Meaning and Definitions of Economics

CHAPTER 1

1.1 INTRODUCTION

Any discussion on a subject must start by explaining what the subject is all about *i.e.,* by *defining* the subject. In this chapter, we shall define Economics. The questions which Economics actually discusses will then be taken up in the subsequent chapters.

The principal fact about Economics that we must always remember is that it is a *social science.* If we forget this, we tend to get bogged down with questions that are not relevant to Economics and are best left to other disciplines.

1.2 MEANING OF ECONOMICS

The word 'Economics' originates from the Greek work '*Oikonomikos*' which can be divided into two parts:

(*a*) '*Oikos*', which means 'Home', and

(*b*) '*Nomos*', which means 'Management'.

Thus, Economics means 'Home Management'. The head of a family faces the problem of managing the unlimited wants of the family members within the limited income of the family. In fact, the same is true for a society also. If we consider the whole society as a 'family', then the society also faces the problem of tackling unlimited wants of the members of the society with the limited resources available in that society. Thus, Economics means the study of the way in which mankind organises itself to tackle the basic problems of scarcity. All societies have more wants than resources. Hence, a system must be devised to allocate these resources between competing ends.

1.3 DEFINITIONS OF ECONOMICS

We have now formed an idea about the meaning of Economics. This at once leads to a general definition of Economics. *Economics is the social science that studies economic activities.*

This definition is, however, too broad. It does not specify the exact manner in which the economic activities are to be studied. Economic activities essentially mean production, exchange and consumption of goods and services. However, with the progress of civilisation, the complexity of the production, exchange and consumption processes in society have increased manifold. Economists at different times have emphasised different aspects of economic

activities, and have arrived at different definitions of Economics. We shall now discuss some of these definitions in detail.

These definitions can be classified into four groups:

1. Wealth definitions,
2. Material welfare definitions,
3. Scarcity definitions, and
4. Growth-centered definitions.

1.3.1 Adam Smith's Definition

Adam Smith, considered to be the founding father of modern Economics, *defined Economics as the study of the nature and causes of nations' wealth or simply as the study of wealth.*

The central point in Smith's definition is wealth creation. Implicitly, Smith identified wealth with welfare. He assumed that, the wealthier a nation becomes the happier are its citizens. Thus, it is important to find out, how a nation can be wealthy. Economics is the subject that tells us how to make a nation wealthy. Adam Smith's definition is a wealth-centred definition of Economics.

1.3.2 Main Characteristics of Wealth Definitions

1. **Exaggerated emphasis on wealth:** These wealth centered definitions gave too much importance to the creation of wealth in an economy. The classical economists like Adam Smith, J.S. Mill, J.B. Say, and others believed that economic prosperity of any nation depends only on the accumulation of wealth.

2. **Inquiry into the creation of wealth:** These definitions show that Economics also deals with an inquiry into the causes behind the creation of wealth. For example, wealth of a nation may be increased through raising the level of production and export.

3. **A study on the nature of wealth:** These definitions have indicated that wealth of a nation includes only material goods (*e.g.*, different manufactured items). Non-material goods were not included. Hence, non-material goods like services of teachers, doctors, engineers, etc., are not considered as 'wealth'.

1.3.3 Alfred Marshall's Definition

Alfred Marshall also stressed the importance of wealth. But he also emphasised the role of the individual in the creation and the use of wealth. He wrote: "***Economics is a study of man in the ordinary business of life. It enquires how he gets his income and how he uses it. Thus, it is on the one side, the study of wealth and on the other and more important side, a part of the study of man".*** Marshall, therefore, stressed the supreme importance of man in the economic system. Marshall's definition is considered to be material-welfare centred definition of Economics.

1.3.4 Features of Material Welfare Definitions

The main features of material welfare-centred definitions are as follows:

1. **Study of material requisites of well-being:** These definitions indicate that Economics studies only the material aspects of well-being. Thus, these definitions emphasise the materialistic aspects of economic welfare.

2. **Concentrates on the ordinary business of life:** These definitions show that Economics deals with the study of man in the ordinary business of life. Thus, Economics enquires how an individual gets his income and how he uses it.

3. **A stress on the role of man:** These definitions stressed on the role of man in the creation of wealth or income.

1.3.5 Lionel Robbins' Definition

The next important definition of Economics was due to Prof. Lionel Robbins. In his book '*Essays on the Nature and Significance of the Economic Science*', published in 1932, Robbins gave a definition which has become one of the most popular definitions of Economics. According to Robbins, "***Economics is a science which studies human behaviour as a relationship between ends and scarce means which have alternative uses***". A long line of economists after Robbins, including Scitovsky and Cassel agreed with this definition and carried on their analysis in line with this definition. It is a scarcity-based definition of Economics.

1.3.6 Main Features of Scarcity Definition

The principal features of scarcity definitions are as follows:

1. **Human wants are unlimited:** The scarcity definition of Economics states that human wants are unlimited. If one want is satisfied, another want crops up. Thus, different wants appear one after another.

2. **Limited means to satisfy human wants:** Though wants are unlimited, yet the means for satisfying these wants are limited. The resources needed to satisfy these wants are limited. For example, the money income (per month) required for the satisfaction of wants of an individual is limited. Any resource is considered as scarce if its supply is less than its demand.

3. **Alternative uses of scarce resources:** Same resource can be devoted to alternative lines of production. Thus, same resource can be used for the satisfaction of different types of human wants. For example, a piece of land can be used for either cultivation, or building a dwelling place or building a factory shed, etc.

