As per the Fifth Dean Committee Recommendations for the B. Sc. (Hons.) Agri. Course Curriculum

Fundamentals of Agricultural Economics
Ag. Econ 2.1 (2+0)

Department of Agricultural Economics
College of Agriculture,
Navsari Agricultural University, Bharuch
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What is Economics?

If we see our day-to-day activities, most of which are related to earning one’s own living and to the manner of satisfying one’s own wants. These human activities, which are generally called economic, are mainly related to production, distribution, consumption and exchange of goods and services. The scientific study of various problems arising out of these economic activities is called economics.

Basic Economic Problem

The basic economic problem is Human wants are many; but means to satisfy these wants are limited. These limited means are capable of alternative uses and hence there is a need of satisfying maximum wants with limited resources. In reality most resources are scarce. Similarly individuals and nations have unlimited wants. There are only a limited number of resources such as workers, machines, factories, raw materials etc. Yet there are a number of different ways in which they could be used. Similarly people only have a limited amount of money. Yet they have lots of wants to satisfy.
CIRCLE OF ECONOMICS

The existence of human wants is the starting point of all economic activity in the world. Unless we make efforts, we cannot satisfy wants. Hence, **wants, efforts and satisfaction form the circle of economics.**

![Economic Cycle Diagram]

NATURE OF ECONOMICS

1. **Economics is a social science**
   Economics deals with human wants and human behavior and human welfare. Therefore it is considered as a social science.

2. **Economics is the science of scarcity**
   In the real world, the means which satisfy our wants are limited, that is, there is scarcity of the means which satisfy our wants. Time and money are limited. And land, labour and capital which are used in production are limited. We study economics because there is scarcity of many goods we want. That is why we say Economics is the science of scarcity. And scarcity is the basic fact of life.

3. **Economics is the science of choice**
   Our wants are unlimited but means are limited. This leads to choice making. It is true that we have many wants. But all wants are not of equal importance. So we choose the more important and the more urgent wants. So choice is the essence of economic activity. We may also say that Economics is the science of choice.

4. **Economics studies about the role of money in the affairs of mankind.**
   Modern economy is a monetary economy. Prices are paid in money. Money is used for buying and selling of goods, for payment of rent, wages, interest and so on. In economics, we study about the role of money in the affairs of mankind.

5. **Economics as a study of the relationship between wealth and welfare.**
   All the scarce goods which satisfy our wants are known as **wealth.** So, in economics, we study about the production of wealth, exchange of wealth, distribution of wealth and consumption of wealth. As wealth is produced to promote **human welfare,** we study the relationship between wealth and welfare.
DEFINITIONS OF ECONOMICS

The word economics has been derived from the Greek word “OIKONOMICAS” with “OIKOS” meaning a household and “NOMOS” meaning management. It is understood that the beginning was made by the Greek Philosopher, Aristotle who in his book “Economica” focused that the field of economics deals with household management.

The economists in defining the term, economics, followed several approaches and concepts. The concepts on which various definitions of economics given are:


“Wealth” Definition by Adam Smith

Adam Smith (1723-90) in his book entitled “Wealth of Nations”(1776) defined economics as “An enquiry into the nature and causes of the wealth of nations”. He is known as the “Father of Economics” because he was the first person who put all the economic ideas in a systematic way. It is only after Adam Smith, we study economics as a systematic science.

The term “wealth” has a special meaning in Economics. In the ordinary language, by “wealth”, we mean money, but in economics, wealth refers to those goods which satisfy human wants. We consider only those goods which are relatively scarce and have money value as wealth. We study about consumption, production, exchange and distribution of wealth.

But the definition of economics as a science of wealth cannot be regarded as being a correct one. In this definition, attention was exclusively paid to wealth as if wealth was everything. Little attention was paid to man for whom wealth is really meant. Writers like Carlyle and Ruskin condemned this worship of Mamon (The god of wealth). They accused economics of selfishness and, therefore, called it a dismal science. This definition was, therefore, rejected.

A great demerit of Adam Smith’s definition is that there is overemphasis on wealth. There is no doubt that we have to study about wealth in economics. But it can be only a part of the study. There is the other side. In fact, it is a more important side and that is the study of man. Economics is a social science. Hence the proper study of mankind should be man and not wealth alone. Man is primary and wealth occupies only a secondary place. Emphasis was, therefore, shifted from the study of wealth to that of human welfare.

Welfare Definition by Alfred Marshall

Alfred Marshall (1842-1924) wrote a book Principles of Economics in 1890. According to him “Economics is a study of man’s actions in the ordinary business of life; it inquires how he gets his income and how he uses it”.

Marshall agrees that economics studies about wealth. But he does not accept the view that economics studies about wealth alone. In the words of Marshall, “Economics is on the one side a study of wealth, and on the other and more important side, a part of the study of man. Man is the centre of his study. According to him, the study of man is more important than the study of wealth. Wealth is sought only for promoting human welfare.. Hence wealth is given a secondary position.
Marshall’s definition is known as material welfare definition of economics because of its emphasis on welfare. **Welfare is the well being of individual or community.** This definition by Marshal remained current for a long time, but early in the 1930’s, a distinguished economist Lionel Robbins challenged the definition as under.

- Economics was treated as a social science rather than a human science; and the term “human science” is more apt on the ground that any individual either as a member of society or in isolation does have economic problems.
- It classifies economic phenomena into material and non-material; and it ignores the non-material services like those of teachers, doctors etc. which also make an important contribution to economic welfare.

**Scarcity Definition by Lionel Robbins**

Lionel Robbins (1898-1984) 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 has given the above definition in his book “An Essay on the Nature and significance of Economic Science”. The definition of Robbins is based on the following basic assumptions.

- Ends are various. The term “ends” mean wants. Human wants are unlimited.
- Means are limited. Means like time, money and resources are limited.
- We can put means to alternative uses. For example, though time is limited, we can use it for different purposes. We can use time for earning money or we may enjoy it as leisure, and
- All wants are not of equal importance.

We know time is limited. There are only 24 hours in a day. If a worker wants only money he has to work for long hours and forgo leisure. If he wants leisure, he has to forgo his income. He cannot have both at the same time. We may, however, note that all means which satisfy human wants are not limited. For example, air and sunshine are available in abundance. They are free goods. But many things we want are scarce in relation to our wants.

So, economics studies human behaviour as a relationship between unlimited wants and scarce means. As means are limited, we have to pay a price for them. We study in economics how the prices of scarce goods are determined. We have to choose among different wants. That is why we say that scarcity and choice are central problems in economics.

Robbins’s definition is superior to “wealth” and “welfare” definitions because ‘welfare’ aspect is embodied in the definition and ‘wealth’ is represented as means which is always scarce.

**Growth Definition by Lord Keynes**

During the last 40 years or so, economic thinking has moved further from Robbins’s view. The credit for bringing about a revolution in economic thinking goes to Lord Keynes (1883-1946). He defined economics as “the study of the administration of scarce resources and of the determinants of employment and income”. Thus, besides studying the resource allocation, Economics studies how the levels of income and employment in an economy are determined. In other words, it also studies the causes of economic fluctuations to see how economic stability could be promoted.
SUBJECT-MATTER / DIVISIONS OF ECONOMICS

Traditional View

Traditionally, the subject matter of economics can be studied under four divisions. These are Consumption, Production, Exchange and Distribution.

Consumption: It means the use of wealth to satisfy innumerable wants. It also means the destruction of utility. All the goods that are produced are consumed immediately or some time in future. Consumption represents using up of utility.

Production: It is an activity that helps to create utility. It simply means the addition of utilities. Hence, production is defined as the creation of utility. Through the process of production one set of goods is transformed into the other. In the production process, inputs are transformed into products.

Exchange: In a primitive society, the connection between wants, efforts and satisfaction is close and direct. A primitive man feels hungry; he picks up some fruit, eats it, and is satisfied. But in a modern society things are not so simple and straight. Here a man produces what he does not consume and consumes what he does not produce. For example, a farmer produces wheat, but he cannot use them all by himself. He sells them for money with which he buys the things he needs. This work of selling and buying is called exchange.

Distribution: Nowadays most of the things we need are produced in a field or factory. To make them workers gives his labour, the landlord his land, the capitalist his capital, while the businessmen organizes the work of all these. They all get a reward in money. The labour earns wages, the landlord gets rent, and the capitalist gets interest, while the entrepreneur’s reward is profit. Economics studies how these incomes – wages, rent, interest and profit are determined. The process is called distribution.

Thus, Consumption, Production, Exchange and Distribution is the subject-matter of economics. This traditional view is now regarded as constituting only one part of Economics, viz., Price Theory or also called Micro-Economics.

Modern View

According to modern approach, the scope or the subject-matter of Economics is not only the price theory but also the study of the economy as a whole. We study, for instance, how the income of an economy is generated and how the level of country’s income and employment is determined. In other words, we also study the factors that determine a country’s national income, savings, investment, output, employment, general price level, etc. Such a study of the economy as a whole is called Macro-Economics.

Recently, economists have begun to pay special attention to how an economy grows. i.e. how the under-developed countries grow into developed economy and the developed countries grow still further. Economics thus also includes study of economic growth.

<table>
<thead>
<tr>
<th>Micro Economics</th>
<th>Macro Economics</th>
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<tbody>
<tr>
<td>It studies economy at unit or individual level.</td>
<td>It studies economy as a whole, i.e. at national level.</td>
</tr>
<tr>
<td>It includes Consumption, Production, Exchange and Distribution as its subject-matter.</td>
<td>It includes national income, employment, welfare economics, interest, tax, growth etc. as its subject matter.</td>
</tr>
<tr>
<td>It is also known as price theory.</td>
<td>It is also known as growth theory.</td>
</tr>
<tr>
<td>It is a traditional view of Economics.</td>
<td>It is a modern view of Economics.</td>
</tr>
</tbody>
</table>
1. **Is Economics a Science or an Art?**

By definition, science is a systematized body of knowledge. Analogous to science, an art is also a systematized body of knowledge. It directs through a system of procedures to attain a given objective or goal. It tells us how to do a thing.

Treating economics as a science, a given theory is formed through the conduct of experiments, recording observations, analysis of data recorded, drawing the conclusions, and finally testing them. In economics also, the same procedure is followed to present any principle or theory. **Hence, economics is as good as any science. Only the question is regarding precision.**

The scientific experiments are conducted under laboratory or controlled conditions, while economic theories are subject to several casual factors that influence human behaviour. The situation of controlled experiments in economics is not possible, since it deals with human behaviour, which is unpredictable. This indicates the fact that the **degree of precision of economics as a science is less, when compared with the pure science.**

As an art, economics shows solutions to the problems. It helps us how to do a thing. The role of economics as an art can be found in any sphere of economic activity. For example, it advocates how to maximize the profits of a firm given the resource constraints (e.g., producing more wheat from an acre of land).

Thus, the field of economics has the attributes of science and art. **Economics, therefore, is a science and art.**

2. **Economics as Social Science**

Economics studies human beings as a member of the society participating in the economic activities. It does not study humans as isolated individuals. He is interdependent. Thus economics is a social science.

3. **Is Economics a Positive Science or Normative Science?**

A positive science explains the why and wherefore of things, i.e., their causes and effects (why things are as they are). A normative science, on the other hand, discusses the **rightness and wrongness** of things (the things ought to be). e.g., atom bomb.

Economists differentiate positive economics and normative economics. Positive economics is completely objective and is limited to the causes and effect relationship of economic activity. It tells us why certain things happen. Normative Economics studies the way that economic relations ought to be. It evaluates policy making, a conscious intervention in the economy for the welfare of the people.

**Thus, economics is both a positive and normative science.** It not only tells us why certain things happen, it also says whether it is the right thing to happen. For example, we know that a few people in the world are very rich while the masses are very poor. Economics should explain not only the causes of this unequal distribution of wealth, but it should also say whether this is good or bad. It might well say that wealth ought to be fairly distributed. Further, it should suggest the methods of doing it.
IMPORTANCE OF ECONOMICS

Economics has become one of the important branches of social sciences. It is of great practical value in our daily life. Economics is considered these days as one of the most important branches of knowledge. Study of Economics is useful in several ways. Economics has got theoretical as well as practical importance.

1. Theoretical Importance

**Informative:** Economics teaches us many interesting facts about man’s behaviour when he is engaged in economic activity. We come understand the various motives which guide men in economic affairs.

