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INTRODUCTION TO THE STUDY OF ECONOMICS

Economics is a vast subject encompassing various topics related to production, consumption, saving, investment, inflation, employment and unemployment, national income, international trade, quality of life, fiscal policy, monetary policy etc so on and so forth. The list is unending. From the point of view of better understanding of the subject and finding a solution to the problem, it is imperative to know the nature of the economic issue under study and the area or branch under which the issue is dealt with.



OBJECTIVES

After completing this lesson, you will be able to:

- understand the meaning of economics;
- distinguish between positive and normative economics;
- differentiate between micro and macroeconomics and highlight their components;
- examine the significance of microeconomics and macroeconomics; and
- relate the interdependence of microeconomics and macroeconomics.

12.1 MEANING OF ECONOMICS

The term 'Economics' is derived from two Greek words **OIKOS** and **NEMEIN**, meaning the rule or law of the household. Economics therefore is concerned with not just how a nation allocates its resources to various uses but it deals with the process by which the productive capacity of these resources can be further



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increased and with the factors which in the past have led to sharp fluctuations in the rate of utilization of resources. British economist Robbins has defined economics as follows:

“Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses.

Robbins definition is comprehensive in explaining the scope of Economics. It is the problem of ‘choice’ which is all pervasive in areas of consumption, production and exchange. For example, a consumer has to choose that combination of goods which yields maximum satisfaction. Similarly, a firm has to choose that size of output which ensures maximum profit. **Nobel Laureate Prof. Samuelson has spelled out Economics as follows:**

“Economics is the study of how men and society choose, with or without the use of money, to employ scarce productive resources which could have alternative uses, to produce various commodities over time, and distribute them for consumption now and in the future among various people and groups of society”.

12.2 POSITIVE VS NORMATIVE ECONOMICS

While discussing the issues related to the economic conditions and trying to find solutions to economic problems, economists often talk about positive and normative nature of these issues. Positive economics deals with economic analysis which are based on facts and statistical data. When an economic phenomenon is being described with statistical support, then we call it positive economics. So positive economics relates to the phenomenon of ‘what is’. On the other hand, normative economics deals with the issue of ‘what ought to be’. Normative economics is based on value judgement and debate which are required to arrive at some conclusion. Issues related to framing policies for the society, mostly come under normative economics. Take the example of the issue of India’s population. It is the fact that as per 2011 census, India’s population was around 121 crore. Since it is based on data, the statement relates to positive economics. But when we discuss about the problems faced due to population pressure, economists and policy makers recommend several solutions such as ‘India should control its population by adopting family planning’ etc. such a thing comes under normative economics because these can be debate on this policy. There are lot of economic problems faced by the citizens and the economy as a whole. Data are required to justify that a problem exists which is part of positive economics. When we try to find solutions to the problem then value judgements are made and debates take place which comes under normative economics.



INTEXT QUESTIONS 12.1

1. Identify the following statements as positive or normative.
 - (i) Government should provide unemployment benefit to the unemployed youths.
 - (ii) 27 per cent of India's population belongs to poor sections of the society.
 - (iii) India should take loan from world bank to create more infrastructure.
 - (iv) RBI should increase the bank rate to curb inflation.
 - (v) RBI has increased the bank rate to 6 percent.



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12.3 MICROECONOMICS VS MACROECONOMICS

Modern economics is studied in two parts- Microeconomics and Macroeconomics. Micro means small. So, when the study or the problem relates to an individual unit or part of the economy then the subject of study is micro economics. Macro means large. When the study relates to the whole economy or to aggregates relating to the whole economy then the subject of study is macro economics.

Microeconomics

Microeconomics is the study of economic activity of an economic unit or a part of the economy or a small group of more than one unit. Derived from the Greek word *micros* meaning small, it relates to the individual economic agent's behaviour and the result of such interactions in determining the price of goods and services. It is, thus, also called Price Theory.

It is the microscopic study of the economy which deals with decision making by any individual, firm, household with respect to matters of production, consumption, determination of prices in the market, determination of wage rate, and so on. The aim is to provide a framework within which the behaviour patterns and interrelationships between individual economic units can be studied and their behaviour with regards to production, exchange and distribution of goods and services can be predicted. Thus, attainment of a state of equilibrium from the point of view of individual economic units is the main aim in microeconomic analysis.

Further, micro economics also puts emphasis on behaviour patterns and role of firms and individuals in income distribution and study of conditions of efficiency in production and attainment of overall efficiency. Efficiency implies optimum allocation of resources among the consumers and producers so that there is neither excess demand nor excess supply of goods and services. The analysis of the three central problems of an economy- what goods and services to be produced, how to produce them and how they can be distributed in the economy are all subject matter of micro economics.



