

UNIT 1

Nature and Scope of Managerial Economics

Managerial economics generally refers to the integration of economic theory with business practice. Economics provides tools managerial economics applies these tools to the management of business. In simple terms, managerial economics means the application of economic theory to the problem of management. Managerial economics may be viewed as economics applied to problem solving at the level of the firm.

It enables the business executive to assume and analyse things. Every firm tries to get satisfactory profit even though economics emphasises maximizing of profit. Hence, it becomes necessary to redesign economic ideas to the practical world. This function is being done by managerial economics.

Managerial economists have defined managerial economics in a variety of ways:

According to E.F. Brigham and J. L. Pappas, Managerial Economics is “the application of economic theory and methodology to business administration practice.”

To Christopher Savage and John R. Small: “Managerial Economics is concerned with business efficiency”.

Milton H. Spencer and Lonis Siegelman define Managerial Economics as “the integration of economic theory with business practice for the purpose of facilitating decision making and forward planning by management.”

In the words of Me Nair and Meriam, “Managerial Economics consists of the use of economic modes of thought to analyse business situations.”

D.C. Hague describes Managerial Economics as “a fundamental academic subject which seeks to understand and analyse the problems of business decision making.”

In the opinion of W.W. Haynes “Managerial Economics is the study of the allocation of resources available to a firm or other unit of management among the activities of that unit.”

According to Floyd E. Gillis, “Managerial Economics deals almost exclusively with those business situations that can be quantified and dealt with in a model or at least approximated quantitatively.”

The above definitions emphasise the interrelationship of economic theory with business decision making and forward planning.

The Nature of Managerial Economics

1. It analyses towards solving business problems, constitutes the subject-matter of Managerial Economics.
2. It helps in decision making and forward planning.
3. The problem of choice arises because resources are limited and the firm has to make the most profitable use of these resources.
4. As future is unpredictable, a business manager’s task is to prepare the best possible plans for the future depending on past experience and future outlook .
5. It assists the managers of a firm in a rational solution of obstacles faced in the firm’s activities.
6. It helps in formulating logical managerial decisions.

7. It lessens the gap between economics in theory and economics in practice.
8. It guides the managers in taking decisions relating to the firm's customers, competitors, suppliers as well as relating to the internal functioning of a firm.
9. It makes use of statistical and analytical tools to assess economic theories in solving practical business problems.
10. It helps in enhancement of analytical skills, assists in rational configuration as well as solution of problems.
11. It can also be used to help in decision-making process of non-profit organizations (hospitals, educational institutions, etc).
12. It enables optimum utilization of scarce resources in such organizations as well as helps in achieving the goals in most efficient manner.

Scopes of Managerial Economics

1. Demand Analysis

A business firm is an economic organization which is engaged in transforming productive resources into goods that are to be sold in the market.

A major part of managerial decision-making depends on accurate estimates of demand. A forecast of future sales serves as a guide to management for preparing production schedules and employing resources.

It will help management to maintain or strengthen its market position and profit-base. Demand analysis also identifies a number of other factors influencing the demand for a product. Demand analysis and forecasting occupies a strategic place in Managerial Economics.

2. Cost Analysis

Cost estimates are most useful for management decisions. The different factors that cause variations in cost estimates should be given due consideration for planning purposes.

There is the element of uncertainty of cost as other factors influencing cost are either uncontrollable or not always known.

If one is able to measure cost it is very important for more sound profit planning, cost control and often for sound pricing practices.

3. Pricing practices and policies

As price gives income to the firm, it constitutes as the most important field of Managerial Economics.

The success of a business firm depends very much on the correctness of the price decisions taken by it.

The various aspects that are dealt under it cover the price determination in various market forms, pricing policies, pricing method, differential pricing, productive pricing and price forecasting.

4. Profit Management

The chief purpose of a business firm is to earn the maximum profit. There is always an element of uncertainty about profits because of variation in costs and revenues.

If knowledge about the future were perfect, profit analysis would have been very easy task. But in this world of uncertainty expectations are not always realized.

Hence profit planning and its measurement constitute the most difficult area of Managerial Economics.