**Mental training:** Economic reasoning trains our mind. It enables us to think clearly and judge correctly.

**Understanding functioning of economic system:** The study of economics helps us to understand how the complicated economic system of today functions almost automatically without any central control. Every economic disturbance somehow tends to smoothen itself out. For example, if there is shortage of a commodity, its price will rise. This will cut down unnecessary demand so that the demand will be brought down to the level of supply. If there is bumper production of a commodity, then its price will go down which will create new demand and thus the stock will be cleared. This is how economic system adjusts itself in all spheres.

**Teaches mutual dependence:** Economic teaches us the important lesion of the mutual dependence of man on man. We come to realize how we depend on others for the satisfaction of our wants, and how others depend on us. This knowledge adds to our sense of responsibility and understanding and thus leads to better work and a happier society.

**Useful citizenship:** Most of the problems of today are economic in nature. The study of economics makes us useful and intelligent citizens. The knowledge of economics enables everyone to perform one’s duties more intelligently and, therefore, more efficiently.

2. Practical Importance

**Professional value:** The study of economics is very useful in several professions. It is useful to the bankers, to the businessmen, to the agriculturist, to the serviceman, to the workers, etc. As a matter of fact, it is useful to all.

**Useful for householders:** A householder will arrange his expenditure much better if he has studied economics. He can prepare a family budget and put his household expenditure on rational basis.

**Useful for political leaders:** A political leader who knows economics is able to fight for the rights of people more effectively. The knowledge of economics will help them in policy planning in several problems of the country such as poverty, unemployment, etc.
Chapter – 2
Nature of Economic Theory

Methodology of Economics
Economics as a science adopts two methods for the discovery of its laws and principles
(a) Deductive method:
Here, we proceed from the general to particular, i.e., we start from certain principles that are self-evident or based on strict observations. Then, we carry them down as a process of pure reasoning to the consequences that they implicitly contain. For instance, traders earn profit in their businesses is a general statement which is accepted even without verifying it. It is useful in analyzing complex economic phenomenon where cause and effect are inextricably mixed up. However, the deductive method is useful only if certain assumptions are valid. (Traders earn profit, if the demand for the commodity is more).
(b) Inductive method:
This method mounts up from particular to general, i.e., we begin with the observation of particular facts and then proceed with the help of reasoning founded on experience so as to formulate laws and theorems on the basis of observed facts. e.g. Data on consumption of poor, middle and rich income groups of people are collected, classified, analyzed and important conclusions are drawn out from the results.

In deductive method, we start from certain principles that are either indisputable or based on strict observations and draw inferences about individual cases. In inductive method, a particular case is examined to establish a general or universal fact. Both deductive and inductive methods are useful in economic analysis.

Approaches to economic analysis
Static and Dynamic
The word 'statics' is derived from the Greek word statike which means bringing to a standstill. It implies a state characterized by movement at a particular level without any change. It is a state where five kinds of changes are absence. The size of population, the supply of capital, methods of production, forms of business organization and wants of the people remain constant but the economy continues to work at steady pace. Statics analysis explains the static equilibrium position of the economy.

Economic dynamics, on the other hand, is the study of change. An economy may change through time in two ways: (a) without changing its pattern, and (b) by changing its pattern. Economic dynamics relates to the latter type of change. If there is a change in
population, capital, techniques of production, forms of business organization and tastes of the people, in anyone or all of them, the economy will assume a different pattern, and the economic system will change its direction.

**Economic laws**

Economic laws are the principles that govern the actions of individuals in their economic activities. Just like any other law of science, economic laws too are conditional i.e. applicable when certain conditions are fulfilled. Economists consider basic factors into account while developing a theory, keeping other factors influencing theory as constant.

According to Robbins, economic laws are statements of uniformities, which govern human behaviour concerning the utilization of limited resources for the achievement of unlimited ends.

**Characteristics of economic laws**

1. Economic laws are not the Government laws: The Govt. laws are very stringent and violation of these laws amounts to punishment. Economic laws on the other are applicable, only if certain conditions are satisfied.
2. Economic laws are merely statement of tendencies: These are based on human tendencies to a given phenomenon. This is the expected behaviour which is not certain.
3. Economic laws are hypothetical: These laws hold good under the assumption of number of things. These laws are characterised by the phrase *ceteris paribus* (other things are held constant).
4. Economic laws are positive but not normative: They only describe economic phenomenon but do not describe how it should be.
5. Some economic laws are axiomatic in character: It means that they are self-evident and universally valid. e.g. LDMU.
6. Economic laws lack exactness of the laws of science. Marshall said that these are the laws of tide rather than the laws of gravitation.

**Equilibrium:**

It indicates ideal condition or when complete adjustment has been made to changes in an economic conditions.

**Types of equilibrium**

- **Stable:** It tends to resume its original position.
- **Unstable:** Original position is never restored.
- **Neutral:** Disturbing forces neither bring it to the original position nor do they drive it further away.
- **Short term:** Economic forces do not get sufficient time to bring complete adjustment. E.g. supply is adjusted to change in demand.
- **Long term:** There is ample time to change even the means of production or resources available. e.g. If demand increased supply is also increased.
- **Partial:** It relates to single individual, consumer, producer or a firm.
- **General:** It relates with multiplicity of variable. It covers all the organizations functioning in the economy.

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Chapter – 3

BASIC CONCEPT

Every science has its own language. Economics has its own language. There are certain terms which are used in a special sense in economics. So we must understand the meaning of some basic concepts like goods, wealth, income, value, price and market. If we do not understand their meaning properly, it may result in a lot of confusion.

GOODS AND SERVICES

Anything that can satisfies a human want is called a good in economics. There are two things with which he can satisfy these wants – goods and services.

<table>
<thead>
<tr>
<th>Goods</th>
<th>Services</th>
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<tbody>
<tr>
<td>It means the commodities that we use.</td>
<td>It is any act or performance that one party can offer to another.</td>
</tr>
<tr>
<td>It is almost always <strong>material</strong>.</td>
<td>It is essentially <strong>non-material</strong>.</td>
</tr>
<tr>
<td>It is tangible.</td>
<td>It is intangible.</td>
</tr>
<tr>
<td>It results in ownership.</td>
<td>It does not result in the ownership.</td>
</tr>
<tr>
<td>E.g.: land, house, foods, books, cloths, mobile, seeds, fertilizers, etc.</td>
<td>E.g.: the services rendered by doctor, teacher, lawyer, labourers, etc.</td>
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</table>

**Classification of Goods**

<table>
<thead>
<tr>
<th>Free Goods</th>
<th>Economic Goods</th>
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<tbody>
<tr>
<td>They are the free gifts of nature.</td>
<td>They are produced through human efforts.</td>
</tr>
<tr>
<td>No efforts are needed to get it.</td>
<td>Efforts are required to get it.</td>
</tr>
<tr>
<td>No price needs to be paid.</td>
<td>They are to be purchased at a given price.</td>
</tr>
<tr>
<td>They are <strong>not scarce</strong>.</td>
<td>They are <strong>scarce</strong>.</td>
</tr>
<tr>
<td>Its supply is more than demand and one can get to the extent they need.</td>
<td>Their supply is less than demand.</td>
</tr>
<tr>
<td>They have value-in-use but no value-in-exchange.</td>
<td>They have value in use and value-in-exchange.</td>
</tr>
<tr>
<td>E.g.: air, sunlight, rainfall, etc.</td>
<td>E.g.: food, cloth, car, books, etc.</td>
</tr>
</tbody>
</table>

**Distinction between economic goods and free goods is not permanent**

It is true that what is a free good in one place can become an economic good in another place. It all depends on the supply of a good and the demand for it. For example, **sand** which is a free good in riverbeds becomes an economic good in the places of house construction activities. Similarly, **water** which is a free good near river or canal becomes an economic good when there is scarcity of water and one has to pay price for that i.e., water in a city. Thus, this distinction between economic goods and free goods is not permanent.
Consumption Goods, Capital Goods and Intermediate Goods

<table>
<thead>
<tr>
<th>Consumption Goods</th>
<th>Capital Goods</th>
</tr>
</thead>
<tbody>
<tr>
<td>They satisfy our wants <strong>directly</strong>.</td>
<td>They are those goods that help to produce other goods. So, they satisfy our wants <strong>indirectly</strong>.</td>
</tr>
<tr>
<td>They are also called goods of the <strong>first order</strong> in view of their ability to give direct satisfaction.</td>
<td>They are goods of <strong>second order</strong> in view of their ability to give indirect satisfaction.</td>
</tr>
<tr>
<td>They are called <strong>consumer goods</strong>.</td>
<td>They are called <strong>producers’ good</strong>.</td>
</tr>
<tr>
<td>E.g.: food, car, cloths, books, etc.</td>
<td>E.g.: machinery which are used to produce a car, cloth, fertilizers, etc.</td>
</tr>
</tbody>
</table>

**Distinction between consumption goods and capital goods is not permanent**

It is true that what is a consumption good in one place can become a capital good in another place. For example, when electricity is used for lighting purposes at home, it is a consumption good. But the same electricity when used in factories for industrial purposes, it becomes a capital good.

**Intermediate Goods**

In between the consumption goods and capital goods are the **intermediate goods**. They are the raw materials used in the production of the final or consumption goods. For example, the cloths that we wear are consumption goods; the textile machinery which is used to make cloths is capital goods; and the **cotton or silk or some synthetic fibers** which are used to make cloths are intermediate goods.

**Material goods and non-material goods**

<table>
<thead>
<tr>
<th>Material goods</th>
<th>Non-material goods</th>
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<tbody>
<tr>
<td>The goods which are tangible and concrete are called material goods.</td>
<td>They are various kinds of services. They are intangible, non-material and variable.</td>
</tr>
<tr>
<td>e.g.: land, house, foods, books, seeds, cloths, machinery, fertilizers etc.</td>
<td>e.g.: the services rendered by doctor, lawyer, labourer etc.</td>
</tr>
</tbody>
</table>

**Transferable Goods and Non-transferable Goods**

<table>
<thead>
<tr>
<th>Transferable Goods</th>
<th>Non-transferable Goods</th>
</tr>
</thead>
<tbody>
<tr>
<td>They are goods which can change their ownership. They can be physically transferred from one place to other place; however in case of land, physical transfer is not possible, only ownership can be changed.</td>
<td>They are personal qualities which cannot be transferred; only their service can be used by others.</td>
</tr>
<tr>
<td>E.g.: car, book, cloths, land, patents, copyright, goodwill of a business, etc.</td>
<td>E.g.: skill, intelligence, degree certificate, driving license, etc.</td>
</tr>
</tbody>
</table>
Impersonal Goods and Personal Goods

<table>
<thead>
<tr>
<th>Impersonal Goods</th>
<th>Personal Goods</th>
</tr>
</thead>
<tbody>
<tr>
<td>The goods which are not personal, are impersonal goods. They are <strong>what he has</strong>.</td>
<td>They refer to the personal qualities of a person. They are <strong>what he is</strong>.</td>
</tr>
<tr>
<td>They are also material and exist outside him, therefore, they are also called <strong>External Goods</strong>.</td>
<td>They are non-material and exist inside him, therefore, they are also called <strong>Internal Goods</strong>.</td>
</tr>
<tr>
<td>E.g.: land, buildings, cloths, etc.</td>
<td>E.g.: ability, skill, knowledge, etc.</td>
</tr>
</tbody>
</table>

Private Goods and Public Goods

<table>
<thead>
<tr>
<th>Private Goods</th>
<th>Public Goods</th>
</tr>
</thead>
<tbody>
<tr>
<td>They are the property of private individuals owned by them exclusively.</td>
<td>The goods which are common to all and are owned by society collectively.</td>
</tr>
<tr>
<td>They are not shared with others.</td>
<td>Every one can use it.</td>
</tr>
<tr>
<td>E.g.: land, house, etc.</td>
<td>E.g.: town hall, public garden, civil hospital, railway, etc.</td>
</tr>
</tbody>
</table>

Mono-period Goods and Durable Goods

<table>
<thead>
<tr>
<th>Mono-period Goods</th>
<th>Durable (poly period) Goods</th>
</tr>
</thead>
<tbody>
<tr>
<td>They are used only once to satisfy a need. They cease to exist once their use was over.</td>
<td>The goods which are used once and the same can be used again in future for several times.</td>
</tr>
<tr>
<td>E.g.: foods, productive resources like seeds, fertilizers, etc.</td>
<td>E.g.: land, machinery, implements, tv, mobile, books, etc.</td>
</tr>
</tbody>
</table>

**UTILITY**

**What is Utility?**

We have seen that goods satisfy human wants. **This want-satisfying quality in a good is called Utility.** Hence, utility means the power to satisfy a human want. In other words, **utility is the want satisfying power of a good.**

In order to find out whether a good possess utility or not, ask a simple question: “Does it satisfy a human want? If so, it has utility, otherwise not. Air, water, etc. (free goods) and food, cloths, etc.(economic goods) satisfy human wants, and as such they possess utility.