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INTEXT QUESTIONS 12.2

Which one of the following statements is correct?

- (a) Determination of price of a good
- (b) What goods to be produced
- (c) Both (a) and (b)
- (d) Only (a)

Macroeconomics

Macroeconomics is the branch of economics that deals with the economic aggregates of a country as a whole. The word macro is derived from the Greek word *macros* meaning large. It has emerged after the British economist John Maynard Keynes published his famous book *The General Theory of Employment, Interest and Money* in 1936. The Great Depression of 1929 made economists think about the subject in a newer way which was holistic and macroeconomic study developed. It is also called the Theory of Income and Employment.

The content of macroeconomic analysis involves a combination of units to get a complete picture of the economic system so as to deal with economic affairs at a large scale. The focus areas are aggregate economic variables of an economy. The components of output, price level and employment operate in an economy simultaneously which indicates that they bear a close relationship with each other. This forms the basis of macroeconomic study which attempts to analyse these attributes together. It sees the economy as a combination of four components—households, firms, government and external sector.

The study area involves the analysis of effects in the market of taxation, budgetary policies, policies on money supply, role of state, rate of interest, wages, employment, and output. It is, therefore, also called *income theory* as it is concerned with the economy as a whole and seeks to study the causes and solutions for economic issues such as unemployment, inflation, balance of payment deficits and so on.



INTEXT QUESTIONS 12.3

1. Give the name of the book authored by Keynes?
2. Which of the following is the subject matter of macro economics?
 - (a) Wage rate
 - (b) monopoly
 - (c) inflation
 - (d) market price.

12.4 INTERDEPENDENCE OF MICRO AND MACROECONOMICS

Micro economics and macro economics are two parts of economics but they are not mutually exclusive. In other words, they are interrelated. A close interlink exists between macro and micro economics. All micro economic studies can help in better understanding and analysis of the macro economic variables. Such studies also help in the formulation of economic policies and programmes. As you know that the changes and processes in an economy are a result of a variety of large and small scale elements which have a capacity to affect each other and are also affected by each other. For example, increased taxes are a macroeconomic decision but their impact on savings of a firm is microeconomic analysis. Further, how this saving impacts the economy is a macroeconomic analysis.

Take another example. If we know how the price of a commodity is determined and understand the role of buyers and sellers in the process of price determination, it would help us in analysing the changes that take place in the general price level for all the commodities as a whole in the economy. A study of the process of price determination and the role of buyers and sellers in this process is a micro economic study, whereas the study of the general price level in the economy is a macro economic study. Similarly, if we want to assess the performance of an economy, we will have to find out the performance of each sector of the economy and to find out the performance of each sector we will have to find out the performance of each production unit individually or in groups. A study of each group of production unit or of each sector is a micro economic study whereas the study of all the production units or all the sectors taken together is a macro economic study. Thus, micro economics and macro economics are two interrelated parts of economics.

Therefore, the study of both is indispensable in economic study.

12.5 DIFFERENCES BETWEEN MICRO AND MACRO ECONOMICS

Significant differences exist between the two branches in the following ways:

(i) Differences in the scale of study

Macroeconomics is related to the study of the aggregate while microeconomics relates to the individual economic agents

(ii) Differences in the field of study

Macroeconomic analysis is concerned with the broadest level of policies pertaining to income, employment and growth of resources while microeconomics is



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concerned with problems and policies relating to the optimum allocation of resources and economic activities such as price determination.

(iii) Differences in importance given to price and income concepts

Microeconomic analysis focuses on price determination in the market for goods and services while macroeconomics focuses on income determination in the economy as a whole. Every good and service has its market where buyers and sellers interact with one another to determine its price and quantity. Since decisions are taken by the individual buyers who demand the goods and the sellers who supply the goods, it forms the part of micro economics. On the other hand, determination of income of the entire economy involves mobilisation of resources by all the sectors of the economy taken together. So it forms the part of macro economics.

(iv) Differences in the methods of study

Microeconomic study is dominated by the method called Partial Equilibrium Analysis which is focussed on significant factors related to an economic activity. Under macroeconomics, the mutual dependence of important economic aggregates is studied and this is called Quasi General Equilibrium Analysis.

(v) Differences in Analytical Factors

Microeconomics deals with the study of the behaviour of economic variables in an equilibrium position while macroeconomic analysis deals with the study of the behaviour of economic aggregates in a disequilibrium position.