Under profit management we study nature and management of profit, profit policies and techniques of profit planning like Break Even Analysis.

5. Capital Management

The problems relating to firm's capital investments are perhaps the most complex and troublesome.

Capital management implies planning and control of capital expenditure because it involves a large sum and moreover the problems in disposing the capital assets of are so complex that they require considerable time and labour.

6. Analysis of business environment

The environmental factors influence the working and performance of a business undertaking. Therefore, the managers will have to consider the environmental factors in the process of decision-making.

Decisions taken in isolation of environmental factors would prove harmful to the firm. Therefore, the management must be fully aware of economic environment, particularly those economic factors which constitute the business climate.

Nevertheless, the management must have an idea of social and political trends. Also the main factors that affect the business climate are : general trend in national income and consumption expenditure, general price trends, trading relations with other countries, trends in world market, economic and business policies of the government, industrial relations etc.

Certain macro-economic theories such as income and employment theory, monetary theory etc. help in analyzing business climate.

Analysis of monetary policy, fiscal policy, industrial policy, foreign trade policy and other direct controls also help in forecasting business climate.

Therefore, macro- economic theory and government policies are also included in the scope of managerial economics.

7. Allied Disciplines

The concepts that help the management in taking business decision are quantitative in nature. Therefore, mathematical tools are widely used in determining relationships between economic variables.

The linear programming techniques, which is mathematical, is used by firms to maximize or minimize their objective function.

Similarly statistical and accounting principles are used in taking business decision. Therefore, mathematical tools, statistical technique and accounting principles that are used in analyzing business problems also come under the scope of Managerial Economics.

Managerial Economics Relationship with Other Subjects

Many new subjects have evolved in recent years due to the interaction among basic disciplines. While there are many such new subjects in natural and social sciences, managerial economics can be taken as the best example of such a phenomenon among social sciences. Hence it is necessary to trace its roots and relationship with other disciplines.

1. Relationship with economics

The relationship between managerial economics and economics theory may be viewed from the point of view of the two approaches to the subject viz. Micro Economics and Macro Economics. Microeconomics is the study of the economic behaviour of individuals, firms and other such micro organization. Managerial economics is rooted in Micro Economic theory. Managerial Economics makes use to several Micro Economic concepts such as marginal cost, marginal revenue, elasticity of demand as well as price theory and theories of market structure to name only a few. Macro theory on the other hand is the study of the economy as a whole. It deals with the analysis of national income, the level of employment, general price level, consumption and investment in the economy and even matters related to international trade, Money, public finance, etc.

The relationship between managerial economics and economics theory is like that of engineering science to physics or of medicine to biology. Managerial economics has an applied bias and its wider scope lies in applying economic theory to solve real life

problems of enterprises. Both managerial economics and economics deal with problems of scarcity and resource allocation.

2. Management theory and accounting

Managerial economics has been influenced by the developments in management theory and accounting techniques. Accounting refers to the recording of pecuniary transactions of the firm in certain books. A proper knowledge of accounting techniques is very essential for the success of the firm because profit maximization is the major objective of the firm.

Managerial Economics requires a proper knowledge of cost and revenue information and their classification. A student of managerial economics should be familiar with the generation, interpretation and use of accounting data. The focus of accounting within the firm is fast changing from the concepts of store keeping to that of managerial decision making, this has resulted in a new specialized area of study called "Managerial Accounting".

3. Managerial Economics and mathematics

The use of mathematics is significant for managerial economics in view of its profit maximization goal along with optimal use of resources. The major problem of the firm is how to minimize cost, how to maximize profit or how to optimize sales. Mathematical concepts and techniques are widely used in economic logic to solve these problems. Also mathematical methods help to estimate and predict the economic factors for decision making and forward planning.

Mathematical symbols are more convenient to handle and understand various concepts like incremental cost, elasticity of demand etc., Geometry, Algebra and calculus are the major branches of mathematics which are of use in managerial economics. The main concepts of mathematics like logarithms, and exponential, vectors and determinants, input-output models etc., are widely used. Besides these usual tools, more advanced techniques designed in the recent years viz. linear programming, inventory models and game theory find wide application in managerial economics.