**Utility and Usefulness**

A commodity may satisfy a human want, but may not be useful. On contrary, it may actually be injurious e.g., opium, tobacco, poison, etc. But, because they satisfy a human want, we say in Economics that they possess utility, even though their consumption is injurious. The term utility as used in Economics has no ethical or moral significance. Thus, a thing may be good or it may bad, but if it satisfies a human want, we shall say it possesses utility.
Characteristics of Utility

1. Utility is subjective

Utility is subjective to the interest of an individual. It depends on individual’s frame of mind. Hence, a given commodity need not bring the same utility to all the consumers. Utility varies from person to person. *Example:* Utility of bidi for a regular smoker is greater than that of non-smoker.

2. Utility varies with purpose

Depending upon the purpose for which a commodity is used, utility of the same varies. *Example:* Utility derived from water as drinking purpose and irrigation purpose are different.

3. Utility varies with time

A particular commodity gives different utilities for the same person in different time period. Cold drinks and ice-cream provide greater utility to the same person in summer than in winter.

4. Utility varies with ownership

Ownership of good creates far greater utility from a good than that when it is hired.

5. Utility need not be synonymous with pleasure

Utility derived from a commodity need not be associated always with pleasure. Consuming apples gives the pleasure to the consumer, while consuming medicine may not give pleasure though it possesses utility. For example, quinine. In spite of its bitter taste, quinine is purchased and consumed, for it does fulfill a need. Hence, utility is not the same thing as pleasure. *A thing which possesses utility may be pleasurable or it may not give any pleasure.*

6. Utility does not mean satisfaction

Utility is not satisfaction by itself. Utility is quality of a good by virtue of which it gives satisfaction to an individual. To say that a mango gives utility is incorrect. We should say, it possesses utility or it gives satisfaction. *A thing possesses utility but it gives satisfaction.*

Kinds / types / Forms of utility

Form Utility

By changing the form of a good, great utility can be created. *Examples:* processing of paddy into rice, cotton into cloths, groundnut into oils, etc.

Place Utility

By virtue of its position in area, the commodity will have different utilities. Such utility is called place utility. Moving a good from one place or market to another place or market increases its utility. *Example:* Apples from Himachal Pradesh, the area of abundant production are transported to western and southern parts of the country (non-producing area), hereby increasing the utility of apples.

Time Utility

Any time lag between production and consumption of commodities creates time utility. Through storage over time, greater utility is created for the products. Storage helps to
create time utility. Example: Agricultural commodities like paddy, wheat, etc, are stored to make them available for the regular use of consumers throughout the year. In doing so, higher utility for commodity is imparted which we call time utility. Similarly, Utility of umbrella in rainy season is higher than that in winter season.

**Possession Utility**

Commodities in the transaction process change the hands from one person to another person. Commodities in the hands of producers have some utility and by the time they reach consumers their utility in increased. Such utility due to possession or transfer of ownership of commodity is called possession utility. Example: Utility of Medicines for a patient is much higher than that of its producer. Similarly, Utility of milk for a child is higher than that of its producer (milkman).

**VALUE**

**Meaning of Value**

Value is of two kinds (1) value–in–use and (2) value–in–exchange.

**Value-in-use**

We often say education has great value or that fresh air, sunshine, rain are very valuable. Here the term ‘value’ is used in the sense of usefulness. This is value-in-use for which economists use the term ‘utility’.

**Value-in-exchange**

In Economics, the term ‘value’ is used in the sense of value-in-exchange’. Thus, in Economics, the term ‘value’ refers to the exchange qualities of a good. Value of a commodity refers to the goods that can be obtained in exchange for it. We cannot exchange fresh air for anything; its value in economic sense is, therefore, zero even though it is otherwise so valuable.

The value of a commodity, thus, means the commodities or services that we can get in return for it; it is, in short, its purchasing power in terms of other commodities or services; it is its power of commanding other things in exchange for itself.

**Attributes of Value**

It is clear, then, that in order to have value in the market; a commodity must not be a free good. Only economic goods can have value in the economic sense. Three qualifications are thus essential for a good before it can have value:

1. It must possess utility;
2. It must be scare in relation to demand; and
3. It must be transferable or marketable.

**All these three qualities are required together.** In absence of any one of these qualities, a good will have no value at all. For example, air possesses utility, but it is not scare. Rotten eggs may be scare; but since they possess no utility. A book has utility; it is also scare and it is transferable. Hence, in economics, air and rotten eggs have no value; while book has value.

**Value is relative term**

Since ‘value’ in Economics means value-in-exchange, it must be relative. It cannot be absolute. It is impossible to speak of the value of a commodity in an absolute manner independently of anything else.
For example, to say that the value of a book is great, gives an idea of its utility only. To talk of the value of a book, in economic sense, we must relate it to something else which we can get in exchange for it. Say, value of a book is Rs. 100 or say value of a book is equal to value of 5 kg rice.

Value equates certain commodities, i.e., a book may fetch 5 kg of rice. It expresses relationship between two commodities, it relates one to other. That is why value is said to be relative. If value of a book increase, it may fetch >5 kg of rice; while if value of rice increases, a book may fetch <5 kg of rice.

**PRICE**

**What is Price?**

Value is not the same thing as price. *When value is expressed in terms of money, it is called price.*

In pre-historic times, people did not know the use of money. They exchanged goods for other goods. This system is called barter. In modern times, however, goods are ordinarily exchanged for money. Therefore, the price of a commodity today means its money-value. *Price expresses value of a commodity in terms of money.*

Generally, economists make no distinction between value and price. All prices are related to one another. They form the price system. It plays a very important role in a capitalistic economy. Buyers express their desire for goods only through prices. *Every price we pay for a good is a vote in favour of it.* It is the price system that regulates the economic activity of a society.

**MONEY**

**What is money?**

It refers to anything which is generally accepted as a medium of exchange.

**WEALTH and WELFARE**

**What is wealth?**

In ordinary speech, when we refer to wealth, we mean money or riches. But in economics, it has a special meaning. It refers to those scarce goods which satisfy our wants and which have money value. *Anything which has money value is wealth.* All economic goods have value–in–exchange. So wealth includes all economic goods. *In Economics the term ‘wealth’ is synonymous with economic goods.* Wealth has been defined as *“stock of goods existing at a given time that have money value”*. Thus, in economics, every man, even the poorest of the poor, possesses some wealth.

**Attributes of Wealth or Characteristics of Wealth**

There are three attributes of wealth as in the case of value; Utility, Scarcity and Transferability or Marketability. Three qualifications are thus essential for a good before it can be considered as wealth:

1. **It must possess utility.**
   - It must have the power to satisfy a want.

2. **It must be scarce.**
   - For example, *air and sunshine* are essential for life. We cannot live without them. But we do not consider them as wealth because they are available in large quantities. Such goods are known as free goods. The goods which are scare are wealth.
3. **It must be transferable.**

   That is, it should be possible for us to transfer the ownership from one person to another. Land, buildings, machinery, etc. are examples of wealth. **Degree certificate**, skill of doctor, artists, cricket, etc. is non-transferable; hence they are not considered as wealth though they are source of wealth. But the **good will** of a company is transferable; hence, it is a wealth.

**What is welfare?**

   Welfare is the well being of individual or community. It refers to the condition of mind. Hence, any good whether it is free or economic, is counted as long as it leads to welfare. Hence, Welfare = Wealth (all economic goods) + All Free goods.

   Wealth and Welfare are two different aspects having relationship. All economics goods are wealth. Free goods have no place while representing wealth. Wealth is a path for welfare, as all our desires are satisfied by means of wealth.

**Money and wealth**

   All money is wealth but all wealth is not money. As wealth consists of all kinds of property, some of them is not acceptable as medium of exchange or not transferable in money.

**Wealth and Income:**

   The amount of money which wealth yield is called income. Wealth is a fund and income is a flow e.g. A person is having Rs. 2 lakhs i.e. wealth. By investing this amount, he earns Rs. 10,000 as interest. This is his income.

   Distinction may also be made between money income and real income. Income of a person expressed in terms of money per month or year is his money income while the amount of goods and services he purchases with his money income is known as real income. A part of current income is consumed and a part is saved or invested.

   **The excess of income over consumption is the saving. Investment means an addition made to nation’s physical stock of capital like building, new machines, finished and semi finished goods.**

   \[ Y = C + S \text{ and } Y = C + I \text{ where } S = I \]

**Classification of wealth**

   Wealth can be classified as follows:

   (1) Individual wealth: The wealth of an individual consists of his property like cash, land, buildings, livestock and goodwill of business which commands a price in the market.

   (2) Personal wealth: Personal qualities like skill, ability and intelligence.

   (3) Social or communal wealth: It consists of state, municipal or social properties like dams, canals, state and museums.

   (4) National wealth: Narrowly speaking it consists of the aggregate wealth of all citizens, excluding the debts. In the wider sense, it includes rivers, mountains, high character of people etc.

   (5) Cosmopolitan wealth: It is the wealth of the whole world.
(6) Negative wealth: This refers to debts owned by individuals or state. If something is a
nuisance like wild pigs, or stray cattles damaging the crops, it may be regarded as negative
wealth.
(7) Representative wealth: Documents of title, documents of property, insurance policy etc
are representative wealth.

HUMAN WANTS

What is Human Wants?

Want means desire. Human wants mean human desire. “Man is a bundle of desire”. His wants are infinite in variety and number. Wants vary from person to person. Food, shelter and cloths are the basic wants. These are the bare necessaries of life. The struggle now is for comforts and joy. As man becomes more civilized, his wants multiply. He wants better food, fashionable clothing, comfortable housings, higher education, entertainments, etc.

Characteristics of Human wants

1. Human wants are unlimited
   There is no end to human wants. When one want is satisfied, another crops up. The never-ending cycle of wants goes on and on. Human wants keep on multiplying.

2. Any particular want is satiable
   Although wants in aggregate are unlimited, yet it is possible to satisfy a particular want, provided one has the means.

3. Wants are Complementary
   It is common experience that we want things in groups. For, example, if we want to write a letter, we want paper and pen. Paper alone is not enough. Thus, a car needs petrol, oil, etc. before it starts working. Thus, wants are complementary.

4. Wants are competitive
   We all have a limited amount of money at our disposal, whereas we want so many things at the same time. We cannot buy them all. We must, therefore, choose between them by accepting some and rejecting others. Thus, there is competition between the various wants that we want to satisfy.

5. Some wants are both complimentary and competitive
   For example, Factory manager wants machinery and labour. Machinery competes with labour; and up to some extent they also complement each other.

6. Wants are alternative
   There are several ways of satisfying a particular want. If we feel thirsty, we can have water, soda, sarbat, lassi, thumps-up, pepsi, etc.

7. Wants vary with time, place and person
   Different people want different things and the same person wants different things at different time and in different places.

8. Wants vary in urgency and intensity
   Some wants are more urgent and intense than others. These are generally satisfied first, while others are given next priority / postponed.

9. Wants multiply with civilization
   As civilization spreads among peoples, their wants also go on increasing.

10. Wants recur
Most of the human wants are of recurring nature. For example, food, drink, entertainment, etc. We eat something when we feel hungry. It will not last for ever. After some hours, we again feel hungry and want some food again and again.

11. Wants change into habits
   If a particular want is regularly satisfied, a person becomes used to it and it grows into habit. For example, smoking, drug addiction, etc.

12. Wants are influenced by income, salesmanship and advertisement
   It is obvious that if income is higher, more wants can be satisfied, and a poor man cannot simply afford to have many wants. Besides, we do not always buy the things we need. We often induced to buy particular brands or products by persuasive salesmen or clever advertisement even though better alternatives may be available.