**INTEXT QUESTIONS 12.4**

State whether the following statements are true or false:

1. Micro economics studies the aggregates of the economy.
2. Macro economics deals with partial equilibrium analysis.
3. Macro economics addresses the issue of unemployment in the economy.
4. Economic policies are studied under micro economics.

12.6 SIGNIFICANCE OF MACRO AND MICRO ECONOMICS

Both the branches of economic analysis are complementary and supplementary to each other. The applied aspects of these relate to the fields of economics and

commerce. The significant areas of microeconomic analysis lie in agricultural economics, labour economics, international economics, consumer economics, comparative economics, welfare economics, regional economics, aspects of public finance and other fields. Macroeconomic studies are applied in the fields of formulation and execution of economic policies, understanding microeconomics, studying economic development, welfare studies, inflation and deflation studies and international comparisons as well.



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WHAT YOU HAVE LEANT

- Positive economics relates to the phenomenon of ‘what is’ which is based on facts.
- Normative economics deals with the issue of ‘what ought to be’ and is based on value judgement.
- Microeconomics is the study of economic activity of an economic unit or a part of the economy or a small group of more than one unit.
- macroeconomics is a branch of economics that studies the aggregates or economy as a whole.
- All macroeconomic studies can help in better understanding and analysis of the microeconomic variables. Such studies also help in the formulation of economic policies and programmes.
- Significant differences between microeconomics and macroeconomics are:
 - (i) differences in scale of study,
 - (ii) differences in the field of study,
 - (iii) differences in the importance given to price and income concepts,
 - (iv) differences in the methods of study,
 - (v) differences in the assumption,
 - (vi) differences in analytical factors.



TERMINAL EXERCISE

1. Define macroeconomics.
2. Define microeconomics.
3. What is the significance of the study of microeconomics?
4. Explain the difference between microeconomics and macroeconomics.



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5. What are the fields of study in microeconomics and macroeconomics.
6. What is the significance of study of macroeconomics?
7. Distinguish between positive and normative economics with examples.

**ANSWERS TO INTEXT QUESTIONS****12.1**

- (i) Normative
- (ii) Positive
- (iii) Normative
- (iv) Normative
- (v) Positive

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- (c) both (a) and (b)

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1. General theory of employment interest and Money
2. (c) Inflation

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1. False
2. False
3. True
4. False

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CENTRAL PROBLEMS OF AN ECONOMY

Economics is about how people make decisions given their limited resources. The decisions are taken with regard to the basic economic activities such as production and consumption of goods and services and saving and investment. However, taking decision is not easy or simple. One must estimate the wants and the availability of resources while taking decisions on production of goods and services. Similarly distribution of the produced goods in the society needs to be done properly. The basic problems central to any economy, therefore, relate to production, consumption and distribution.



OBJECTIVES

After completing this lesson, you will be able to:

- explain the causes of economic problems;
- identify the central problems: ‘what to produce’, ‘how to produce’ and ‘for whom to produce’;
- understand the concept of production possibility frontier curve;
- explain the concepts of opportunity cost and marginal opportunity cost; and
- describe the central problems of an economy by using the production possibility curve.

13.1 WHY DO ECONOMIC PROBLEMS ARISE

The economic problem arises in every economy due to

- (a) Unlimited wants
- (b) Limited resources
- (c) Alternative uses of resources.

**Notes****(a) Unlimited Wants**

Human beings are required to satisfy their basic needs for their survival. For example, a person needs food, water, clothing and shelter in order to survive. These are the basic needs of a person. However, no person would like to satisfy only his/her basic needs if he/she could improve his/her life. People, by nature, want more than what they just need for survival. If one want is satisfied, many others crop up and this goes on endlessly.

Let us understand this through an example. Suppose Neha wants some food, a blouse, utensil for her mother, sweets for her brother, and bangles. These may be only a few of the many things that Neha may like to have if she had some money. This example shows that an individual's wants are unlimited.

(b) Limited Resources

Let us say that all the things said above are available at some price. Now suppose that Neha has only ₹ 1000 with her to spend. Let food is available at ₹ 150, a blouse costs ₹ 200, value of utensil is ₹ 600, a packet of sweet costs ₹ 200 and a set of bangles is available at ₹ 50. All these taken together would cost Neha ₹ 1200. Since she has only ₹ 1000 with her, Neha has to adjust her purchases accordingly. Here, we say that the means to satisfy Neha's wants are limited to ₹ 1000. People may have high or low income but not unlimited income. Hence, resources (or income) available to consumers are scarce or limited.