4. **Efficient use of scarce resources:** Since wants are unlimited, so these wants are to be ranked in order of priorities. On the basis of such priorities, the scarce resources are to be used in an efficient manner for the satisfaction of these wants.

5. **Need for choice and optimisation:** Since human wants are unlimited, so one has to choose between the most urgent and less urgent wants. Hence, Economics is also called a science of choice. So, scarce resources are to be used for the maximum satisfaction (*i.e.*, optimisation) of the most urgent human wants.

1.3.7 Modern Growth-Oriented Definition of Samuelson

In relatively recent times, more comprehensive definitions of Economics have been offered. Thus, Professor Samuelson writes, "***Economics is the study of how people and society end up choosing, with or without the use of money, to employ scarce productive resources that could have alternative uses to produce various commodities over time and distributing them for consumption, now or in the future, among various persons or groups in society. It analyses costs and benefits of improving patterns of resource allocation***". A large number of modern economists subscribe to this broad definition of Economics.

1.3.8 Features of the Modern Growth-Oriented Definition

1. **Growth-orientation:** Economic growth is measured by the change in national output over time. The definition says that, Economics is concerned with determining the pattern of employment of scarce resources to produce commodities 'over time'. Thus, the dynamic problems of production have been brought within the purview of Economics.

2. **Dynamic allocation of consumption:** Similarly, under this definition, Economics is concerned with the pattern of consumption, not only now but also in the future. Thus, the problem of dividing the use of income between present consumption and future consumption has been brought within the orbit of Economics.

3. **Distribution:** The modern definition also concerns itself with the distribution of consumption among various persons and groups in a society. Thus, while the problem of distribution is implicit in the earlier definitions, the modern definition makes it explicit.

4. **Improvement of resource allocation:** The definition also says that, Economics analyses the costs and benefits of improving the pattern of resource allocation. Improvement of resource allocation and better distributive justice are synonymous with economic development. Thus, issues of development of a less developed economy have also been made subjects of the study of Economics.

To put it summarily, the modern definition of Economics is the most comprehensive of all the definitions. All the issues that were highlighted in the earlier definitions are included here. In addition, the issues of development of a backward economy, as well as those of growth in a mature capitalist economy, form part of this definition. Economics as it stands today, is built on the basis of this comprehensive definition.

1.4 BRANCHES OF ECONOMICS: NATURE OF ECONOMIC SCIENCE

Economic theory, as it stands today, has several branches. Of these, two are most important. These are *microeconomics* and *macroeconomics.* We shall now briefly mention the major features of these two branches to have an idea regarding the nature of economics.

1.4.1 Microeconomics

Microeconomics is that branch of economics which is concerned with the decision-making of a single unit of an economic system. How does an individual (or a family) decide on how much of various commodities and services to consume? How does a business firm decide how much of its product (or products) to produce? These are the typical questions discussed in microeconomics. Determination of income, employment, etc. in the economic system as a whole is not the concern of microeconomics. Thus, microeconomics can be defined as the study of economic decision-making by micro-units.

1.4.2 Usefulness of Microeconomics

1. **Determination of demand pattern:** The study of microeconomics has several uses. It determines the pattern of demand in the economy, *i.e.,* the amounts of the demand for the different goods and services in the economy, because the total demand for a good or service is the sum total of the demands of all the individuals. Thus, by determining the demand patterns of every individual or family, microeconomics determines the demand pattern in the country as a whole.

2. **Determination of the pattern of supply:** In a similar way, the pattern of supply in the country as a whole, can be obtained from the amounts of goods and services produced by the firms in the economy. Microeconomics, therefore, determines the pattern of supply as well.

3. **Pricing:** Probably the most important economic question is the one of price determination. The prices of the various goods and services determine the pattern of resource allocation in the economy. The prices, in turn, are determined by the interaction of the forces

of demand and supply of the goods and services. By determining demand and supply, microeconomics helps us in understanding the process of price determination and, hence, the process of determination of resource allocation in a society.

4. **Policies for improvement of resource allocation:** As is well-known, economic development stresses the need for improving the pattern of resource allocation in the country. Development polices, therefore, can be formulated only if we understand how the pattern of resource allocation is determined. For instance, if we want to analyse how a tax or a subsidy will affect the use of the scarce resources in the economy, we have to know how these will affect their prices. By explaining prices and, hence, the pattern of resource allocation, microeconomics helps us to formulate appropriate development policies for an underdeveloped economy.

5. **Solution to the problems of micro-units:** Finally, it goes without saying that, since the study of microeconomics starts with the individual consumers and producers, policies for the correction of any wrong decisions at the micro-level are also facilitated by microeconomics. For example, if a firm has to know exactly what it should do in order to run efficiently, it has to know the optimal quantities of outputs produced and of inputs purchased. Only then can any deviation from these optimal levels be corrected. In this sense, microeconomics helps the formulation of policies at the micro-level.

In every society, the economic problems faced by different economic agents (such as individual consumers, producers, etc.) can be analysed with the help of microeconomic theories. This shows that **economics is a social science** which aims at analysing the economic behaviour of individuals in a social environment.

1.4.3 Limitations of Microeconomics

However, microeconomics has its limitations as well:

1. **Monetary and fiscal policies:** Although total demand and total supply in the economy is the sum of individual demands and individual supplies respectively, the total economic picture of the country cannot always be understood in this simplistic way. There are many factors affecting the total economic system, which are outside the scope of microeconomics. For example, the role of monetary and fiscal policies in the determination of the economic variables cannot be analysed completely without going beyond microeconomics.