13. Wants may be the result of custom or convention
   More or less, we all are slaves of custom. Many of our wants are conventional. Whether, we like it or not, we have to spend a lot of money on social ceremonies.

Classification of Wants

1. Necessaries
   They may be sub-divided as:
   1. Necessaries of Existence: These are the things without which we cannot exist, e.g., food, cloths, shelter, etc.
   2. Necessaries of Efficiency: Some goods may not be necessary to enable us to live, but necessary to make us efficient workers. A pen is necessary for student.
   3. Conventional Necessary: These are the things which are forced to use either by social custom or because of the people around us expect us to do so. Example: need of black coat for lawyer.

2. Comforts
   Having satisfied our wants for the necessaries of life, we desire to have some comforts too. For a student, a book is a necessity, table and a chair are necessaries of efficiency; but cushioned chair is a comfort.

3. Luxuries
   Man does not stop even at comforts. After comforts have been provided he wants luxuries too. ‘Luxury’ has been defined as a superfluous consumption, something we could easily do without. Example: costly furniture, luxurious car, etc. For a college student, a fen in summer is a comfort; but air-conditioner is a luxury.
Necessaries, Comforts and Luxuries are relative term

We cannot attach permanent and fixed labels of necessaries, comforts or luxuries to commodities. We cannot say that car is always a luxury. The same thing may be a necessary under one set of conditions and a luxury under others. For example, a car for a doctor is necessary, but for a teacher it is comfort; while for a labour it is luxury. Today what may be a luxury can become a necessary in future. In same manner, what may be regarded as a luxury in India may be a necessary in England. Thus, necessaries, comforts and luxuries are relative to person, time and place.

Comparison / difference

<table>
<thead>
<tr>
<th>Necessaries of Efficiency</th>
<th>Comforts</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Necessary to make us efficient workers</td>
<td>(1) Make for fuller life, enjoyments etc.</td>
</tr>
<tr>
<td>(2) Benefit from money spent is more</td>
<td>(2) Benefit from money spent is less</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comforts</th>
<th>Luxuries</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Comforts make for a fuller life, enjoyment</td>
<td>(1) It is a superfluous consumption, something we could easily do without it.</td>
</tr>
<tr>
<td>(2) Money spent on comforts brings some compensation</td>
<td>(2) Expenditure on luxuries brings negligible return. There may be a loss or harm.</td>
</tr>
</tbody>
</table>
Chapter – 4

AGRICULTURAL ECONOMICS

What is Agricultural Economics?

Agriculture
- The word agriculture comes from the Latin words \textit{ager}, referring to the soil and \textit{cultura}, to its cultivation.
- Agriculture in its widest sense can be defined as the cultivation and/or production of crop plants or livestock products.
- It is synonymous with farming: the production of field dependent production of food, fodder and industrial organic material.

Economics
- Economics is the science that studies as how people choose to use scare productive resources (like land, labour, capital and organiser) to produce various goods and to distribute these goods to various members of the society for their consumption.

Agricultural Economics
- \textbf{Agricultural economics is an applied field of economics} in which the principles of choice are applied in the use of scare resource such as land, labour, water, seeds, fertilizers, etc. in farming and allied activities.
- It deals with the principles that help the farmer in efficient use of land, labour and capital.
- Its role is evident in offering practicable solutions in using scare resource of the farmers for maximization of income.

Definitions
1. Prof. Gray has defined agricultural economics as \textit{“The science in which the principles and methods of economics are applied to the special conditions of agricultural industry”}.

2. According to Prof. Hibbard \textit{“Agricultural economics is the study of relationships arising from the wealth-getting and wealth-using activity of man in agriculture”}.

Thus, agricultural economics deals with the problems of the farms as the units of industry, the income earning and spending activities of the farmers and also the management of farm business and bringing necessary changes according to the situation so as to bring stability to farm income.

Importance
- Agricultural Economics uses theoretical concepts of economics to provide answers to the problems of agriculture and agri-business. Initially earnest efforts were made by the economists to use the economic theory to agricultural problems. Now the subject of agricultural economics is enriched in many directions and fields taking the relevant tools of science particularly mathematics and statistics.
- Agriculture is the integral part of world food system having the foundation link between crops and animal production system. Agricultural economists here have to play a major role in understanding the foundation systems.
- The student of agricultural economics should have a clear insight and understanding of the influences of climatic conditions in determining as to how the commodities are produced and marketed in line with the consumption needs. Knowledge regarding problems in production, finance, marketing and Government policies and their impact on production and distribution is very essential to find out suitable solutions.
Major Fields of Agricultural Economics

1. Microeconomics
   - Basic Concepts
   - Consumer Behaviour
     - Theory of Demand
     - Theory of Supply
   - Theory of Production
   - Theory of Cost
   - Market Structure
   - Theory of Distribution

2. Macroeconomics
   - National Income
   - Money
   - Public Expenditure
   - Public Revenue
   - Unemployment
   - Trade Cycle
   - Inflation
   - Poverty

3. Agricultural Production Economics
   - Laws of Returns
   - Returns to Scale
   - Factor-Product Relationship
   - Factor-Factor Relationship
   - Product-Product Relationship

4. Farm Management
   - Types of Farming
   - Types of Farm Business Organization
   - Farm Planning
   - Farm Budgeting
   - Farm Records, Accountancy and Inventory
   - Farm Efficiency Measures
   - Risk and Uncertainty

5. Agricultural Finance
   - Problems of Agricultural Finance
   - Institutional Agencies in Farm Credit
   - Tests of Farm Credit Proposals
   - Tools of Farm Financial Analysis
   - Agricultural Projects

6. Agricultural Marketing
   - Marketing Functions
   - Marketing Efficiency
   - Marketing Channels
   - Agricultural Prices
   - Problems of Agricultural Marketing
   - Role of Government in Agricultural Marketing
Characteristics of Agriculture
1. Perishability of the product
2. Seasonality of production
3. Bulkiness of products
4. Variation in quality of products
5. Irregular supply of agricultural products
6. Small size of holdings and scattered production
7. Processing

The contribution of agriculture to economic development is as follows
1. It provides food to the rapidly expanding population.
2. It increases the demand for industrial products and thus helps in the expansion of other sectors.
3. It provides additional foreign exchange earnings for the import of capital goods for development through increased agricultural exports.
4. It increases the rural income.
5. It increases the employment opportunities.
6. It improves the welfare of the rural people.

* * * * *
Chapter – 5

DEMAND

What is Demand?

Demand is defined as the quantity of a good or service that consumers are willing and able to buy at a given price in a given time period.

It is necessary to distinguish between demand and desire or need. Demand in economics must be effective. It means that when a consumers’ desire to buy a product is backed up by an ability and willingness to pay for it, then only it actually effect the market. If a person below poverty line wants to buy a car, it is only a desire but not a demand as he cannot pay for the car. If a rich man wants to buy a car, it is demand as he will be able to pay for the car. Thus, desire backed by willingness and ability to pay is called demand.

Demand Function

The demand for any commodity mainly depends on the price of that commodity. The other determinants include price of related commodities, the income of consumers, tastes and preferences of consumers, and the wealth of consumers. Hence the demand function can be written as under:

$$D_x = f(P_x, P_s, Y, T, W)$$

Where,
- \(D_x\) represents demand for good \(x\)
- \(P_x\) is price of good \(X\)
- \(P_s\) is price of related goods
- \(Y\) is income
- \(T\) refers to tastes and preferences of the consumers
- \(W\) refers to wealth of the consumer.

Types of Demand

There are three kinds of demands: Price Demand, Income Demand and Cross Demand.

1. Price Demand

Price demand refers to the various quantities of a commodity or service that a consumer would purchase at a given time in a market at various hypothetical prices. It is assumed that other things, such as consumer’s income, his taste and price of inter related goods remain unchanged.

The demand of the individual consumer for a particular good or service at different prices is called Individual Demand. The sum of the individual demand for a product in the market is called Market Demand.

2. Income Demand

It refers to the various quantities of a good or service which would be purchased by the consumers at various levels of income here we assume that the price of the commodity or service as well as the prices of inter related goods and the taste and desires of consumers do not changed. The Income Demand shows the relation between income and the quantities demanded.
3. Cross Demand

It means the quantity of good or service which will be demanded with reference to change in price not of this good but of other inter-related goods. These goods are either substitutes (e.g., tea and coffee) or complementary (e.g. tractor and trailer) goods. A change in price of tea, for instance, will affect the demand of coffee. A change in price of tractor will affect the demand of trailer.

**The Law of Demand**

Other factors remaining constant (ceteris paribus) there is an inverse relationship between the price of a good and its demand. Demand varies inversely with price, not necessarily proportionately. If the price falls, demand will extend and vice-versa. Demand thus is a function of price. i.e. it varies with price. It can be expressed as:

\[ D = F(P) \]

Where,

- \( D \) = Demand
- \( P \) = Price

**The ceteris paribus assumption**

Understanding ceteris paribus is the key to understanding much of microeconomics. Many factors can be said to affect demand. Economists assume all factors are held constant except one—the price of the product itself. Thus, the assumptions of the law are:

1. No change in the consumer’s income
2. No change in consumer’s tastes and preferences
3. No changes in the prices of inter-related goods
4. No new substitutes for the goods have been discovered
5. Change in the price should not be anticipatory due to the fact that either on account of the danger of war or widespread failure of rains.
6. The use of a commodity does not confers distinctions.

**Demand Schedule**

Demand schedule is a tabular statement showing how much of a commodity is demanded at different prices. Table 2.1 is a hypothetical demand schedule of an individual consumer. It shows a list of prices and corresponding quantities demanded by an individual consumer. This is an individual demand schedule.

<table>
<thead>
<tr>
<th>Price (Rs./unit)</th>
<th>Quantity Demanded (units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td>1</td>
<td>50</td>
</tr>
</tbody>
</table>
### Market Demand Schedule

<table>
<thead>
<tr>
<th>Price of (Rs./unit)</th>
<th>Qty Demanded by “A”</th>
<th>Qty Demanded by “B”</th>
<th>Qty Demanded by “C”</th>
<th>Total Qty. Demanded</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>10</td>
<td>15</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>4</td>
<td>20</td>
<td>25</td>
<td>5</td>
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<tr>
<td>3</td>
<td>30</td>
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<td>10</td>
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<td>40</td>
<td>45</td>
<td>15</td>
<td>100</td>
</tr>
<tr>
<td>1</td>
<td>50</td>
<td>55</td>
<td>20</td>
<td>125</td>
</tr>
</tbody>
</table>

### Practical utility of a demand schedule

It is not possible to construct the demand schedule accurately even though it is useful in the following ways.

1) All the businessmen make their forecast of quantity they could dispose of at different prices and accordingly they forecast profit and also it helps in arranging production level.

2) In order to find out the effect of different rates of taxes on the sale of commodity, a finance minister takes the help of demand schedule. Imposition of tax is bound to raise price, which would reduce demand while the government revenue depends on how much actually sold.

### Demand Curve

The demand schedule can be converted into a demand curve by measuring price on vertical axis and quantity on horizontal axis as shown in the figure below.

![Demand Curve](image)

**Fig. 1: Demand Curve**

A demand curve shows the relationship between the price of an item and the quantity demanded over a period of time. The curve slopes downwards from left to right showing that, when price rises, less is demanded and vice versa. Thus the demand curve represents the inverse relationship between the price and quantity demanded, other things remaining constant.
The demand curve is normally drawn in textbooks as a straight line suggesting a linear relationship between price and demand but in reality, the demand curve will be non-linear! No business has a perfect idea of what the demand curve for a particular product looks like, they use real-time evidence from markets to estimate the demand conditions and this accumulated experience of market conditions gives them an advantage in constructing demand-price relationships.

<table>
<thead>
<tr>
<th>Individual Demand Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price (Rs./unit)</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
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<td>8</td>
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<tr>
<td>9</td>
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<tr>
<td>10</td>
</tr>
<tr>
<td>11</td>
</tr>
</tbody>
</table>

**Fig. 2: Normal Demand Curve**

**Why demand curve slopes downward?**

Generally, the demand curve slopes downwards. This is in accordance with the law of diminishing marginal utility. The purchases of most of us are governed by this law. When the price falls, new purchasers enter the market and old purchasers will probably purchase more. Since, this particular commodity has become cheaper, it will be purchased by some people in preference to other commodities.