Resources also include factors of production: land, labour, capital and entrepreneurship. These resources are not available in abundance in this world. They are scarce or limited. Scarcity means that the demand for the resources is greater than their availability.

(c) Alternative Uses of Resources

The above example also highlights another important fact that a resource can be used in different ways. In Neha's case, she can use her ₹ 1000 to buy some items. Once she chooses to buy something (for example utensil for her mother) then she can not satisfy her other wants. Similarly, all factors of production can be put to alternative uses. For example, a piece of land can be used to do farming, build a factory, develop a school or build a hospital. A labour can be used to plough a field, to make baskets or to sell vegetables. Hence, we see that resources have alternative uses.

From the above discussion we can see that wants are unlimited but resources (to satisfy the wants) are limited which happens to be the basic economic problem faced by all economies. We have also discussed that resources have alternative uses. This basic problem exists in every economy - whether rich or poor; developed or developing.

Scarcity of resources also leads to choice. In our example, Neha has only ₹ 1000 to spend but she wants to buy many things which was limited. So she must choose what she wants. In this way a consumer tries to solve the economic problem of unlimited wants and limited resources. Similarly producers also face the economic problem as they need to decide as to which alternative use should they put their scarce resources.

Suppose resources were not limited. Would it still lead to the economic problem? The answer to this question is that if resources were not scarce they could be used to satisfy all wants. Hence, the basic problem of scarcity and choice would not arise. Scarcity of resources results in people making decisions about how best they would like to use these limited resources. Making the best use of resources is termed as **economizing of resources**. Economizing of resources does not mean being miserly about using resources, but using resources judiciously so that maximum benefit can be obtained from the scarce resources.



INTEXT QUESTIONS 13.1

State whether the following statements are true or false:

1. Resources are scarce.
2. Wants are limited.
3. Scarcity does not lead to choice.
4. Resources have alternative uses.
5. Every economy does not face the basic economic problem.
6. Economizing of resources means being miserly about using resources.
7. Land is a factor of production.
8. Human wants are unlimited.
9. Resources are scarce if demand is less than its availability.
10. Only producers face economic problems.



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13.2 CENTRAL PROBLEMS OF ECONOMY

As we have discussed above, every economy in the world faces the economic problem of unlimited wants and limited resources. This economic problem gives rise to people making choices about how they would like to use scarce resources. This economic problem gives rise to the central problems of an economy which are as following

- What to produce and in what quantities?
- How to produce?
- For whom to produce?

These are called central problems because every economy has to face them and seek solutions to them.

Collectively, these central problems are called **the Problem of Allocation of Resources**.

Let us discuss each of these central problems in detail

(a) What to produce and in what quantities?

The fact that resources are scarce leads to the problem of ‘what to produce’ and in what quantities to produce. An individual producer needs to decide on how to employ the sources that are available to her for production. For example, if Lata, a farmer has a piece of land, she needs to think about what crop she would like to produce on her land. Let us assume taht she can grow either sugarcane or wheat. Given that her land is limited, she needs to choose whether she wants to use the land to produce sugarcane or wheat or both. Once Lata has taken this decision she needs to think about the quantity of the crop that she would like to produce. For example, 10 quintals, 20 quintals or 50 quintals.

This problem of ‘what to produce’ and in what quantities to produce is faced by all economies. An economy needs to choose whether it wants to use its resources to produce consumer goods or producer goods. Alternatively, to what extent should luxury goods be produced in comparison to necessities or goods of mass consumption? An economy may also be faced with the question of how much of civilian goods to be produced and how much of defence goods to be produced. In other words, scarce resources require economies to decide the combination of goods and services they should produce.

The problem of what to produce and in what quantities to be produced can be solved by a government that decides the allocation of resources in different areas of production. Alternatively, it can be solved based on the preferences of people in an economy and on the price of goods and services in market.

(b) How to produce?

Choosing the technique of production relates to the problem of 'how to produce'. By technique of production we mean the different combination of factors of production that can be used to produce a good.

Generally all goods can be produced through different methods of production. Various methods of production require different combinations of factors of production. A technique of production could be either labour intensive or capital intensive. *In a production process when more units of labour are used in proportion to capital, it is termed as a labour intensive technique. Alternatively, when the proportion of capital used is more than labour, the production process is called a capital intensive technique.*

Let us understand this with the help of some examples. On Lata's farm, she has the choice of using different combinations of labour and capital to produce her crop. If she chooses to do the ploughing, sowing, harvesting and threshing with her bullocks and employing people, then she is using a labour intensive technique. On the other hand, if she uses machines such as tractor, harvester and thresher to do the same work, then she is using a capital intensive technique of production. Similarly, in cloth production the use of handlooms is a labour intensive technique to produce cloth whereas the use of powerlooms is a capital intensive technique of production of cloth.