2. **Income determination:** Microeconomics also does not tell us anything about how the income of a country (*i.e.,* national income) is determined.

3. **Business cycles:** A related point is that, it does not analyse the causes of fluctuations in national income. The ups-and-downs of national income over time are known as *business cycles.* Microeconomics does not help us in understanding as to why these cycles occur and what the remedies are.

4. **Unemployment:** One of the main economic problems faced by an economy like India is the problem of unemployment. This, again, is one of the areas on which microeconomics does not shed much light. Because, if we are to find a solution to the unemployment problem, we must first understand the causes of this problem. For that, in turn, we must understand how the total employment level in the economy is determined. This is difficult to understand from within the confines of microeconomics.

1.4.4 Macroeconomics

Macroeconomics is that branch of economics which is concerned with the economic magnitudes relating to the economic system as a whole, rather than to the microeconomic units like individuals or firms. It has, therefore, been called 'aggregative economics'. In the picturesque language of Kenneth Boulding, "Macroeconomics deals ... not with individual income but with national income, not with individual prices but with the price level, not with individual outputs but with national output".

1.4.5 Importance of Macroeconomics

Why is the study of macroeconomics important? To put it briefly, macroeconomics deals with some of the questions untouched by microeconomics. The study of economics is, therefore, left incomplete, if we do not study macroeconomics. Some of the important issues analysed in macroeconomics are the following:

1. **Income and employment determination:** The determination of national income and of total employment in the country are vital concerns of macroeconomics. Since the volume of unemployment is simply population minus the number of people employed, unemployment is determined as soon as the employment level is known.

2. **Price level:** The determination of the general price level is discussed in macroeconomic theories. Upward movement of the general price level is known as *inflation.* Thus, if we want to understand the process of inflation and find ways of controlling it, we must resort to the study of macroeconomics.

3. **Business cycles:** The economic booms and depressions in the levels of income and employment follow one another in a cyclical fashion. While income rises and employment expands during boom periods, they shrink during depressions. Since depressions bring business failures and unemployment in their wake, economists have sought remedies to depressions. Discussion of business cycles in general and anti-depression policies in particular, fall within the scope of macroeconomics.

4. **Balance of payments:** The balance of payments theory is also a part of macroeconomics. The difference between the total inflow and the total outflow of foreign exchange is known as the balance of payments of a country. When this balance is negative (*i.e.,* outflow exceeds inflow), the country faces a lot of economic hardships. The causes and remedies of such balance of payments problems are discussed in macroeconomics.

5. **Government policies:** The effects of various government policies on the economic variables like national income or the general price level are also studied in macroeconomics. [It should be noted that, we are talking of the macroeconomic effects of government policies. The effects of these policies on the micro-units (for instance, the effects of taxes on the output of an individual firm), are the subject-matter of microeconomics.] Since, the Government occupies an important position in any modern economic system, the analysis of these effects is of obvious importance.

6. **Interrelations between markets:** Probably, the most important contribution of macroeconomic theories is to show that different markets of the economic system (for example, the commodity market, the labour market, the bond market, the money market, etc.) are interrelated. Any disturbance in one of these markets affects all the others. (Again, it should be noted that, it is the interrelation between the macroeconomic markets that we are talking

about here. The relationship between the markets of the individual commodities is the subject-matter of 'general equilibrium theory', which is a part of microeconomics).

Thus, we see that the study of microeconomics and that of macroeconomics are complementary to each other. The limitations of microeconomics are covered by macroeconomics. On the other hand, macroeconomics does not make a detailed study of the individual consumer or producer. This is taken care of by microeconomics. One can hope to form a comprehensive notion of what economics is all about only when one is acquainted with both microeconomics and macroeconomics.

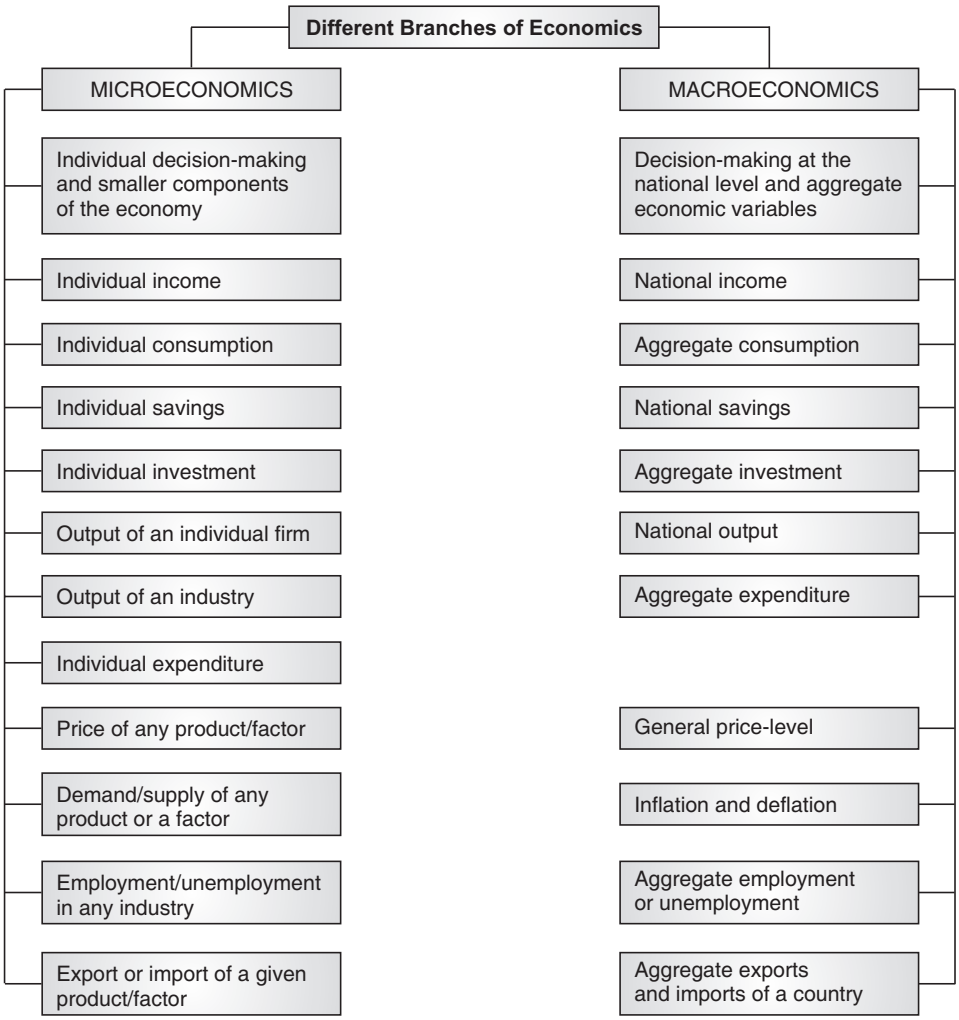
1.4.6 Differences between Microeconomics and Macroeconomics