**Why people buy more when the price falls?**
1. A unit of money goes farther and one can afford to buy more. He is willing and able to buy more because the thing being cheaper, his real income (i.e. income in terms of goods) increases. It is called **Income Effect**

2. When the commodity becomes cheaper, it tends to be substituted wholly or partly for other commodities. This is called **Substitution Effect**.

3. A commodity tends to be put to more uses or less urgent uses when it becomes cheaper. For example, if water is dear, we shall use it for drinking only; but when it becomes cheaper, we shall use it for washing and other less urgent uses.

**Exceptions to the Law of Demand**

As we have said above, generally the demand curve slops downwards to the left. But sometimes the demand curve, instead of sloping downward, will rise upwards. In other words, sometimes people will buy more when the price rises. This can be represented by a rising demand curve. Such cases are very rare, but we can imagine some. The following is the list of few exceptions to the law of demand.

![Fig. 3: Exceptions to the Law of Demand](image)

(1) **Veblen Effect**

Veblen has pointed out that there are some goods demanded by very rich people for their social prestige. When price of such goods rise, their use becomes more attractive and they are purchased in larger quantities. Demand for diamonds from the richer class will go up if there is increase in price. If such goods were cheaper, the rich would not even purchase.

(2) **Giffen Paradox**

Sir Robert Giffen discovered that the poor people will demand more of inferior goods if their prices rise and demand less if their prices fall. Inferior goods are those goods which people buy in large quantities when they are poor and in small quantities when they become rich. For example, poor people spend the major part of their income on coarse grains (e.g. ragi, kordra, bavta) and only a small part on rice. When the price of coarse grains rises, they will buy less rice. To fill up the resulting gap, more of coarse grains have to be purchased. Thus, rise in the price of coarse grains results in the increase in quantity of coarse grains purchased. This is called ‘Giffen Paradox’. In these cases, the law of demand has an exception.
(3) When a serious shortage is feared, people may be in get panic and buy more even though the price is rising. They are anxious to avoid the necessity of having to pay a still higher price in future.

(4) Sometimes, people buy at a higher price in sheer ignorance.

**Change in Demand (Extension / Contraction of Demand)**

The demand curve does not change its position here. When change in demand for a commodity is entirely due to a change in its price, it is called extension or contraction of demand. The extension or contraction in demand are movements on or along the given demand curve. It is shown in Fig. 4.

![Fig. 4: Changes in Demand](image)

When the price of a good is OP, demand is OQ. If the price of good falls to OP”, demand expands to OQ”. Thus extension in demand is QQ”. On the other hand, when the price of good rises to OP’ demand contracts to OQ’. Thus contraction in demand is QQ’.

**Shift in Demand (Increase / Decrease in Demand)**

One of the basic assumptions of economic theory is ‘other things being equal’. Other things are income, tastes, population, government policy, technology, price of related goods etc. Change in such factors will bring about increase or decrease in demand. In Fig.5, the increase in demand is shown by the shifts of the demand curve to the right from D to D’ and D”. The increase in demand is shown by the shift to the right from D to D’ and QQ’ indicates increase in demand. The decrease in demand is shown by the shift to the left from D to D” and QQ” indicates decrease in demand.

![Fig. 5: Shifts in Demand](image)
Factors determining demand

The following are the factors that bring change in demand either increase or decrease.

1) **Change in fashion**: When some goods go out of fashion, they will be less in demand even though they may become cheap.

2) **Change in weather**: Demand change when the weather changes. A fall in the price of woolen clothes does not increase their demand in summer.

3) **Change in the quantity of money in circulation**: If the quantity of money in circulation increases, the people will have more purchasing power and consequently demand will increase and vice versa.

4) **Change in population**: A change in size or composition of population will bring about a change in demand. If birth rate increase, more toys and perambulators will be demanded, country with old men will demand more walking sticks, false teeth and medicines.

5) **Change in wealth distribution**: Suppose wealth is distributed more evenly then the demand for necessaries and comfort commonly used by poor people will increase, while demand for luxuries will fall.

6) **Change in real income**: Increase in real income means things is cheap and with the same money/income people are able to buy more goods.

7) **Change in habit, test and customs**: Demand also depends on the tastes, habits and custom of a commodity. For example, if people develop tastes for tea in place of lassi, the demand for tea will increase.

8) **Technical progress**: Inventions and discoveries bring new things in the market and therefore demand for old things decline. For example, radio sets replaced gramophones and TV sets are replacing radio sets.

9) **Discovery of cheap substitutes**: Manufacture of vegetable ghee has made available a cheap substitute for ghee and therefore demand for pure ghee has decreased.

10) **Advertisement**: A clear and persistent advertisement may create a new type of demand.

**Inter-related Demand**

**Direct demand**

The demand for the ultimate object e.g. demand for house, a cup of tea, ice cream is called direct demand.

**Derived demand**

The demand for various kinds of labour and materials which go to make the final product is called derived demand e.g. the demand for new bricks, iron, cement is strongly linked to demand of new buildings.
Joint demand

When several things are demanded for a joint purpose, it is a case of joint demand. Milk, sugar and tea leaves are wanted for making a tea.

Composite demand

The demand for a commodity that can be put to several uses is a composite demand. Coal can be used for heating, cooking and for a running steam engine etc. Similarly milk can be used for making different dairy products like penda, cheese, curd, ice-cream etc.

Latent Demand

It is probably best described as the potential demand for a product. It exists when there is willingness to buy among people for a good or service, but where consumers lack the purchasing power to be able to afford the product. Latent demand is affected by advertising—where the producer is seeking to influence consumer tastes and preferences.

Speculative Demand

The demand for a product can also be affected by speculative demand. Here, potential buyers are interested not just in the satisfaction they may get from consuming the product, but also the potential rise in market price leading to a capital gain or profit. When prices are rising, speculative demand may grow, adding to the upward pressure on prices. The speculative demand for housing and for shares might come into this category.

* * * * *
Chapter – 6

UTILITY THEORY

Concept of Utility

In the ordinary language, ‘utility’ means ‘usefulness’. In Economics, utility is defined as the power of a commodity or a service to satisfy a human want. Utility is a subjective or psychological concept. The same commodity or service gives different utilities to different people. For a vegetarian, mutton has no utility. Warm clothes have little utility for the people in hot countries. So utility depends on the consumer and his need for the commodity.

Total Utility

Total Utility refers to the sum of utilities of all units of a commodity consumed. For example, if a consumer consumes ten biscuits, then the total utility is the sum of satisfaction of consuming all the ten biscuits.

Marginal Utility

Marginal Utility is the addition made to the total utility by consuming one more unit of a commodity. For example, if a consumer consumes 10 biscuits, the marginal utility of 10th unit is nothing but the total utility of 10 biscuits minus the total utility of 9 biscuits.

Law of Diminishing Marginal Utility

The law of diminishing marginal utility explains an ordinary experience of a consumer. If a consumer takes more and more units of a commodity, the additional utility he derives from an extra unit of the commodity goes on falling. Thus, according to this law, the marginal utility decreases with the increase in the consumption of a commodity. When marginal utility decreases, the total utility increases at a diminishing rate.

Definition According to Marshall, “The additional benefit which a person derives from a given increase of his stock of a thing diminishes with every increase in the stock that he already has”.

Explanation

Suppose Mr. X is hungry and eats apple one by one. The first apple gives him great pleasure (higher utility) as he is hungry; when he takes the second apple, the extent of his hunger will reduce. Therefore he will derive less utility from the second apple. If he continues to take additional apples, the utility derived from the third apple will be less than that of the second one. In this way, the additional utility (marginal utility) from the extra units will go on decreasing. If the consumer continues to take more apples, marginal utility falls to zero and then becomes negative.

For example, the utility derived by a person from successive units of consumption of apples is as under.

<table>
<thead>
<tr>
<th>Units of apple</th>
<th>Total Utility</th>
<th>Marginal utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>35</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>45</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>50</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>45</td>
<td>-5</td>
</tr>
<tr>
<td>7</td>
<td>35</td>
<td>-10</td>
</tr>
</tbody>
</table>
From the above table and figure, it is very clear that the marginal utility (addition made to the total utility) goes on declining. The consumer derives 20 units of utility from the first apple he consumes. When he consumes the apples continuously, the marginal utility falls to 5 units for the fourth apple and becomes zero for the fifth apple. The marginal utilities are negative for the 6th and 7th apples. Thus when the consumer consumes a commodity continuously, the marginal utility declines, reaches zero and then becomes negative.

The total utility (sum of utilities of all the units consumed) goes on increasing and after a certain stage begins to decline. When the marginal utility declines and it is greater than zero, the total utility increases. For the first four units of apple, the total utility increases from 20 units to 50 units. When the marginal utility is zero (5th apple), the total utility is constant (50 units) and reaches the maximum. When the marginal utility becomes negative (6th and 7th units), the total utility declines from 50 units to 45 and then to 35 units.

**Relationship between Total Utility and Marginal Utility**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Total Utility</th>
<th>Marginal Utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Increases</td>
<td>Declines</td>
</tr>
<tr>
<td>2</td>
<td>Reaches maximum</td>
<td>Reaches zero</td>
</tr>
<tr>
<td>3</td>
<td>Declines</td>
<td>Becomes negative</td>
</tr>
</tbody>
</table>

**Importance**

1. The Law of Diminishing Marginal Utility (DMU) is the foundation for various other economic laws. For example, the Law of Demand is the result of the operation of the Law of Diminishing Marginal Utility. In other words, as more and more units of a commodity are consumed, each of them gives less and less marginal utility. This is
due to the operation of the Law of DMU. As utility falls, consumer is therefore willing to pay a lower price only.

2. The Law of DMU operates in the case of money also. A rich man already possesses a lot of money. If more and more money is newly added to his income, marginal utility of money begins to fall. Alfred Marshall assumed that the marginal utility of money remains Constant

3. This law is a handy tool for the Finance Minister for increasing tax rate on the rich.

4. Producers are guided by the operation the Law of DMU, unconsciously. They constantly change the design, the package of their goods so that the goods become more attractive to the consumers and they appear as ‘new goods’. Or else, the consumers would think that they are using the same commodity, over and over. In such a situation, the Law of DMU operates in the minds of the consumers. Demand for such commodities may fall.

**Assumptions**

1. The units of consumption must be in standard units e.g., a cup of tea, a bottle of cool drink etc.
2. All the units of the commodity must be identical in all aspects like taste, quality, colour and size.
3. The law holds good only when the process of consumption continues without any time gap.
4. The consumer’s taste, habit or preference must remain the same during the process of consumption.
5. The income of the consumer remains constant.
6. The prices of the commodity consumed and its substitutes are constant.
7. The consumer is assumed to be a rational economic man. As a rational consumer, he wants to maximize the total utility
8. Utility is measurable.

**Criticism / Limitations**

1. Deriving utility is a psychological experience, when we say a unit of X gives ten units of utility, this means that utility can be measured precisely. In reality, utility cannot be measured. For example, when a person sees a film and says it is very good, we cannot measure the utility he has derived from it. However, we can measure utility indirectly by the cinema fare he is willing to pay.
2. The Law is based on a single commodity consumption mode. That is, a consumer consumes only one good at a time. This is an unrealistic assumption. In real life, a consumer consumes more than one good at a time.
3. According to the Law, a consumer should consume successive units of the same good continuously. In real life it is not so.
4. The Law assumes constancy of the marginal utility of money. This means the marginal utility of money remains constant, even when money stock changes. In real life, the marginal utility derived from the consumption of a good cannot be measured precisely in monetary terms.
5. As utility itself is capable of varying from person to person, marginal utility derived from the consumption of a good cannot be measured precisely.
Law of Equi – marginal Utility

This law is also known as the law of substitution. “The law implies that if a person has a thing which he can put to several uses, he will distribute it between those uses in such a way that it has the same marginal utility in all” (Marshall). A consumer generally is confronted with the problem of buying from among several goods and services, given his limited income. He is left with the choice making, regarding purchase of commodities and their quantities so that the purchases that are decided upon ensure him maximum satisfaction. Here, the consumer aims at maximizing total utility by consuming possible goods and services given the income constraint. In this process the consumer substitutes the goods having greater utility for those which have lesser utility. This process is continued till the marginal utilities of the commodities purchased are equalized. Hence the name, the law of equimarginal utility.