4. Managerial Economics and Statistics

Managerial Economics needs the tools of statistics in more than one way. A successful businessman must correctly estimate the demand for his product. He should be able to analyse the impact of variations in tastes. Fashion and changes in income on demand only then he can adjust his output. Statistical methods provide a sure base for decision-making. Thus statistical tools are used in collecting data and analyzing them to help in the decision making process.

Statistical tools like the theory of probability and forecasting techniques help the firm to predict the future course of events. Managerial Economics also make use of correlation and multiple regressions in related variables like price and demand to estimate the extent of dependence of one variable on the other. The theory of probability is very useful in problems involving uncertainty.

5. Managerial Economics and Operations Research

Taking effective decisions is the major concern of both managerial economics and operations research. The development of techniques and concepts such as linear

programming, inventory models and game theory is due to the development of this new subject of operations research in the postwar years. Operations research is concerned with the complex problems arising out of the management of men, machines, materials and money.

Operation research provides a scientific model of the system and it helps managerial economists in the field of product development, material management, and inventory control, quality control, marketing and demand analysis. The varied tools of operations Research are helpful to managerial economists in decision-making.

6. Managerial Economics and the theory of Decision making

The Theory of decision-making is a new field of knowledge grown in the second half of this century. Most of the economic theories explain a single goal for the consumer i.e., Profit maximization for the firm. But the theory of decision-making is developed to explain multiplicity of goals and lot of uncertainty.

As such this new branch of knowledge is useful to business firms, which have to take quick decision in the case of multiple goals. Viewed this way the theory of decision making is more practical and application oriented than the economic theories.

7. Managerial Economics and Computer Science

Computers have changes the way of the world functions and economic or business activity is no exception. Computers are used in data and accounts maintenance, inventory and stock controls and supply and demand predictions. What used to take days and months is done in a few minutes or hours by the computers. In fact

computerization of business activities on a large scale has reduced the workload of managerial personnel. In most countries a basic knowledge of computer science, is a compulsory programme for managerial trainees.

To conclude, managerial economics, which is an offshoot traditional economics, has gained strength to be a separate branch of knowledge. Its strength lies in its ability to integrate ideas from various specialized subjects to gain a proper perspective for decision-making.

A successful managerial economist must be a mathematician, a statistician and an economist. He must be also able to combine philosophic methods with historical methods to get the right perspective only then; he will be good at predictions. In short managerial practices with the help of other allied sciences.

Fundamental Principles of Managerial Economics- Incremental Principle, Marginal Principle, Opportunity Cost Principle, Discounting Principle, Concept of Time Perspective Principle, Equi-Marginal Principle

Managerial Economics is both conceptual and metrical. Before the substantive decision problems which fall within the purview of managerial economics are discussed, it is useful to identify and understand some of the basic concepts underlying the subject.

Economic theory provides a number of concepts and analytical tools which can be of considerable and immense help to a manager in taking many decisions and business planning. This is not to say that economics has all the solutions. In fact, actual problem solving in business has found that there exists a wide disparity between economic theory of the firm and actual observed practice.

Therefore, it would be useful to examine the basic tools of managerial economics and the nature and extent of gap between the economic theory of the firm and the managerial theory of the firm. The contribution of economics to managerial economics lies in certain principles which are basic to managerial economics. There are six basic principles of managerial economics. They are:-

1. The Incremental Principle

The incremental concept is probably the most important concept in economics and is certainly the most frequently used in Managerial Economics. Incremental concept is closely related to the marginal cost and marginal revenues of economic theory.

The two major concepts in this analysis are incremental cost and incremental revenue. Incremental cost denotes change in total cost, whereas incremental revenue means change in total revenue resulting from a decision of the firm.

The incremental principle may be stated as follows:

A decision is clearly a profitable one if

(i) It increases revenue more than costs.

(ii) It decreases some cost to a greater extent than it increases others.

(iii) It increases some revenues more than it decreases others.

(iv) It reduces costs more than revenues.