We can now indicate some of the important differences between Microeconomics and Macroeconomics. This is shown in Table 1.1 and Chart 1.

Table 1.1: Differences between Microeconomics and Macroeconomics

Microeconomics	Macroeconomics
1. It is that branch of economics which deals with the economic decision-making of individual economic agents such as the producer, the consumer, etc.	1. It is that branch of economics which deals with aggregates and averages of the entire economy, *e.g.*, aggregate output, national income, aggregate savings and investment, etc.
2. It takes into account small components of the whole economy.	2. It takes into consideration the economy of any country as a whole.
3. It deals with the process of price-determination in case of individual products and factors of production.	3. It deals with general price-level in any economy.
4. It is known as price theory (since it explains the process of allocation of economic resources along alternative lines of production on the basis of relative prices of various goods and services.)	4. It is also known as the income theory (since it explains the changing levels of national income in any economy during any particular time period.)
5. It is concerned with the optimisation goals of individual consumers and producers (*e.g.*, individual consumers are utility-maximisers, while individual producers are profit-maximisers.)	5. It is concerned with the optimisation of the growth process of the entire economy.
6. It studies the flow of economic resources or factors of production from any individual owner of such resources to any individual user of these resources, etc.	6. It studies the circular flow of income and expenditure between different sectors of the economy (say, between the firm sector and the household sector.)
7. Microeconomic theories help us in formulating appropriate policies for resource allocation at the firm level.	7. Macroeconomic theories help us in formulating appropriate policies for controlling inflation (*i.e.*, rising price-level), unemployment, etc.
8. It takes into account the aggregates over homogeneous or similar products (*e.g.*, the supply of steel in an economy.)	8. It takes into account the aggregates over heterogeneous or dissimilar products (say, the Gross Domestic Product of any country during any year.)

CHART 1



1.5 BROAD SCOPE OF ECONOMICS

The scope of economics entails the identification of basic economic problems before any society and find out different possible ways to solve those problems.

1.5.1 Economic Problem

The main economic problems faced by every society are:

1. Unlimited human wants,
2. Limited availability of resources to satisfy those wants, and
3. Fulfillment of unlimited wants with limited resources.

In any society, human wants are unlimited. If one want is satisfied, the other appears soon. For instance, if the *basic needs* of human being (*e.g.*, food, clothing and shelter) are satisfied then some *secondary needs* appear very soon. These secondary needs may be social needs, *i.e.*,

need for attaining a social function, need for fulfilling some social obligations, etc. However, in comparison with this unlimited human wants, the resources required to satisfy such wants remain limited.

Thus, the main problem before any society is to satisfy the unlimited wants with limited resources. Here arises the problem of choice or selection. It implies that every society has to arrange its requirements in order of priority. Then, with its limited resources, the society has to satisfy the human wants in order of priority. In Economics, we try to analyse the causes behind these basic economic problems and find out possible ways to solve the said problems.

1.5.2 Causes behind Economic Problems

The main causes behind the economic problems of any society are:

1. **Unlimited human wants:** Every human being requires varieties of goods and services for maintaining and improving his or her standard of living. Whenever the basic needs of food, clothing and shelter are fulfilled then the people feel that they 'want' and 'need' education, book, pen and pencil, eraser, chair, table, television, tape-recorder, CD-player, computer, travel, sports, finer clothes, washing machine, and thousands of such items. In a modern society, these wants are increased further in response to the pressures of fashion and advertising. These wants appear one after another like untiring waves of the sea.

2. **Limited resources for satisfying these wants:** Production of various goods and services require resources like land resources, mineral resources, forest resources, physical capital (*e.g.*, machines, factory sheds, etc.) and money capital, human resources (*e.g.*, skilled man power), etc. However, compared to the unlimited wants for various goods and services, these resources seem to be insufficient. It implies that even if all these available resources are fully employed for producing various goods and services, only a small part of human wants can be satisfied. So, scarcity of resources is an important reason behind the economic problem in any society.