Assumptions
Before explaining the law, the following assumptions are made.
1. The consumer behaves rationally.
2. He has full knowledge about the commodities, their attributes, prices, etc., in the market.
3. Utility is measurable cardinally in terms of utils.
4. Commodities that are chosen are divisible and substitutable.

Explanation of the Law

Given the income constraint, the consumer makes prudent decisions in his purchases such that the allocation so made ensures him maximum satisfaction. Let us assume that the consumer has got Rs. 25 to spend. He has the options of spending this amount on three vegetables viz., potato, tomato and ridge gourd. The marginal utilities that are derived from the consumption of these vegetables and the amounts of money spent are presented in table. The marginal utilities are derived from the consumption of three vegetables by spending a unit of money (each unit of money is equal to Rs. 5). First unit of Rs. 5 on potato gives a marginal utility of 19 utils, second unit 16 utils, third 14 utils and so on. Now to maximize the satisfaction from the three vegetables the consumer has to spend Rs. 25 in such a way that the marginal utility of the last unit of money is equal in all uses. Given the marginal utilities derived from the three vegetables, the consumer has to spend first three units on tomato, one unit each on potato and ridge gourd respectively. The total utility through this combination would be 100 (22 + 21 + 20 + 19 + 18). No other combination of vegetables gives as high as 100 utils.

Equi – marginal Utility

<table>
<thead>
<tr>
<th>No. of units (Rs. 5 per unit)</th>
<th>Marginal utilities per unit of Rs. 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Potato</td>
</tr>
<tr>
<td>1</td>
<td>19*</td>
</tr>
<tr>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

* Indicates units of money spent on vegetables
This combination is going to hold good till some changes occur either in the price or his income or his tastes. This law is also called as the principle of proportionality, as the consumer allocates his expenditure in such a way that the marginal utilities of the goods purchased would be in proportion to their prices. Consumer attaining equilibrium by spending his limited money is shown below:

\[
\frac{\text{MU of X}}{\text{Price of X}} = \frac{\text{MU of Y}}{\text{Price of Y}} = \frac{\text{MU of Z}}{\text{Price of Z}} = K
\]

**Practical Importance of Law of Equi – marginal Utility**

1. Consumption: A rational consumer follows this law, while planning his expenditure. He spends in such a way that marginal utility derived from each unit of money gives nearly equal utility in the various goods he purchases.
2. Production: A rational producer allocates his limited resources among various possible enterprises in such a way that the marginal value product derived from each unit of resource on various enterprises are the same.
3. Marketing: The consumer should keep in mind that marginal utility of the commodity and price of the commodities should be equal in purchasing the commodities from the markets. Thus this law guides the consumers to spend the given amount efficiently on different goods which provide utilities.
4. Distribution: The share of each factor of production is determined on the basis of marginal value productivity.
5. Prices: When the price of a commodity goes up in view of shortfall in supply, consumer prefers that commodity which is relatively less scarce. This preference of consumer brings down the price of the commodity.

**Limitations of the Law**

It needs a very careful scrutiny by the consumer regarding prices of various commodities and their substitutes. More often, the expenditure pattern is influenced by the habits, except in the case of very high priced goods for which certain amount of thinking goes before taking buying decisions. Another limitation for the operation of the law is indivisibility of certain goods which would not permit the equalization of marginal utilities. Further, it is possible that buying decisions are influenced by advertisement in which case rationality criterion may not be followed.

**Consumer Equilibrium**

The term *consumer’s equilibrium* refers to the amount of goods and services which the consumer may buy in the market given his income and given prices of goods in the market. The aim of the consumer is to get maximum satisfaction from his money income. In simpler words, consumer equilibrium is the point at which a consumer reaches optimum utility, or satisfaction, from the goods and services purchased given the constraints of income and prices. Consumer is in equilibrium position when marginal utility of money expenditure on each good is the same.
The law of demand or the demand curve can be derived with the aid of law of diminishing marginal utility. The law of diminishing marginal utility states that as the quantity of a good with a consumer increases, marginal utility of the good to him expressed in terms of money falls. In other words, the marginal utility curve of a good is downward sloping. Now, a consumer will go on purchasing a good until the marginal utility of the good equals the market price. His satisfaction will be maximum only when marginal utility equals price. It, therefore, follows that the diminishing marginal utility curve implies the downward sloping demand curve, that is, as the price of the good falls, more of it will be purchased. In the figure, the diminishing marginal utility of the good is measured in terms of money.

![Diagram of Demand Curve](image)

* * * * *

**Fig. 3.2 Derivation of Law of Demand from Law of Diminishing Marginal Utility**

Suppose, the price of the good is $OP_0$ and a consumer will be in equilibrium if he purchased $OQ_0$, then the marginal utility is equal to the given price $OP_0$. Now, if the price falls to $OP_1$, the consumer would buy $OQ_1$ quantity of good and the equilibrium would be shifted from $E_0$ to $E_1$. In order to equate the marginal utility with the lower price $OP_1$, the consumer must buy more of the good. Thus, there is an inverse relationship between quantity demanded and price of the good.
Chapter – 7

CONSUMER’S SURPLUS

The concept of consumer’s surplus was first introduced by Alfred Marshall. When a consumer is prepared to buy a commodity, he always calculates the utility he is going to derive from its consumption. Every rational consumer compares the utility he derives from the consumption of a commodity, against the price he has to pay. If the utility is more than the price paid, he prefers it and if it is vice-versa, he does not buy the same good. The surplus of utility he derives is consumer’s surplus.

In nutshell, consumer’s surplus is the difference between what the consumer is willing to pay and what he actual pays.

**Consumer’s surplus = Price that a consumer is willing to pay - Price he actual pays.**

Suppose, a consumer wants to buys a shirt. He is willing to pay Rs 250 for it. But the actual price is only Rs 200. Thus he enjoys a surplus of Rs 50. This is called consumer’s surplus.

Consumer’s surplus is experienced in commodities which are highly useful but relatively cheap. For example, newspaper, salt, match box, postage stamp etc. For these commodities, we are ready to pay more than what we actually pay.

**Estimation of Consumer’s surplus**

<table>
<thead>
<tr>
<th>Units of apple</th>
<th>Marginal utility</th>
<th>Actual Price of Apple</th>
<th>Consumer’s surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>15</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Total Units</td>
<td></td>
<td>Total Utility = 50</td>
<td>Total Money Spent = Rs. 20</td>
</tr>
</tbody>
</table>

Marginal utility explains the price which a consumer is willing to pay for the unit of the commodity. As more and more units of a commodity is purchased, the marginal utility declines. Therefore the price, which the consumer is willing to pay, also decreases. The difference between marginal utility and the market price (actual price) gives the consumer’s surplus. Thus from the table consumer’s surplus for each unit is the difference between Marginal Utility (column 2) minus market price (column 3). The consumer’s surplus for all the units can be calculated as total utility minus the total amount spent on the commodity i.e. consumer’s surplus = Rs 50 – 20 = Rs 30.

A rise in the market price reduces the consumer’s surplus and vice-versa. If price of apple increases to Rs. 10, consumer will buy only 3 units and in such case consumer’s surplus will be decreased to Rs. 15 only.
In the above figure, MU is the marginal utility curve. OP is the price and OM is the quantity purchased. For OM units, the consumer is willing to pay OAEM. The actual amount he pays is OPEM. Thus consumer’s surplus is OAEM – OPEM = PAE (the shaded area). A rise in the market price reduces consumer’s surplus.

Assumptions
1. Cardinal utility, that is, utility of a commodity is measured in money terms.
2. Marshall assumes that there is definite relationship between expected satisfaction (utility) and realized satisfaction (actual).
3. Marginal utility of money is constant
4. Absence of differences in income, tastes, fashion etc.
5. Independent goods and independent utilities.
6. Demand for a commodity depends on its price alone; it excludes other determinants of demand.

Criticism / Limitations
Two major criticisms against the Marshallian concept of Consumer’s Surplus are:
1. Marshall assumed that utility is measurable, but J.R.Hicks says that is immeasurable, because it is psychological in nature
2. The Marshallian assumption of marginal utility of money remaining constant. But it is unrealistic. Marginal utility of money increases with the fall in the stock of money.

Importance of Consumer’s Surplus
1. It is useful to the Finance Minister in formulating taxation policies.
2. It is helpful in fixing a higher price by a monopolist in the market, based on the extent of consumer’s surplus enjoyed by consumers.
3. It enables comparison of the standard of living of people of different regions or countries. This comparison helps to distinguish consumption levels between the people, who are living in rich countries and poor countries. For example, a middleclass person in New York enjoys more consumers’ surplus than a similar person in Anand.

* * * * *
Chapter – 8

ELASTICITY OF DEMAND

The law of demand explains that demand will change due to a change in the price of the commodity. But it does not explain the rate at which demand changes to a change in price. The concept of elasticity of demand measures the rate of change in demand.

Demand extends or contracts with change in price. This quality of demand by virtue of which it changes called elasticity of demand. Elasticity means sensitiveness or responsiveness. Elasticity of demand expresses the degree of correlation between demand and price. It is the measure of the responsiveness of demand to changing price.

Elastic and Inelastic Demand

A change in demand is not always proportionate to the change in price. A small change in price may lead to a great change in demand. In that case, we shall say that the demand is elastic. If, on other hand, even a big change in price there is followed only by a small change in demand, it is said to be a case of inelastic demand. For example, demand of mobile is elastic, while demand of salt is inelastic.

Types of Elasticity

1. Price elasticity

The degree of responsiveness of quantity demanded to a change in price is called price elasticity of demand. It is the ratio of proportionate change in the amount demanded to a proportionate change in price.

\[
\text{Price Elasticity (Ep)} = \frac{\% \text{ change in Demand}}{\% \text{ change in Price}}
\]

2. Income Elasticity

Income elasticity is a measure of responsiveness of demand to change in income, when price remains the same. It is the ratio of proportionate change in the amount spent on commodity to a proportionate change in income.

\[
\text{Income Elasticity (Ei)} = \frac{\% \text{ change in Demand}}{\% \text{ change in Income}}
\]

3. Cross Elasticity

Here, a change in price of one good causes a change in the demand for other goods. This type of elasticity arises in the case of inter-related goods such as substitutes and complementary goods.

\[
\text{Cross Elasticity (Ec)} = \frac{\% \text{ change in Demand for commodity X}}{\% \text{ change in Price of commodity Y}}
\]

Degree of Price Elasticity

There are five types of elasticity of demand.
1. **Infinite or Perfectly elastic demand (Ep=α)**

Elasticity of demand is infinity when even a negligible fall in price of the commodity leads to an infinite extension in the demand for it.

2. **Perfectly inelastic demand (Ep=0)**

Perfectly inelastic demand means a great rise or fall in the price of the commodity, its demand remains absolutely unchanged.

3. **Relatively (very) elastic demand (Ep>1)**

When even a small change in the price of a commodity leads to a considerable extension/contraction of demand, demand is said to be very elastic.

4. **Unitary (unit) elastic demand (Ep=1)**

When a change in price brings equal (but negative) change in demand is referred as unit elasticity. For example, 10% increase in price results into 10% contraction in demand.

5. **Relatively inelastic (or less elastic) demand (Ep<1)**

When even a substantial change in price brings only a small extension/contraction in demand, it is said to be a less elastic or relatively inelastic demand.

