that a rupee tomorrow is worth less than a rupee today.

Let us illustrate this with an example. Suppose an individual is offered a choice between a gift of Rs. 100 today or Rs. 100 next year, he will naturally choose to have Rs. 100 today rather than next year. This is because of two reasons :

- (a) Future is uncertain; these may be uncertainty in getting Rs. 100 next year, if the present opportunity is not ceased.
- (b) Even if an individual is assured of receiving Rs. 100 next year, but than what happens is that by accepting Rs. 100 at present he can earn an interest of say 6 percent and in that case, after one year 100 of today shall become Rs. 106, whereas if he does not accept Rs. 100 today he will get only Rs. 100 next year- nothing more than that. Hence naturally an individual will prefer the first alternative because he gains by Rs. 6 in future. In other words, it can be said that Rs. 100 of next year are not equal to Rs. 100 today but less than that.

On the basis of the above illustration, we can explain the discounting principle. The pertinent question to be considered is how much rupees of today are equal to Rs. 100 one year hence. Suppose the rate of interest is 6 percent which means that Rs. 100 one year after should be discounted at the rate of 6 percent and this would mean that we should divide it by 1.06 .The formula for this is as follows :

$$V = \frac{A}{1 + r}$$

Where, V = present value of capital .

A = value of capital after one year

r = rate of interest

$$\begin{aligned} \text{in the above example, } V &= \frac{100}{1 + r} \\ &= \frac{100}{1.06} = \text{Rs. } 94.33 \end{aligned}$$

We can verify the corrections of the above calculation by multiplying Rs. 94.33 by 1.06 which will come to Rs. 100.

The discounting principle can, thus, be stated as, "if a decision affects costs and revenues at future dates, it is necessary to discount those costs and revenues to present values before a valid comparison of alternatives is possible".

[6] The Equi-marginal Principle :

The equi-marginal principle is a widely prevalent concept in economic literature and as a fundamental concept of business economics, it is extensively used in the process of decision - making and forward planning. *According to this principle, those factors of production which can be put to alternative uses must be allocated amongst various uses or various activities in such a manner that the net increase in the factor product value of the marginal unit in each use is the same. The allocation of factors in this manner enables the firm to achieve optimum position.*

We know that factors of production have alternative uses. For determining the allocation of a given factor amongst its alternative uses, it is essential for us to know as to what will be the marginal increase in output from the alternative uses of that factor. If the firm is producing more than one product or is engaged in more than one productive activity, it would use its inputs or factors in the best way, if the last unit of the factor in each case produces equal output. In case, however, if the value of marginal product as between different uses or different activities is not equal, the firm would continue to reallocate the factors until the value of marginal product becomes equal in all uses or activities.

Now, suppose the firm decides to add one additional worker in activity **A** as a result of which there will be an increase in the net product value of this activity which may be called as the marginal product value of labour. Likewise, if one more additional worker is added to other productive activities **B** and **C**, then there would be an increase in the marginal product value of labour in these activities as well.

Now, it is obvious that the firm would allocate more workers in that activity, where the marginal product value is high. It would be in the interest of the firm to reduce the number of workers in those activities where marginal product value is less and to increase the number of workers in those activities where the marginal product value is high. Such allocation and reallocation of the workers between the different activities or different uses will continue till the marginal product value of labour in each of the activity becomes equal. At this point, the shifting of workers as between different activities and uses will stop, the output of the firm will be maximum and the firm would attain optimal position.

In short, the equi - marginal principle states that the factors of production are allocated amongst different productive activities in such a manner that the value added by the marginal unit of each factor is the same in all activities or uses. When the marginal product value in all the activities or uses is equal, the firm attains optimum position. This can be expressed symbolically as follows :

$$VMP_{LA} = VMP_{LB} = VMP_{LC} \text{ ————— }$$

Here, VMP = Value of marginal product

L = Labour

ABC = different productive activities.

This would be clear from the following diagrams :