1.5.3 Three Main Economic Questions

In recent times, economists have analysed economic systems from a broad perspective. These modern economists talk about three main economic problems: (1) What to produce; (2) How to produce and (3) For whom to produce. In short, these are called the 'What, How and for Whom' questions.

1.6 WHAT TO PRODUCE?

The very first question that any economic system must answer is: What goods and services are to be produced in a society and in what quantities?

This question arises from the fact that human wants are *unlimited,* while resources are *limited.* The satisfaction of human wants requires the consumption of goods and services. Human beings, therefore, wish to consume goods and services. But, since resources are limited, the economic system cannot produce *all* types of goods and services. Even any particular good or service cannot be produced in an infinitely large quantity. Only *finite* amounts of a *limited number* of goods and services can be produced. Therefore, there arises this decision problem. The economy must decide which goods and services to produce and which goods and services to exclude from production.

The economy must *choose* its production plan carefully. Everything cannot be produced and even those things which are produced cannot be produced in unlimited quantities.

1.7 HOW TO PRODUCE?

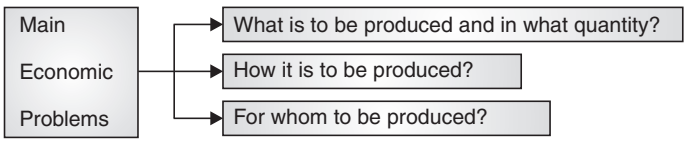
The second basic problem that every economy must solve is that of deciding *how to produce* the goods and services (that the economy has decided to produce). A particular quantity of a particular good or service can be produced in many different ways. The economy must choose a particular way of producing the specified amount of the good. Moreover, this must be done for each of the different goods and services that the economy wants to produce.

1.7.1 Choice of Techniques

In the language of the economists, a particular way of producing a particular good or service (or a set of goods and services) is called a *technique of production.* For instance , in some cases, a particular amount of a particular good can be produced by different combinations of inputs. Thus, it may be that 10 tons of wheat can be produced either on 2 hectares of land by 5 agricultural workers or on 4 hectares of land by 2 workers. Here, there are two techniques for producing 10 tons of wheat: (2 hectares of land, 5 workers) and (4 hectares of land, 2 workers). An economy which has decided to produce 10 tons of wheat must choose between these two techniques. There is a similar problem for every good (or every set of goods). Therefore, the question 'how to produce' is also known as the problem of *choice of techniques.*

1.8 FOR WHOM TO PRODUCE?

Suppose now that the first two basic problems have been solved *i.e.,* the economy has decided the amounts of production of various goods and services and has also chosen the appropriate techniques for producing them. There still remains the problem of deciding the manner in which the produced goods and services will be used. That will, obviously, be used to satisfy human wants. But among the members of society, who will receive how much of the produced commodities? In other words, after the commodities have been *produced,* there remains the task of deciding how they will be *distributed.* Who will get (to consume) the produced commodities? This is known as the question: '*For whom to produce*? It is also known as the *problem of distribution.*



1.9 GENERAL FRAMEWORK

Professor Paul Samuelson is a leading figure among those economists who have explained the working of the economic system through these three questions. According to Samuelson, the main functions of an economic system are to answer these three questions.

1.9.1 Explanation of these Problems using Production Possibility Curve

Professor Samuelson used the concept of the production possibility curve to explain the economic problem of a society.

A **production possibility curve** is the locus of all such combinations of two commodities which can be produced in a country with its given resources and technology. In Fig. 1, P_0P_0' is the production possibility curve of a country. It shows different combinations of paddy (X) and natural rubber (Y) which of the country can produce with its available resources and technology. It can choose any such combination like N or T which lies on this curve.

(*a*) **Limited resource:** Here, the combination point N shows $0Y_1$ amount of natural rubber and $0X_0$ amount of paddy. Again, the combination point T shows $0Y_0$ amount of natural rubber and $0X_1$ amount of paddy. Thus, point N shows relatively higher amount of natural rubber as compared to point T. It implies that if the country wants to produce more of paddy, it has to reduce the production of natural rubber. This shows the limited availability of natural resources. Due to this reason, the country cannot choose any such combination like 'H' which lies beyond the production possibility curve.

(*b*) **The problem of 'what to produce and in what quantity':** This curve also reflects the problem of 'what to produce'. If the country uses all of its resources for the production of only natural rubber then the maximum possible production of natural rubber will be $0P'_0$. In that case, there will be no production of paddy.

Similarly, if the country uses all of its resources for the production of paddy then, the maximum possible production of paddy will be $0P'_0$. But in that case, the production of natural rubber will be zero.

(*c*) **Efficient utilisation of available resources:** If the country chooses the combination point M, *i.e.,* if it produces $0X_0$ of paddy and $0Y_0$ of natural rubber then it would indicate inefficient utilisation of resources. Here, the country can increase the production of paddy from $0X_0$ to $0X_1$ by keeping the production of natural rubber unchanged at $0Y_0$ (*i.e.,* the country can move from point M to T). Similarly, in this situation, the country can also increase the production of natural rubber from $0Y_0$ to $0Y_1$ by keeping the production of paddy unchanged at $0X_0$ (*i.e.,* the country can move from point M to N.). Thus, if the country chooses any combination of X and Y on the production possibility curve, it implies efficient utilisation of available resources. However, if it chooses any combination that lies below that curve, it would indicate inefficient utilisation or underutilisation of resources.