**Methods for Measurement of Price Elasticity**

1. **Total expenditure method / Total outlay method**

Under this method we measure elasticity of demand by examine the change in the total expenditure due to a change in price. Calculate Ep for following demand schedule.
### Price of Milk

<table>
<thead>
<tr>
<th>Price of Milk Rs./ lit.</th>
<th>Quantity Demanded (lit.)</th>
<th>Total Amount Spent (Rs.)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>3</td>
<td>72</td>
<td>(1)</td>
</tr>
<tr>
<td>21</td>
<td>4</td>
<td>84</td>
<td>(2)</td>
</tr>
<tr>
<td>18</td>
<td>5</td>
<td>90</td>
<td>(3)</td>
</tr>
<tr>
<td>15</td>
<td>6</td>
<td>90</td>
<td>(4)</td>
</tr>
<tr>
<td>12</td>
<td>7</td>
<td>84</td>
<td>(5)</td>
</tr>
<tr>
<td>9</td>
<td>8</td>
<td>72</td>
<td>(6)</td>
</tr>
</tbody>
</table>

#### Rule to decide Ep

<table>
<thead>
<tr>
<th>Situation</th>
<th>Conclusion</th>
<th>Observations found in example</th>
</tr>
</thead>
<tbody>
<tr>
<td>When the total amount of money spent increase with a fall in price or decreases with a rise in price.</td>
<td>The elasticity is said to be greater than unity. (Ep&gt;1)</td>
<td>Between no.1 &amp; 2 (84&gt;72) and 2 &amp; 3 (90&gt;84)</td>
</tr>
<tr>
<td>When the total amount of money spent remains the same. The rise in price is exactly balanced by reduction in purchases and vice versa.</td>
<td>The elasticity is said to be a unity. (Ep=1)</td>
<td>Between no.3 &amp; 4 (90=90)</td>
</tr>
<tr>
<td>When the total amount of money spent decrease with a fall in price or increases with a rise in price.</td>
<td>The elasticity is said to be less than unity. (Ep&lt;1)</td>
<td>Between no.4 &amp; 5 (84&lt;90) and 5 &amp; 6 (72&lt;84)</td>
</tr>
</tbody>
</table>

2. **Proportional method**

Under this method, we measure elasticity by comparing the percentage change in price with percentage change in demand. The elasticity is the ratio of the percentage change in the quantity demanded to the percentage change in the price.

\[
\text{Elasticity (Ep)} = \frac{\% \text{ change in Demand}}{\% \text{ change in Price}}
\]

\[
= \frac{\text{Change in Demand}}{\text{Initial Demand}} \div \frac{\text{Change in Price}}{\text{Initial Price}}
\]

**Example**: Find out Ep for following demand schedule.

<table>
<thead>
<tr>
<th>Price of “X” (Rs./kg)</th>
<th>Quantity of “X” Demanded (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>250</td>
<td>10</td>
</tr>
<tr>
<td>200</td>
<td>15</td>
</tr>
</tbody>
</table>

\[
\text{Ep} = \frac{\text{Change in Demand}}{\text{Initial Demand}} \div \frac{\text{Change in Price}}{\text{Initial Price}}
\]
\[
\begin{align*}
&= \frac{15-10}{10} \div \frac{200-250}{250} \\
&= \frac{5}{10} \div \frac{50}{250} \\
&= \frac{1}{2} \div \frac{1}{5} \\
&= \frac{5}{2} \\
&= 2.5
\end{align*}
\]

**Conclusion:** Ep>1, Thus, the demand is very elastic.

**3. Geometrical method /point elasticity**

We can calculate the price elasticity of demand at a point on the linear demand curve as under.

![Graph showing point elasticity](image)

Formula to find out Ep through point method is,

\[
Ep = \frac{\text{Lower segment of the demand curve}}{\text{Upper segment of the demand curve}}
\]

For example, in above figure, the length of the demand curve AB is 4 cm.

- At point E, \( Ep = \frac{EB}{EA} = \frac{2}{2} = 1 \) (Ep=1, i.e., Unitary elastic demand)
- At point C, \( Ep = \frac{CB}{CA} = \frac{3}{1} = 3 \) (Ep>1, i.e., Elastic demand)
- At point D, \( Ep = \frac{DB}{DA} = \frac{1}{3} = 0.33 \) (Ep<1, i.e., Inelastic demand)
- At point A, \( Ep = \frac{AB}{0} = \frac{4}{0} = \text{Infinite} \) (Ep=∞, i.e. Perfectly elastic demand)
- At point B, \( Ep = \frac{0}{BA} = \frac{0}{4} = 0 \) (Ep=0, i.e. Perfectly inelastic demand)

**Factors determining elasticity of demand:**

1. Nature of the commodity
2. Uses of commodity
3. Existence of substitutes
4. Postponement of demand
5. Amount of money spent
6. Habits
7. Range of prices of commodity

Importance of Elasticity of demand

1. Price discrimination
   If the demand for a product has different elasticities in different markets, then the monopolist can fix different prices in different markets. This price discrimination is possible due to different price elasticities.

2. Levy of taxes
   The government will get higher revenue if tax is increased on goods having inelastic demand. Conversely, the government will get lower revenue if tax is increased on goods having elastic demand.

3. International Trade
   Terms of trade refer to the rate at which domestic commodities are exchanged for foreign commodities. The terms of trade will be favourable to a country if its exports enjoy inelastic demand in the world market.

4. Determination of volume of output
   Volume of goods and services must be produced in accordance with the demand for the commodity. When the demand is inelastic, the producer will produce more goods to take the advantage of higher prices. Hence the nature of elastic and inelastic demand helps in the determination of the volume of output.

5. Fixation of wages for labourers
   If the demand for workers is inelastic, efforts of trade unions to raise wages of the workers will be successful. On the other hand, if the demand for labour is elastic, they may not succeed in increasing the wage rate by trade union activity.

6. Poverty in the midst of plenty
   The concept of elasticity of demand explains the paradox of poverty i.e. poverty in the midst of plenty. For example, bumper crop of food grains should bring agricultural prosperity but if the demand for food grains is inelastic, the agriculturist will be the loser if low price is paid.

* * * * *
Chapter – 9

PRODUCTION

Production
Production means creation of value in the goods, i.e. creation of utility. Production activity helps in transforming a set of inputs into goods and services. It essentially means transforming of one set of goods into another. The output which comes out of production has greater utility over the inputs combined in the production process. The inputs that are used in production of goods may be provided by the nature and/or by other industries.

Factors of Production
These mean the production resources required to produce a given product. Fraser defined factor of production as “a group or class of original productive resources”. The factors of production have been traditionally classified as land, labour, capital and organization.

Land
According to Marshall, land means “the materials and forces which nature gives freely for man’s aid, in land and water, in air and light and heat.” In Economics the term land has a very broad meaning. It includes all free gifts of nature available to mankind viz., air, water and land. It includes all types of land surfaces such as mountains, valley, plains, forests etc. It includes all types of water resources such as rivers, oceans, etc. Thus the term land includes all natural resources on, above and below the earth's surface.

Labour
The term, labour has wide and diversified meaning in economics. It can be physical work or mental work that is done by a person with an aim of earning money. It includes the work done by farmers, workers, the service of teachers, doctors, actors, etc. In the words of Marshall, labour is defined as “any exertion of mind or body undergone partly or wholly with a view to earn some good other than the pleasure derived directly from the work”. Any work that is done for pleasure does not come under labour.

Characteristics of Labour
1. Labour is inseparable from labourer.
2. Labour is perishable.
3. Labour has very weak bargaining power.
4. Lack of free mobility.
5. Supply of labour is independent of demand.
6. Supply of labour peculiarly changes with the wages.

Capital
Capital is not an original factor like land, but it is the result of man – made efforts. Man makes the capital goods to produce other goods and services. For example, machinery, raw material, transport equipment, dams, etc., are considered as capital goods. Capital is produced means of production. According to Karl Max, capital is ‘crystallized labour’. All capital is necessarily wealth but all wealth is not necessarily capital. Money when used for the purchase of capital goods, then only it becomes capital. For instance, residential buildings are the wealth of the individuals, but these are not considered as capital.

Characteristics of Capital
1. Capital is not a free gift of nature. It is the result of man – made efforts. Machinery, implements,
   etc., are considered as capital goods.
2. Capital is productive, as it helps in enhancing the overall productivity of all the resources employed in the production process.
3. It is also prospective as its accumulation rewards income in future.
4. Capital is highly mobile as it possesses the characteristic of territorial mobility.
5. Capital is supply elastic as its supply can be altered according to the need.

**Organization**
In any business activity, there is always a person who guides and controls its function. He also coordinates and regulates all the factors which are employed in the business activity. Apart from monitoring it, he takes the responsibility of the outcome. We call such a person, an entrepreneur (organizer) and the business activity which he is doing is called an enterprise or organization. The performance of an organization depends upon the capabilities of the organizer or entrepreneur. Through proper allocation of resources, the entrepreneur would be in a position to maximize productivity of the resources that are used. Hence, the success or failure of enterprise depends on the role of the entrepreneur in any business activity. Following are the prime functions of an entrepreneur.

**Functions of Entrepreneur**
1. Identification and initiation: Entrepreneur is the person who identifies a particular business activity and initiates the idea of commencing the business.
2. Location of the enterprise: The place where the business unit is proposed to be set up is finalized by the entrepreneur.
3. Organizing
4. Supervision
5. Introduction of innovation
6. Risk taking

**Production Function**
Production function is a technical and mathematical relationship describing the manner and the extent to which a particular product depends upon the quantities of inputs or services of inputs, used at a given level of technology and in a given period of time. It shows the quantity of output that can be produced using different levels of inputs. I. e.,

\[ Y = f (X_1 | X_2, X_3, \ldots, X_n) \]

Where,
- \( Y \) = Output from a particular enterprise
- \( X_1 \) = Variable resource
- \( X_2 \ldots X_n \) = Fixed resources
- \( | \) (Vertical bar) = It separates variable resource from fixed resources

* * * * *
LAWS OF RETURNS

Law of Variable Proportions

This is the modern viewpoint of traditional law of diminishing marginal returns. According to the law, “As additional input of one factor in equal installment is carried out while keeping all other factor input constant, after a certain point, the output of the product also decreases i.e. the marginal product will decrease.” According to Leftwich “the law of variable proportion states that if the inputs of one resource is increased by equal increment per unit of time while the inputs of other resources are held constant, total output will increase, but beyond some point the resulting output increases will become smaller and smaller.”

Explanation of the Law of Variable Proportion

(a) Total product: Total number of units of output obtained in a unit time by using all input factors.
(b) Average Product: Total product per unit of a given variable factor.
(c) Marginal Product: The new additional total product obtained on addition of a unit of variable factor to the production process, keeping all other factors constant.

Production with one variable input

<table>
<thead>
<tr>
<th>Unit of Capital (K)</th>
<th>Unit of Labour (L)</th>
<th>Total Product (Tp)</th>
<th>Average Product (Tp/L)</th>
<th>Marginal Product (ΔTp/ΔL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>40</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>10</td>
<td>2</td>
<td>120</td>
<td>60</td>
<td>80</td>
</tr>
<tr>
<td>10</td>
<td>3</td>
<td>240</td>
<td>80</td>
<td>120</td>
</tr>
<tr>
<td>10</td>
<td>4</td>
<td>320</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>10</td>
<td>5</td>
<td>380</td>
<td>76</td>
<td>60</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>432</td>
<td>72</td>
<td>52</td>
</tr>
<tr>
<td>10</td>
<td>7</td>
<td>448</td>
<td>64</td>
<td>16</td>
</tr>
<tr>
<td>10</td>
<td>8</td>
<td>448</td>
<td>56</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>9</td>
<td>432</td>
<td>48</td>
<td>-16</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>400</td>
<td>40</td>
<td>-32</td>
</tr>
</tbody>
</table>

The above table indicates phenomena of law of variable proportion. The capital is fixed at 10 units and shown in first column. The labour units increase from zero to 10 units, shown in second column. The third column show the total output. The data of the table indicates that there is no production when labour unit is zero. Then as labour input increases, keeping the capital fixed, output increases first at an increasing rate and then at a decreasing rate, up to seventh unit of labour. At eighth unit, there is no increase in output. At seventh and eighth labour unit the output remains same as 448 units. Beyond eighth unit more units of labour is Counter Productive because output decrease as labour is increased. The average product shown in fourth column also increases initially then falls after fourth unit. The marginal product shown in fifth column also increases initially, then decreases and ultimately becomes negative, reason being use of variable input too intensively with the fixed input.

Returns to scale

It refers to the change in output as a result of a given proportionate change in all the factors of production simultaneously. When all the factors or inputs involved in a production
process are increased or decreased simultaneously, in a certain fixed proportion, the response of output to such an increase or decrease in the input levels, is explained through the concept of returns to scale. Returns to scale is a long run concept as all the variables are varied in quantity. Returns to scale are increasing or constant or decreasing depending on whether proportionate simultaneous increase of input factors results in an increase in output by a greater or same or small proportion. Returns to scale is illustrated with the help of hypothetical data in the following table.