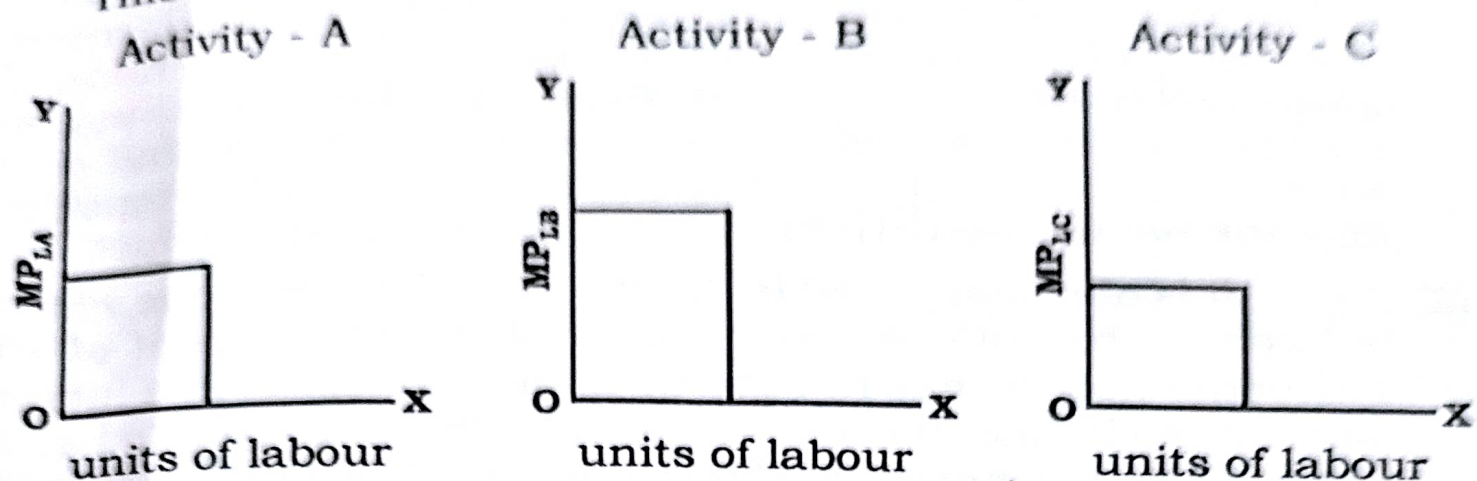


Figure : 1

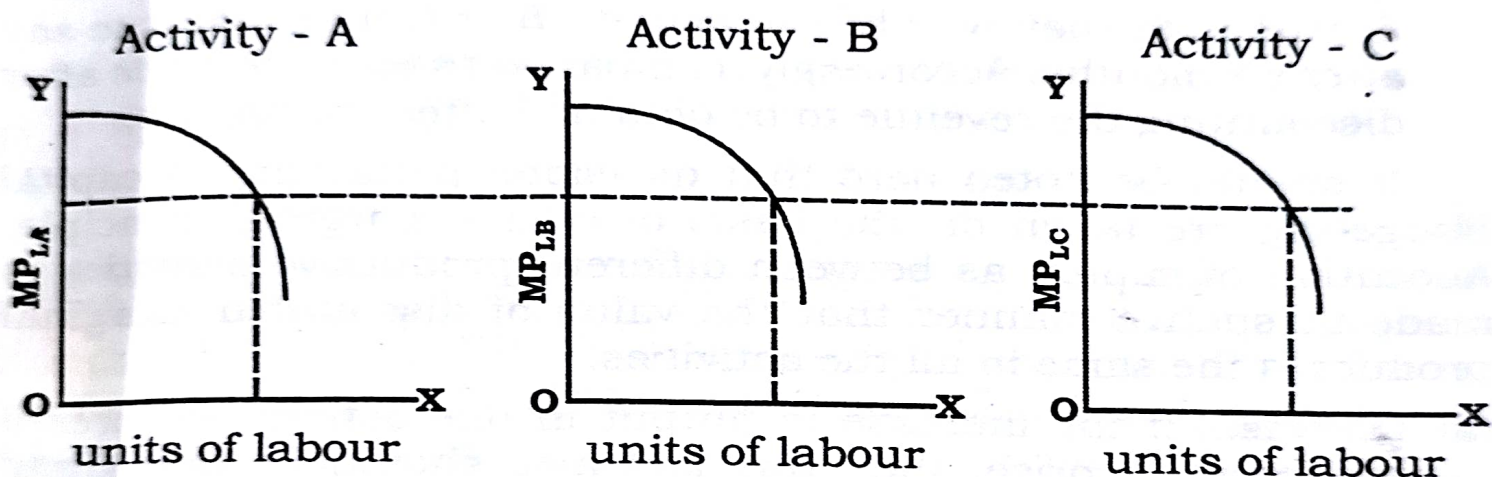


Figure : 2

Points for Consideration :

However, while discussing and applying the equi-marginal principle in practice, the following points should be borne in mind :

- (1) In equi - marginal principle, increase in the value of marginal product refers to the net increase in value of marginal product. Thus for example, as a result of employing one additional worker in activity say A, the total output increases by 50 units. Now, if the price per unit of the product in the market is Rs. 1, the total revenue of firm will increase by Rs. 50. But it should also be remembered that the increased output of 50 unit will also require

some more of raw materials, fuel and other inputs, so that there will be an increase in the variable cost and suppose this increase is of the order of Rs. 20, then the marginal product value of labour will be Rs. 30 (Rs. 50-20). Thus, the value of the marginal product relevant for our purpose will not be Rs. 50 but only Rs. 30. As such, in equi - marginal principle, we have to consider only the net increase in the value of the marginal product.

- (2) Again, it is also just possible that the additional revenue which is likely to be obtained as a result of an employment of an additional worker may not accrue immediately, but at a future date. In such case these revenues should be discounted and only after that, comparison of revenue in the alternative activities should be made. Thus, for example, revenue in activity **A** may accrue immediately, while in activity **B** or **C** it may accrue say after six months. Accordingly, comparison should be made after discounting the revenue to be obtained after six months.

It should be noted here that decisions pertaining to capital budgeting are taken on the basis of equi - marginal principle. Allocation of capital as between different productive activities is made in such a manner that the value of discounted marginal product is the same in all the activities.