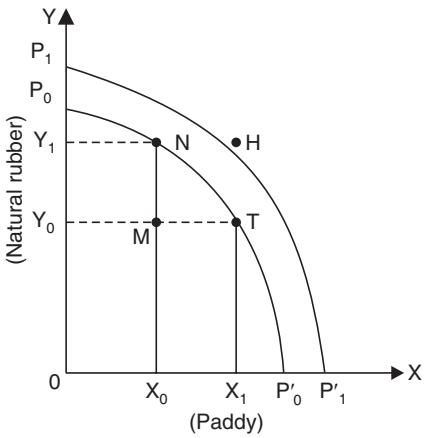


Fig. 1

(*d*) **Improvement in technology and increase in the amount of resources:** If new resources are available or if the level of technology is improved (*e.g.,* application of high-yielding varieties of seeds, better methods of cultivation, better irrigational facilities, etc.) then the whole production possibility curve will shift outward. This is shown by $P_1P'_1$ curve in Fig. 1. In that case, the country can produce more of both X and Y commodities. The possible ways of solving the basic economic problems will be discussed in subsequent chapters.

1.10 WHAT IS MANAGERIAL ECONOMICS?

Managerial economics can be defined as the application of economic theory and methodology to business decision-making practice. More specifically, managerial economics is the use of

tools and techniques of economic analysis to solve the problems of decision-making by the business firms which aim at achieving certain objectives subject to some constraints. Thus, managerial economics shows the process of integrating economic theory with business operations. Hence, it can be regarded as an applied branch of economics.

Any business firm wants to make the best use of the economic resources available to it, particularly to maximise its profit or its sales revenue. Hence, business executives (or the managers of different business firms) have to take prudent decisions regarding the production, type of product-mix, purchase of inputs, product-price, etc., keeping in view the targets or definite goals of the business firm. Since future is always uncertain, such tasks of decision-making for the future progress of the business firm are really difficult. Managerial economics makes this difficult task a bit easier and systematic.

1.10.1 Some Definitions of Managerial Economics

According to McNair and Meriam, "*managerial economics consists of the use of economic models of thought to analyse business situations*".

M.H. Spencer and Louis Siegelman have defined managerial economics as "*the integration of economic theory with business practice for the purpose of facilitating decision-making and forward planning by management*".

According to Evan J. Douglas, "*managerial economics is concerned with the application of economic principles and methodologies to the decision-making process within the firm or organisation*."

On the other hand, E.F. Brigham and J.L. Pappas defined managerial economics as "*the application of economic theory and methodology to business administration practice*."

According to W.R. Henry and W.W. Haynes, "*managerial economics is the study of allocation of the limited resources available to a firm or other unit of management among the various possible activities of that unit*."

1.10.2 Managerial Economics and General Economics

Managerial economics is a branch of general economics. In general, "economics is the study of how people and society end up choosing, with or without the use of money, to employ scarce productive resources that could have alternative uses to produce various commodities over time and distributing them for consumption, now or in future, among various persons or groups in a society. It analyses costs and benefits of improving patterns of resource allocation".

The firms and the households are the basic economic entities in an economy. The households are 'consumption units' while the firms are 'production units'. Thus, business firms purchase different factors of production such as labour, raw materials, etc. and produce (and sell) different types of products. The principal goal of any business firm is to maximise its profit. Since managerial economics is concerned with the economic decisions of these firms, it is regarded as a part of general economics.

1.10.3 Nature of Managerial Economics

Managerial economics has some special characteristics, and these characteristics indicate the nature of managerial economics. Some of the important characteristic features of managerial economics are noted below:

1. **Managerial economics is microeconomic in nature:** Economic theories can broadly be divided into two parts, viz., macroeconomics and microeconomics. While macroeconomics

is concerned with the economic magnitudes relating to the whole economy (such as national income, national production, etc.) microeconomics is concerned with the decision-making of a single economic entity (such as a business firm) within this system. Since managerial economics deals with the economic problems of individual business firms in an economy, it is microeconomic in nature. However, the firm works within a given macroeconomic environment.

2. **Prescriptive in nature:** Managerial economics actually prescribes the ways through which a business firm can achieve its goal within its constraints. It prescribes the policies that should be undertaken by any business firm for achieving its specific target. Hence, managerial economics is not concerned with mere description of economic theories.

3. **Pragmatic in its approach:** Managerial economics is pragmatic in its approach because it emphasises on the real-life problems faced by any business firm and their possible solutions, rather than concentrating only on some abstract economic theories (which are based on restrictive assumptions).

4. **Emphasises on quantitative analysis:** Managerial economics is mainly concerned with some of the quantitative aspects of business decisions. Business decisions relating to (*i*) output to be produced, (*ii*) inputs to be used, (*iii*) prices to be fixed, (*iv*) estimated cost and revenue schedules, etc., are expressed in quantitative terms. Some of the qualitative aspects of production such as efficiency of labour or the efficiency of factor inputs, are also estimated in quantitative terms. For instance, average productivity of the workers can be estimated to reflect their efficiency.

1.10.4 Scope of Managerial Economics

With the continuous expansion of business world, the scope of managerial economics has also increased to a great extent. It has become a multi-disciplinary subject, and draws not only on economics but also on other subjects such as mathematics, statistics, accounting theory, etc. Business firms use various techniques to forecast the demand pattern, estimate the economic viability of a project, etc. Thus, analysis of the present business environment, and forward planning require not only the knowledge of economic theory but also other related subjects like mathematics and statistics. Hence, managerial economics takes into consideration all these aspects of analytical framework.