The solution of the problem of how to produce is based on the extent of output that is produced for a given level of resources. Any producer would like to maximize the level of output from the available resources. At the same time cost of using a technique is equally very important. A producer will use that particular technology which is available at least cost.

(c) For whom to produce?

The problem of 'for whom to produce' relates to how the value of the produced output of an economy gets distributed amongst different people. People do not receive the output they produce as their compensation. The output is sold and the money is earned in the production process. This money is paid as income to people for the work they have done in the production process. This income, in turn, is used by people to satisfy their wants. Hence, the problem of for whom to produce tells us how the different factors of production are compensated for their work.

In our example, once Lata's crop is harvested and sold, she needs to pay the various factors of production for their services. The labour will be paid wages, land will be paid rent, capital (in the form of machinery) will be paid interest. Lastly, Lata will earn profit as an entrepreneur for organising the factors of production and undertaking some risk of running the production activity.



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**Notes****INTEXT QUESTIONS 13.2**

Choose the correct answer:

1. The problem of how to produce relates to:
 - (a) distribution of income
 - (b) technique of production
 - (c) choosing the goods to produce
 - (d) choosing the quantities to produce
2. The problem of what to produce is solved by:
 - (a) preferences of people
 - (b) market prices
 - (c) government allocation of resources
 - (d) all of the above
3. The income earned by labour in the production process will be part of the problem of:
 - (a) what to produce and what quantities
 - (b) how to produce
 - (c) for whom to produce
 - (d) none of the above
4. Labour intensive technique of production means:
 - (a) the use of only labour in production
 - (b) production unit is owned by labour
 - (c) the technique used for producing necessities
 - (d) the use of more labour than capital in producing goods
5. The central problems facing an economy relates to:
 - (a) the allocation of resources
 - (b) what to produce
 - (c) how to produce
 - (d) for whom to produce

13.3 OTHER CENTRAL PROBLEMS OF THE ECONOMY

In addition to the central problems discussed in the previous section, every economy faces two other problems. These are:

- (a) The problem of optimum utilization of resources
- (b) The problem of growth of resources

Let us discuss each of these problems in detail.

(a) Optimum Utilization of Resources

Resources are scarce they must not be wasted. They must also be used judiciously to give the maximum output. Thus, optimum utilization of resources has the following implications:

- (i) All resources must be utilized and
- (ii) Resources must be used efficiently

These two issues are discussed below:

(i) All resources must be utilized

If resources are not utilized/employed or are lying idle, it means that they are being wasted. Wastage of resources results in low output. For example, people may be unemployed. This means that human resources are being wasted. Similarly, when workers in a factory go on strike, capital resources lie idle and are wasted. If these resources are utilized, the output that can be produced in the economy shall rise. Thus, every economy must ensure that scarce resources are utilized and not left idle or unemployed.

(ii) Efficient Utilization of resources

Since resources are scarce, they should not be under utilized. Under utilization of resources means that resources are not being used to their fullest capacity. For example, if a person finds a job in which he works only for 4 hours a day, but his capacity to work is 8 hours a day, then his labour is under utilized. In other words, the person is not being employed efficiently. If he had a job for 8 hours a day, the output would increase. Under utilization of resources also results in wastage of resources. Hence, every economy must try and adopt techniques of production that ensure efficient utilization of resources.

(b) Growth of resources

We have studied earlier in the chapter that wants are unlimited. This means that people continuously want more and more goods. However, these ever increasing wants can not be satisfied unless the resources that produce goods and services are increased. Thus, resources must grow to satisfy the constantly increasing wants in an economy. So, how can resources grow in an economy? Resources can increase if:



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(i) *There are quantitative changes in the resources*

Quantitative increase in resources occurs when the actual quantity of resources that is available in the economy increases. For example, when the population increases, then the quantity of human resource increases. Similarly, when more natural resources are found, it increases the availability of resources in an economy.

(ii) *There are qualitative changes in resources*

Qualitative changes in human capital occur due to better training and skill development. Qualitative changes in man made capital occur when there is an improvement in technology. Under qualitative changes, the amount of resources available does not change but their productivity increases. Productivity is defined as the output per unit of input. For example, if labour gets trained, then the output from the same person can increase. Productivity improves due to better skill and training.

To conclude our discussion, growth of resources occurs when the physical availability of resources increases and/or there is technological upgradation or an improvement in the quality of resources.