2. Marginal Principle

Marginal analysis implies judging the impact of a unit change in one variable on the other. Marginal generally refers to small changes. Marginal revenue is change in total revenue per unit change in output sold. Marginal cost refers to change in total costs per unit change in output produced (While incremental cost refers to change in total costs due to change in total output). The decision of a firm to change the price would depend upon the resulting impact/change in marginal revenue and marginal cost. If the marginal revenue is greater than the marginal cost, then the firm should bring about the change in price.

3. The Opportunity Cost Principle

Both micro and macro economics make abundant use of the fundamental concept of opportunity cost. In everyday life, we apply the notion of opportunity cost even if we are unable to articulate its significance. In Managerial Economics, the opportunity cost concept is useful in decision involving a choice between different alternative courses of action.

Resources are scarce, we cannot produce all the commodities. For the production of one commodity, we have to forego the production of another commodity. We cannot have everything we want. We are, therefore, forced to make a choice.

Opportunity cost of a decision is the sacrifice of alternatives required by that decision. Sacrifice of alternatives is involved when carrying out a decision requires using a resource that is limited in supply with the firm. Opportunity cost, therefore, represents the benefits or revenue forgone by pursuing one course of action rather than another.

The concept of opportunity cost implies three things:

(i) The calculation of opportunity cost involves the measurement of sacrifices.

(ii) Sacrifices may be monetary or real.

(iii) The opportunity cost is termed as the cost of sacrificed alternatives.

Opportunity cost is just a notional idea which does not appear in the books of account of the company. If resource has no alternative use, then its opportunity cost is nil.

In managerial decision making, the concept of opportunity cost occupies an important place. The economic significance of opportunity cost is as follows:

(i) It helps in determining relative prices of different goods.

(ii) It helps in determining normal remuneration to a factor of production.

(iii) It helps in proper allocation of factor resources.

4. Discounting Principle

This concept is an extension of the concept of time perspective. Since future is unknown and incalculable, there is lot of risk and uncertainty in future. Everyone knows that a rupee today is worth more than a rupee will be two years from now. This appears similar to the saying that “a bird in hand is more worth than two in the bush.” This judgment is made not on account of the uncertainty surrounding the future or the risk of inflation.

It is simply that in the intervening period a sum of money can earn a return which is ruled out if the same sum is available only at the end of the period. In technical parlance, it is said that the present value of one rupee available at the end of two years is the present value of one rupee available today. The mathematical technique for adjusting for the time value of money and computing present value is called ‘discounting’.

5. Concept of Time Perspective Principle

The time perspective concept states that the decision maker must give due consideration both to the short run and long run effects of his decisions. He must give due emphasis to the various time periods. It was Marshall who introduced time element in economic theory.

The economic concepts of the long run and the short run have become part of everyday language. Managerial economists are also concerned with the short run and long run effects of decisions on revenues as well as costs. The main problem in decision making is to establish the right balance between long run and short run.

In the short period, the firm can change its output without changing its size. In the long period, the firm can change its output by changing its size. In the short period, the

output of the industry is fixed because the firms cannot change their size of operation and they can vary only variable factors. In the long period, the output of the industry is likely to be more because the firms have enough time to increase their sizes and also use both variable and fixed factors.

In the short period, the average cost of a firm may be either more or less than its average revenue. In the long period, the average cost of the firm will be equal to its average revenue. A decision may be made on the basis of short run considerations, but may as time elapses have long run repercussions which make it more or less profitable than it at first appeared.

6. Equi-Marginal Principle

One of the widest known principles of economics is the equi-marginal principle. The principle states that an input should be allocated so that value added by the last unit is the same in all cases. This generalization is popularly called the equi-marginal.

Let us assume a case in which the firm has 100 unit of labour at its disposal. And the firm is involved in five activities viz., A, B, C, D and E. The firm can increase any one of these activities by employing more labour but only at the cost i.e., sacrifice of other activities.

An optimum allocation cannot be achieved if the value of the marginal product is greater in one activity than in another. It would be, therefore, profitable to shift labour from low marginal value activity to high marginal value activity, thus increasing the total value of all products taken together.