Though the scope and subject-matter of managerial economics have been increasing day by day, we can mention some of the important fields of study which fall under the purview of managerial economics. These are stated below:

1. Demand analysis,
2. Production and cost analysis,
3. Objectives of business firms,
4. Pricing policies,
5. Capital budgeting, etc.

Every business firm has to produce different products keeping an eye on the demand pattern. So demand analysis is necessary for any business firm. The production and cost analysis are necessary to undertake proper project planning. In fact, in a competitive business environment, the existence of a firm depends much on its cost-competitiveness. Generally, the main objective of a business firm is to earn maximum profit. However, a modern firm may

have some other objectives such as maximisation of sales revenue, minimisation of risk component, etc. Thus, an analysis of the alternative objectives of any business firm becomes relevant. Any business firm has to fix its product-price in such a manner that it can cover not only its average cost of production but also create some profit margin. Thus, analysis of pricing policy becomes pertinent. Capital-investment decisions or capital budgeting refers to the process of planning expenditure (by any business firm) which would generate returns over a particular time span. So, the exercise of capital budgeting also comes under the purview of managerial economics.

It is important to note that managerial economics not only covers the business firms but also the non-profit organisations (such as educational institutions, charitable non-government organisations, etc.). The objective of any such non-profit organisation which provides primary health care services to rural poor, may be optimum utilisation of its available fund (received through donations/aid.) Sometimes 'business economics' and 'managerial economics' are used to denote same meaning. But business economics is applicable only in case of business activities with a profit-motive. But, as we have mentioned earlier, the managerial economics also covers the non-profit organisation.

1.11 ECONOMIC DECISION AND TECHNICAL DECISION

Managerial economics has often been defined as economics applied in decision-making. In this connection, we can make a distinction between the concepts of economic decision and technical decision.

Economic decision refers to:

(*i*) the decision taken by any producer regarding the volume of output to be produced during any particular time period to maximise its profit. The producer either wants to maximise its output given its cost constraint or minimise the cost given the targeted output.

(*ii*) the decision taken by any consumer regarding the quantities of commodities to be purchased to maximise his/her utility (The want-satisfying power of a commodity is considered as its utility.) The consumer wants to maximise his/her utility subject to his/her budget constraint.

(*iii*) the decision taken by the government to invest in such activities which maximise social welfare.

On the other hand, the **technical decision** refers to:

(*i*) the decision taken by any engineer regarding the application of any particular technique to complete a job or a project work within a given time period;

(*ii*) the decision taken by any architecture regarding the technicalities of a design-plan for, say, building a housing complex;

(*iii*) the decision taken by any entrepreneur (even a farmer) with regard to the proportion in which some inputs are be applied in any production process without any consideration for the prices of those inputs (say, the proportion of water and chemical fertiliser to be applied in any cultivation work), etc.

Thus, if any engineering firm designs a thermal power project, the technical decision of the firm would become relevant in this process. However, if the same firm makes a cost-benefit analysis with an objective to maximise its profit or minimise its cost, the economic decision becomes relevant.

Similarly, when a farmer chooses a particular proportion of high yielding varieties of seeds, chemical fertilisers and irrigation-water for carrying out the cultivation process, the technical decision becomes relevant. But the market prices of those inputs and the given income of the poor farmer may not allow him to achieve that 'technical decision'. Hence, when we take into account the given input prices and the available fund to be invested in the production process, the economic decision becomes more relevant.

Table 1.2: Basic Differences between Economic and Technical Decisions

Economic decision	Technical decision
1. It is more concerned with the theoretical aspect of a production or consumption decision.	1. It is more concerned with the technical or application aspects of any productive activity.
2. It is concerned with optimisation behaviour of a firm subject to cost or fund constraint.	2. It is concerned with achieving a targeted output with technologically efficient dose of inputs (disregarding the input prices).

1.12 DECISION-MAKING IN MANAGERIAL ECONOMICS

The theory of decision-making is very much relevant to managerial economics. Much of economic theory is based on the assumption of a single goal, viz, maximisation of profit by a firm or maximisation of utility by any individual consumer. It also rests on the assumption of perfect knowledge or certainty. However, the theory of decision-making in the realm of managerial economics recognises multiplicity of goals and the existence of uncertainty.

■ **Definition of decision-making:** Decision-making is a process of selecting a particular course of action from among a number of alternatives.

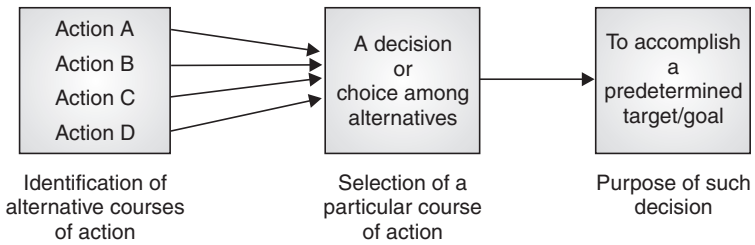
1.12.1 Steps in the Process of Managerial Decision-Making

Simply speaking, there are two broad steps in the process of managerial decision-making:

1. Identification of alternative courses of action, and
2. The selection of a particular course of action.

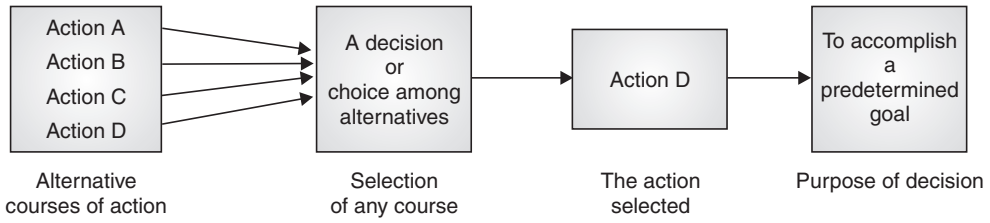
Let us assume that four alternative courses of action are available to the decision-maker. The identification of these alternative courses of action for the accomplishment of a predetermined target or objective is the first step in this decision-making process. Now, the problem is to select a particular course of action or to make a decision which is likely to be best suited for achieving the targeted goal.