INTEXT QUESTIONS 13.3

Choose the correct answer:

1. Under utilization of resources means that resources are being used (efficiently/inefficiently)
2. Technological (backwardness/improvement) leads to growth of resources.
3. Resources should remain (idle/fully utilised).
4. If a person is (employed/unemployed), it means that the resource is being wasted.
5. Quantitative change in resources means that (there is more labour available/ labour gets more skill and training).

13.4 CONCEPT OF PRODUCTION POSSIBILITIES

In deciding ‘what to produce’ and how much, an economy has to take decisions regarding allocation of resources among different possible alternatives. Let us assume that the economy is producing only two commodities, rice and bicycles. With the limitation of the total resources, if all the resources are utilized in the production of rice, let 20 quintals of rice can be produced and no production of

bicycle will take place. If more and more resources are being diverted towards the production of bicycles, little amount will be left for the production of rice. Similarly if all the resources are being used in the production of bicycles, say 150 bicycles can be produced and no resources will be left for the production of rice. Therefore, the scarce resources are employed in various combinations to get alternative production possibilities.

The production possibilities curve is a graphical medium of highlighting the central problem of 'what to produce'. To decide what to produce and in what quantities, it is first necessary to know what is obtainable. The curve shows the options that are obtainable, or simply the production possibilities. What is obtainable is based on the following assumptions:

- The resources available are fixed.
- The technology remains unchanged.
- The resources are fully employed.
- The resources are efficiently employed.

The resources are not equally efficient in production of all products. Thus, if resources are transferred from production of one good to another, the cost of production may increase.

13.5 PRODUCTION POSSIBILITY SCHEDULE

To simplify, let us assume that only two goods are produced in an economy. Let these two goods be guns and butter. The example given by a famous economist Samuelson who won nobel prize in economics in the year 1969. The example, symbolizes the problem of choice between war goods and civilian goods. Given the extremes and the in-between possibilities, a schedule can be prepared. It can be called a production possibilities schedule. A Production Possibilities Schedule (or Table) is a set of numbers in tabular form that illustrates different possible combinations of two goods that can be produced if all available resources are efficiently used during a given time given technology of production. Suppose if all the resources are engaged in the production of guns, there will be a maximum amount of guns that can be produced per year. Let it be 15 units. At the other extreme suppose all the resources are employed in production of butter only. Let the maximum amount of butter that can be produced is 5 units. These are the two extreme possibilities. In between the resources can also be partly used for the production of guns and partly for production of butter. Given the extremes and the in-between possibilities, a schedule can be prepared. It can be called a production possibility schedule (PPS). Let the schedule be given as follows.





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Possibilities	Guns (units)	Butter (units)	MRT
A	15	0	–
B	14	1	4
C	12	2	2
D	9	3	3
E	5	4	4
F	0	5	5

13.6 PRODUCTION POSSIBILITIES CURVE/FRONTIER

The central problems of an economy are explained by modern economists with the help of Production Possibility Schedule (PPS) or Production Possibility Curve (PPC). PPS shows alternative production possibilities of two sets of goods with the given resources and techniques of production. PPC is a graphic representation of PPS. It is also called Production Possibility Frontier (PPF). This curve is also called Transformation Curve since it indicates that if more of butter is to be produced, then factors will have to be withdrawn from the production of guns and transferred towards the production of butter.

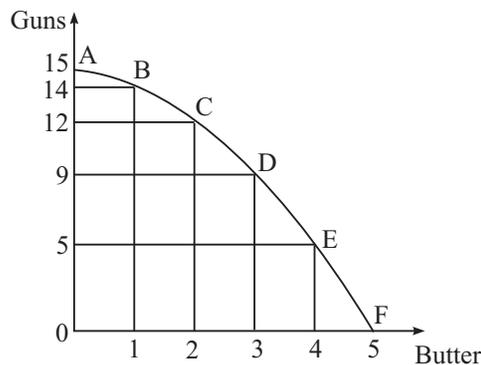


Fig. 13.1

In Fig. 13.1 the curve AF is called PPC. As shown in the diagram, when all the resources are used for production of guns only the economy produces 15 units of guns and no butter. This is marked as point A. When some resources are transferred to increase production of butter from 0 to 1 unit, then production of gun fall from 15 to 14 so that the economy reaches at point B on PPC and so on. Finally all resources are transferred from guns to produce only butter, then the economy reaches at point F, where it produces 5 units of butter and no gun. This way the

locus ABCDEF gives the PPC. So PPC is a graphical representation of the alternative combinations of the amounts of two goods or services that an economy can produce by transferring resources from one good or service to the other. This curve helps in determining what quantity of a nonessential good or a service an economy can afford to produce without jeopardizing the required production of an essential good or service. PPC has two following properties:

- (a) PPC slopes downward: This means that more of a good can be produced only by sacrificing some quantity of the other good.
- (b) PPC is concave to the point of origin: You can see that some amount of gun has to be reduced to produce one unit extra of butter. This is done by transferring resources from the production of gun to that of butter. The rate at which the units of a good is reduced to increase a unit of another good is called marginal rate of transformation (MRT). MRT is measured along PPC when the economy moves from one point to another. In Fig. 13.1, movement from point A to B to C and so on gives the idea of MRT. When the economy moves from point A to B, 1 unit of gun is reduced (from 15 units to 14 units) to produce extra unit of butter (from 0 to 1 unit). When the economy moves from point B to C, 2 units gun are given up (from 14 to 12 units) to produce another unit of butter (from 1 to 2 units). This way some units are guns are reduced to gain one unit of butter. So MRT measures the change in one good (here gun), due to change in another good (here butter).

Hence MRT measures the rate of change of PPC or simply the slope of PPC. On a concave shaped PPC as in Fig. 13.1, we see that when we increase butter by one unit, we have to decrease gun by more units than before. So on a concave PPC, MRT increases.

$$\text{Here MRT} = \frac{\text{Change in Guns}}{\text{One unit change in Butter}}$$

The curve is based on the following assumptions:

- (a) quantity of factors of production is fixed
- (b) full employment
- (c) technology is given
- (d) There are two goods produced in the economy.

PPC can be a straight line if production is obtained under law of constant returns or when marginal rate of transformation of both the commodities is same. For e.g. to produce one more unit of commodity X if only one unit of commodity Y is sacrificed through out then PPC becomes a straight line. However, this is only a conceptual possibility. The significance of this curve lies in the interpretation of the central problems and help in finding solutions to them. This is done through



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analysing the output with changing combination of resources. Situation of economic growth can also be analysed through the shifts in PPC as observed after growth in capital stock, changes in investment and improvement in technology.



INTEXT QUESTIONS 13.4

State whether the following statements are true or false:

1. A point on the PPC implies that resources are fully utilised.
2. A point inside the PPC implies existence of under employment.
3. A PPC is drawn on the assumption that resources of the economy are increasing.

13.7 UNDERUTILISATION OR INEFFICIENT UTILIZATION OF RESOURCES

We have seen above that any point on the production possibility curve represents full and efficient utilization of resources. If, however, the economy functions at a point inside the production possibility curve, then it shows that there exists either underutilization or inefficient utilization of resources.

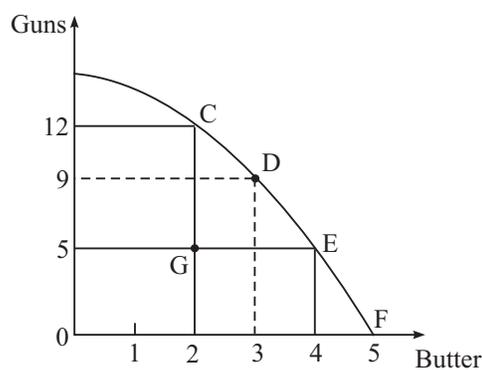


Fig 13.2 : Underutilisation or inefficient utilization of resources

Refer to our schedule of PPL given earlier.

Let us understand this point with the help of a diagram given in Fig. 13.2. In Fig. 13.2, we see that at point G, the economy is producing 2 units of butter and 5 units of guns. Through a re-allocation of resources, the economy can do one of the following:

- (a) increase the production of guns to 12 units and keep the production of butter at the same 2 units as at point C on PPC.

(b) increase the production of butter to 4 units and keep the production of guns same at 5 units as shown at point E on PPC.

In both (a) and (b) above, we see that the economy has been able to increase the production of the one of the goods if it moves towards point C or E on PPC from the point G which is inside PPC.

(c) In fact the economy can produce more of both the goods on any point on PPC (e.g. at point D) as compared to point G.

Therefore, we can conclude that at point G the economy was not using its available resources in the best possible manner. So any point inside the PPC shows unemployment of resources.



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13.8 GROWTH OF RESOURCES

We have studied earlier that resources in any economy need to grow to satisfy the ever increasing wants of people. Growth of resources occurs when the physical quantum of resources increases or when there is a rise in the productivity level of resources. This implies that with growth in resources, the output produced in an economy will increase. We can use the diagram in Fig. 13.2 to show growth in production capacity.