- (3) Likewise, if the increase in output in one activity requires a reduction in price, then this fact also should be taken into account while comparing the values of the marginal product in different activities and necessary adjustment be made for the fall in price.

- (4) The phenomenon of diminishing returns must also be considered while applying equi - marginal principle. According to this law, in any productive activity, as more and more units of variable factors are added to a fixed factor, then after a certain stage, increase in output obtained is not in proportion to the increase in the quantum of variable factors, that is, the output increases at a diminishing rate. Thus, it is only after taking into account this tendency to diminishing returns that the allocation of factors as between different uses should be made in such a manner that the value of the marginal product in different uses is the same.

To conclude, as said earlier, the equi - marginal principle helps the manager of a firm in the process of decision - making and forward planning. While taking production decision, the firm allocates the various factors amongst different productive activities in such a manner that the value of the marginal product in each activity is the same. Likewise, this principle is useful in taking decisions regarding capital budgeting, allocation of capital as between different spheres of productive activity is done in such a manner that the marginal return from each of the spheres is equal.

Short Questions with Answers

Q. 1. State the main characteristics of business economics.

The following are the main characteristics of business economics :

- (1) Business economics is a branch and discipline of general economics.
- (2) Business economics is mainly micro in character.
- (3) The contents of business economics are mainly based on the theory of firm .
- (4) Business economics is normative in character that is, it is prescriptive rather than more descriptive.
- (5) The scope of business economics is limited as compared to general economics.
- (6) Business economics is both conceptual and metrical.
- (7) Business economics helps business executives in taking rational decisions.

Q. 2. Give a definition of business economics.

OR

What is meant by Business Economics?

(April - 2012, 2015 October - 2013, 2014).

Business economics is the application of economic theory and analysis to practices of business firms and other institutions. It may be defined as the study of those economic theories, logic and methodology which are generally applied to seek solution to the practical problems of business, According to **Spencer and Scegelman**, "Business economics is the integration of economic theory with business practice for the purpose of facilitating decision - making and forward planning by the management."

Q. 3. How does Business economics differ from general economics ?

OR

Explain the difference between business economics and general economics.

- (1) In general economics, decisions are mainly influenced by economic considerations, while in business economics, apart for economic factors other factors like human and behavioural factors, environment forces, technical considerations etc. are also taken into account.

- (2) Business economics differs from traditional economic theory with regard to its assumption of profit - maximisation. .
- (3) Business economics involves the application of economic theory to analyse business situation, while general economics deals with the body of economic principles itself.
- (4) Business economics is mainly micro in character, while general economics is both micro as well as macro in character.
- (5) Even in micro aspect, business economics deals only with the problems of a firm and not with the economic problems of an individual; general economics, however, deals with both.
- (6) Again in micro economics, business economics studies only the theory of profit, while in general economics all the theories of distribution, namely, rent, wages, interest and profit theories are studied.

Q. 4. What is the scope of business economics?

OR

State the scope of business economics.

(April - 2013, 2016, November/December - 2019)

The scope of business economics includes the following :

- (1) Allocation of resources as between different uses .
- (2) Demand analysis and demand forecasting .
- (3) Cost and production analysis.
- (4) Pricing policies and practices.
- (5) Profit planning and break - even analysis.
- (6) Capital budgeting and investment decisions.

Short Questions & Answers

Q. 1. What is opportunity cost?

(April - 2011, 2013, October - 2012, 2013, 2015)

Opportunity cost means the next best alternative that is sacrificed or foregone. The opportunity cost of a product or service is measured in terms of revenue which could have been earned by employing that product or service in some other alternatives uses. According to **Marshall** the real ultimate cost of anything is the loss of that alternative which must be sacrificed when resources of a given are devoted to a particular object. In the words of **Benham** the opportunity cost of anything is the next best alternative that could be produced instead, by the same factors or by an equivalent group of factors. In other words, the cost of a thing is the cost which is most nearly chosen instead the alternative so foregone; "the unborn is the cost of the born".

Q. 2. What is discounting?

(April - 2013, 2014)

The concept of discounting is based on the rational that individuals give more importance to the present than to the future; they prefer present satisfaction to a future satisfaction of an equal amount and of equal certainty. The discounting principle states that if a decision affects costs and revenues at future dates, it is necessary to discount those costs and revenues to present values before a valid comparison of alternatives is possible. The formula for this is as below :

$$V = \frac{A}{1 + r}$$

Here, V = present value of capital

A = value of capital after one year

r = rate of interest

Q. 3. What is 'Incremental Revenue' and 'Incremental Cost'?
(April - 2014)

Increment revenue is the change in total revenue resulting from a decision regarding the change in the level of output, price etc.

The formula for incremental revenue is as follows :

$$IR = R_2 - R_1 = AR$$

Here, IR = Incremental revenue

R_2 = New total revenue

R_1 = Old total revenue

AR = Change in total revenue

Incremental total cost is the change in total cost as a result of the change in the level of output, investment, price etc. Thus,

$$IC = C_2 - C_1 = AC$$

Where, IC = incremental cost,

C_1 = Old total cost

C_2 = New total cost

AC = Change in total cost