Step I: ***Identification of alternative courses of action***



At the next step, the decision-maker after making a thorough evaluation of those alternative courses of action, selects a particular course of action (say, Action D) for achieving its target.

Step II: ***Selection of a particular course of action***



In this flow-chart, it is assumed that the decision-maker chooses only one course of action. But in actual practice, the decision-maker may select multiple course of actions or a combination of two or more actions. However, the essential nature of decision-making process remains the same.

■ **Uncertainty in decision-making:** If everything can be predicted or estimated accurately, the decision-making process would be very simple. However, in most cases, the outcome of a decision cannot be controlled by the decision-maker. As a result, some elements of uncertainty remain present in the decision-making process. In that case, the decision-maker tries to estimate the probable outcome of each alternative course of action.

Such uncertainty arises because of various reasons:

(*i*) Unpredictable movements of market demand for any product;

(*ii*) Unforeseen changes in the input prices both in home market and world market (when the inputs are required to be imported);

(*iii*) Unforeseen changes in the tax policy, export-import policy, licensing policy, etc., of the government;

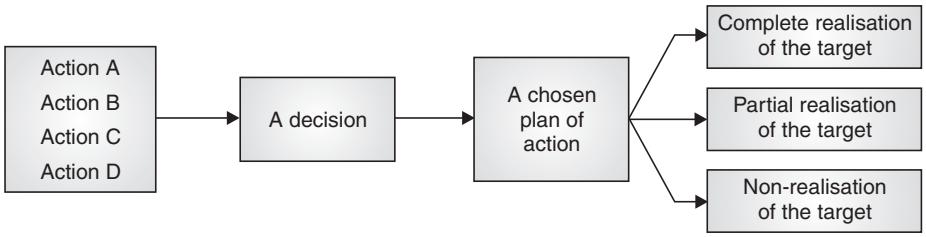
(*iv*) Unpredictable political and social environment (say, sudden break out of any social or political tension);

(*v*) Unpredictable changes in the preference pattern of the consumers;

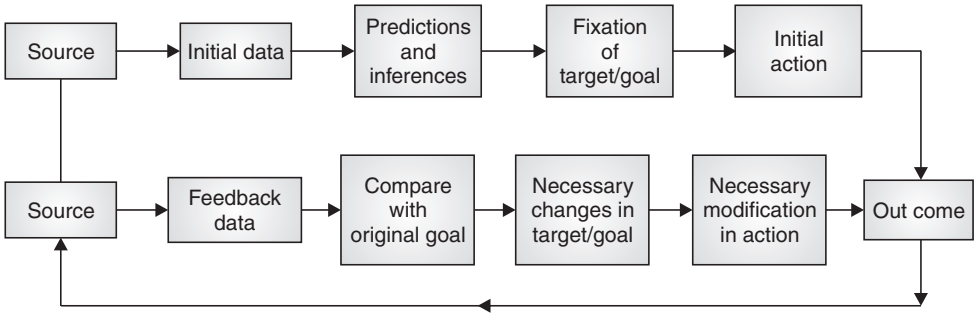
(*vi*) Unpredictable behaviour of the domestic and foreign investors (that may affect the fund-raising move of a firm); etc.

Such uncertainties lead to the possibilities of either (*i*) complete realisation of the target, or (*ii*) partial realisation of the target or (*iii*) non-realisation of the target.

Uncertainty in decision-making process



Since the decision-maker is subject to all such uncertainties in a business world, this process involves a risk (*i.e.,* the probability of non-fulfilment of a target or the probability of making negative profit in a venture). Hence, the decision-maker tries to take cautious steps to minimise such problems. He may take necessary feedback of outcome resulting from his initial course of action and compare the same with the original target. Then he may make necessary adjustments or changes in the course of action.



Feedback Information System for Decision-making

From the view point of managerial decision-making, such feedback mechanism and the modified decision becomes profitable when it (*i*) increases revenue more than production costs, or (*ii*) reduces costs more than the revenue of the firm, or (*iii*) increases revenue without affecting the costs of production, or (*iv*) reduces costs of production without affecting the revenue of the firm.

1.12.2 Functional Aspects of Decision-Making

The decision-making process in managerial economics can also be analysed from the view point of various functions of any entrepreneur (viz., production, finance, marketing, purchase of inputs, etc.)

The decision variables can be identified for each of those functions.

Managerial functions	Decision variables
1. **Production**	Choice of technology, factor substitutability, scale of production, type of products/product diversification, capacity utilisation, etc.
2. **Purchase of inputs**	Input costs, inventory control, time of purchase, etc.
3. **Finance**	Cost of capital, sources of fund, capital structure, cash flow and fund flow, dividend policy, etc.
4. **Marketing**	Advertisement/selling expenses, transport costs, distribution channel, customer care, pattern of competition, product price, etc.
5. **Personnel**	Wages and bonus payments, incentive schemes, job rotation and training, etc.
6. **Legal**	Tax laws, pollution control regulations, labour laws, licensing policies, export-import policies, etc.