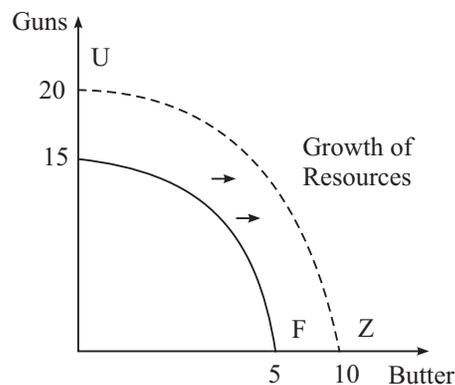


Fig. 13.3 : Production Possibility Curve showing Growth of Resources

In Fig. 13.3, we see that AF is the same production possibility curve as in Fig. 13.1. As resources grow, the economy can now produce more of both guns and butter. This is depicted by the curve UZ. At point U, the economy produces only guns which has increased to 20 units. This is more than the output of gun at point A. Similarly, at point Z, when the production of gun is zero, the output of butter is 20 units. This is greater than the output of 5 units when resources had not grown. All other output combinations show that the output of both guns and butter are higher on the production possibility curve UZ than on the curve AF. This shows that



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growth of resources results in an outward shift of the production possibility curve, which results in higher levels of output.



INTEXT QUESTIONS 13.5

1. Choose the correct answer:

A point on the production possibility curve shows:

- (i) Growth of resources
- (ii) Inefficient utilization of resources
- (iii) Unemployment of resources
- (iv) Full and efficient utilization of resources

2. State whether the following statement, are true or false:

- (a) A point inside the production possibility curve shows underutilization of resources.
- (b) Unemployment of labour means that resources are not being fully employed.
- (c) Better technology will lead to an inward shift of the production possibility curve.
- (d) A production possibility curve can depict more than two goods in an economy.
- (e) An economy needs to choose the point at which it wishes to operate on the production possibility curve, as all points are equally efficient.



WHAT YOU HAVE LEANT

- Scarcity of resources leads to the problem of choice.
- The basic economic problem is faced by both consumers and producers.
- The economic problem gives rise to the central problems in an economy. These are also termed as the problem of allocation of resources.
- The problem of what to produce and in what quantities to produce looks at the different combinations of goods and services that an economy could produce given the available resources which must be used efficiently.
- The problem of how to produce looks at choosing the best technique of production. This could be either labour intensive or capital intensive.
- The problem of 'For whom to produce' looks at how is the output produced in the economy distributed amongst the owners of different factors of production which have helped to produce the output.

Central Problems of an Economy

- The production possibility curve shows the different combinations of two goods that can be produced with full and efficient utilization of given resources and a given state of technology.
- Any point on the PPC shows resources are being fully and efficiently used.
- Any point inside the PPC shows that resources are being underutilized or are unemployed or are lying idle.
- A growth of resources is reflected by an outward shift of the PPC.



TERMINAL EXERCISE

1. How do economic problems arise? Would there be any economic problem if resources were unlimited?
2. Explain how scarcity leads to choice.
3. Using examples explain the problem of what to produce and in what quantity.
4. Discuss the problem of 'how to produce'?
5. Explain the problem of fuller utilization of resources.
6. How can resources grow in an economy?
7. What is a production possibility curve? Using a production possibility curve show the problem of inefficient utilization of resources.
8. Draw a production possibility curve that shows growth of resources. How does growth of resources affect the output of an economy?
9. Discuss the problems of what and how to produce?
10. Draw a concave PPC by drawing a schedule?
11. Using a PPC explain inefficient utilisation of resources?
12. Using a PPC explain growth of resources?
13. Using a PPC explain efficient utilisation of resources?
14. Give three examples each about microeconomics and macroeconomics?



ANSWERS TO INTEXT QUESTIONS

13.1

- | | | | | |
|----------|----------|----------|----------|-----------|
| 1. True | 2. False | 3. False | 4. True | 5. False |
| 6. False | 7. True | 8. True | 9. False | 10. False |

MODULE - 5

Introduction to Economics



Notes

MODULE - 5

Central Problems of an Economy

Introduction to Economics



Notes

13.2

1. (b)
2. (d)
3. (c)
4. (d)
5. (a)

13.3

1. inefficiently
2. improvement
3. fully utilized
4. unemployed
5. there is more labour available

13.4

1. True
2. True
3. False

13.5

1. (iv)
2. (a) True (b) True (c) False (d) False (e) True