### Returns to Scale

<table>
<thead>
<tr>
<th>Labour (L)</th>
<th>Capital (K)</th>
<th>Total Output (Q)</th>
<th>Increment in output</th>
<th>Nature of returns to scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>Increasing</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>8</td>
<td>8</td>
<td>Constant</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>17</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>28</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>38</td>
<td>10</td>
<td>Increasing</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>48</td>
<td>10</td>
<td>Constant</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>58</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>68</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>76</td>
<td>8</td>
<td>Decreasing</td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>82</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>86</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

From the table it can be seen the variation in total output for changing proportion of L and K. Initially, when the input proportion is changing, output is changing by an increasing proportion. This is increasing returns to scale. This trend is seen in the use of Land K up to the ration of 3: 3. Constant increase in output is found till the proportion of L and K is extended up to the ratio of 7: 7. This is constant returns to scale. The use of L and K in the proportion of 8: 8 onwards reveals the decreasing returns to scale.

Let the estimated Cobb – Douglas production function be represented as

\[ Y = 0.32 X_1^{-0.0681} X_2^{0.6669} X_3^{0.1202} X_4^{0.1050} \]

\[ Y = \text{Crop output in quintals} \]
\[ X_1 = \text{Human labour in man days} \]
\[ X_2 = \text{Fertilizers in kg} \]
\[ X_3 = \text{Manures in tonnes} \]
\(X_4 = \text{Pesticides in litres}\)

In Cobb – Douglas production function the returns to scale is obtained by the summation of elasticity coefficients of the independent variables i. e.,

\[
\frac{\Sigma b_i}{i = 1}^n
\]

If \(\Sigma b_i > 1\) it is increasing returns to scale
If \(\Sigma b_i = 1\) it is constant returns to scale and
If \(\Sigma b_i < 1\) it is decreasing returns to scale

The value of \(\Sigma b_i\) from the estimated equation is 0.824, which indicates the prevalence of decreasing returns to scale.

**Differences between the Law of Variable Proportions and Returns to Scale**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Law of variable proportions</th>
<th>Returns to scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Describes the behaviour of output when one input is varied</td>
<td>Examines the behaviour of output, when all the inputs are varied at the same time</td>
</tr>
<tr>
<td>2.</td>
<td>Some factors of production are constant</td>
<td>All factors are varied</td>
</tr>
<tr>
<td>3.</td>
<td>The proportion among factors varies</td>
<td>The proportion among the factors remains the same</td>
</tr>
<tr>
<td>4.</td>
<td>It is a short run production function</td>
<td>It is a long run production function</td>
</tr>
<tr>
<td>5.</td>
<td>Here increasing, constant and decreasing returns to a factor are observed</td>
<td>Here increasing, constant and decreasing returns to scale are observed</td>
</tr>
<tr>
<td>6.</td>
<td>Increasing returns are due to the efficient utilization of fixed resources as a result of application of sufficient quantity of variable resource</td>
<td>Increasing returns to scale are due to scale economies of production</td>
</tr>
<tr>
<td>7.</td>
<td>Optimum output is the result of best proportion among fixed and variable resources</td>
<td>The optimum output is the result of optimum size of the plant</td>
</tr>
<tr>
<td>8.</td>
<td>The diminishing returns are due to over exploitation of fixed factor</td>
<td>Diminishing returns to scale are due to the operation of diseconomies of scale</td>
</tr>
<tr>
<td>9.</td>
<td>(Y = f (X_1</td>
<td>X_2, X_3, ........X_n))</td>
</tr>
<tr>
<td>10.</td>
<td>It is a reality</td>
<td>It is a myth</td>
</tr>
</tbody>
</table>

******
Chapter – 11

COST

Knowledge regarding various relationships existing between costs and output is necessary to comprehend the concepts of equilibrium conditions of different firms under different market conditions. Basically we require data on output, fixed costs, variable costs and the prices of inputs and outputs. From this data we finally derive all the seven cost concepts, viz., TFC, TVC, TC, AFC, AVC, AC and MC. These cost concepts would have implications for output expansion of the firms and equilibrium position of the firms in different time periods. In the cost theory, economists use different names for cost concepts under different context. They are money costs or nominal costs, real costs, opportunity costs, economic costs, implicit costs, explicit costs, deflated costs, social costs, short run costs, long run costs, separable costs, etc.

Nominal Costs or Money Costs

These are usually expressed in money terms at current prices. Nominal costs of production refer to per unit cost of production of output at current market prices.

Real Costs

When the costs of inputs and input services are expressed at constant prices they become real costs.

Opportunity Cost

Opportunity cost is the value of return sacrificed or foregone from the next best alternative activity. In farming farmers don’t have to pay for their owned resources, viz., family labour, owned bullock labour, owned machinery, owned seed, etc. But still in the cost analysis the value of these owned resources are considered on the basis of opportunity cost.

Economic Costs

These are divided into explicit cost and implicit costs. Explicit costs include payments made by the entrepreneurs for purchasing and hiring of inputs and input services. They are also called paid out costs or cash costs. Entrepreneurs do not pay for the use of owned resources. The value of such resources is called as implicit costs. Costs of self – owned and self – employed resources are known as implicit costs.

Deflated Costs

Costs if deflated by general price index are called deflated costs. By doing so the effect of inflation in an economy is taken out. Example: Real cost of commodities.

Social Costs

These are also called as externalities. Firms incur both implicit and explicit costs in the production of goods and services. Their sum constitutes total cost of production. These costs we name as private costs, but from the point of view of society, these firms will give rise to some additional costs to the society in the form of environmental degradation, water, air or noise pollution etc., in the areas where goods are produced by the private firms. In the absence of well – drained system, irrigation projects bring problems to the command area of the project in the form of new diseases. Such costs are called social costs.

Separable Costs

Separable costs are the costs which can exclusively be attributed to production of output separately. Common costs are those which cannot be separated to the production of the
output. So they are called joint costs. The costs are involved in the production of several products. For example, electricity generation, ground water use, etc.

**Historical Costs and Replacement Costs**

Historical costs are the costs involved in the purchase of durable goods like land, buildings, machinery, equipment, etc. Purchase price of the asset should be considered as price of the asset and hence it is considered as historical cost in analysis. Since the costs of the assets are apportioned in computation, they are called as historical costs. Replacement costs refer to the difference between the purchase price of the asset and the current price of the same asset. Suppose a tractor is purchased 10 years ago at a price of Rs. 1,50,000 but its present price is say, Rs. 2,50,000, the difference of Rs. 1,00,000 is the replacement cost.

**Establishment Costs**

Construction of plant in any business activity entails some costs. Such construction costs are called establishment costs in the business analysis. They are also called first phase costs. The other costs viz., licenses, site development expenditure for construction of factory, purchase of equipment, furniture, expenditure on personnel, royalties for seeking product rights, cost of raising finance, costs of maintaining raw materials etc., are also included in the establishment costs.

**Cost Concepts**

Knowledge regarding the cost functions is very much essential for optimal managerial decisions to be taken by the firm as well as the Government. In the short run, pricing and output decisions are based on short run cost curves, while in the long run, long run cost curves have crucial implications for development and growth of the firm and investment policies of the firm. Consideration of cost curves is essential and forms the basis for entry and exit of the firms in the industry. Profit maximizing rule is determined with the help of cost curves, cost functions and production functions. This rule is popularly known as marginal analysis at which MC = MR. The costs are also one of the major price determinants in all the market situations of the economy and in all the economic models which would explain the behavior of the firms.

There are seven costs, which explain the behavior of the firms in the production of requisite products.

**Fixed Costs**

Fixed costs remain the same irrespective of level of production. These costs remain invariant in the short run but in the long run there are no fixed costs as all the inputs can be varied. Fixed costs include cost items like taxes, insurance, cess, depreciation on machinery, implements, tools, buildings, salaries of personnel working in the firm, etc. These are also known as indirect costs, sunk costs and overhead costs. The summation of all these costs is called total fixed costs (TFC). TFC is a horizontal straight line parallel to X – axis.
**Variable Costs**

Variable costs as per definition vary with the level of output. These include costs of raw materials, labour, power, repairs, maintenance charges of machinery, etc. These are also known as working costs, operating costs, direct costs, prime costs, circulating costs and running costs. These are second phase costs. The summation of these costs refer to total variable costs (TVC). Graphically TVC as inverse ‘S’ shape.

![Graph of Total Cost](image)

**Total Costs**

These include total fixed costs as well as total variable costs. Its shape is similar to that of TVC.

![Graph of Average Variable Cost](image)

**Average Variable Cost (AVC)**

It is the amount spent on the variable inputs to produce an unit of output. Algebraically it is expressed as

\[
AVC = \frac{\text{Total variable costs} = TVC}{\text{Output} = Q}
\]

When a small amount of output is produced, cost of variable input per unit of output becomes very high. This is to say in other words, that productivity of variable input increases when greater amounts are used in the production of the commodities due to economies of scale. This causes AVC to have ‘U’ shape when it is graphed. When it is ‘U’ shaped it
becomes reciprocal of average physical product curve. AVC falls to minimum level at the output level where APP is maximum. Thereafter due to production of greater amount of output, AVC rises again and becomes vertical at certain level of maximum output.

**Average Fixed Cost (AFC)**

It is the cost of fixed resources or inputs required for producing one unit of output and it is given by the formula as

$$\text{AFC} = \frac{\text{Total fixed costs}}{\text{Output}} = \frac{\text{TFC}}{Q}$$

AFC curve is declining with the increased output because TFC is constant. Due to this it is continuously falling up to its maximum output. It is having the shape of hyperbola.

**Average Total Cost or Average Cost (ATC or AC)**

When the total costs are divided by output, we get ATC.

$$\text{AFC} = \frac{\text{Total costs}}{\text{Output}} = \frac{\text{TC}}{Q} = \frac{\text{TFC} + \text{TVC}}{Q}$$
Marginal Cost (MC)

As per the definition, it is the change in the total cost due to the change in output. Algebraically it is expressed as:

$$\frac{\text{Change in total costs}}{\text{Change in output}} = \frac{\Delta \text{ TC or TVC}}{\Delta Q}$$

To compute MC, we can use TC or TVC because fixed costs cannot be changed. The only component of change in TC is TVC. The specific shape of MC curve is due to marginal product of the variable inputs. When MPP is maximum, MC is minimum. MC curve is declining when MPP curve is increasing; hence there is an inverse relationship between MPP and MC. When MPP is zero, MC becomes vertical. MC curve intersects AVC and ATC at their minimum points.

Short run and Long run Costs

In the short run it is possible to vary the output by varying only the amount of variable factors such as labour and raw materials. In the short run, the fixed factors such as capital equipment, managerial persons, factory building etc cannot be changed. Thus in the short run if an organization intends to increase production, then it can be done by hiring more workers or buying and using more raw materials. In the short run it is not possible to enlarge the size of the plant. Thus in the short run only variable factors can be varied and the fixed factors remain the same.
In long run time period it is possible to vary all factors of production. Thus it is possible to increase output in long run either by increasing capital equipment or by adding capacity to existing plant or installing an altogether new plant of bigger size.

**Short run Cost Behaviour**

The short run cost behaviour is explained by following hypothetical example.

<table>
<thead>
<tr>
<th>Capital Units (Fixed Factor)</th>
<th>Labour Units (Variable factor)</th>
<th>Total product (TP)</th>
<th>Total fixed cost (TFC) (Rs.)</th>
<th>Total Variable cost (TVC) (Rs.)</th>
<th>Total Cost (TC) (TFC + TVC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>0</td>
<td>0</td>
<td>150</td>
<td>-</td>
<td>150</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>4</td>
<td>150</td>
<td>12</td>
<td>162</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>7</td>
<td>150</td>
<td>24</td>
<td>174</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>12</td>
<td>150</td>
<td>36</td>
<td>186</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>17</td>
<td>150</td>
<td>48</td>
<td>198</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>20</td>
<td>150</td>
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</tr>
<tr>
<td>5</td>
<td>6</td>
<td>22</td>
<td>150</td>
<td>72</td>
<td>222</td>
</tr>
<tr>
<td>5</td>
<td>7</td>
<td>23</td>
<td>150</td>
<td>84</td>
<td>234</td>
</tr>
</tbody>
</table>

The data in the above table shows the behaviour of total fixed cost, total variable cost, total cost in the short run. Following assumptions are made about the data: price of labour is Rs. 12 per Unit and Price of capital is Rs 30 per Unit.

**Behaviour of Total Cost**

1. Total fixed cost remains same at Rs. 150 at all levels of output. Even when production is not done (TP = 0), total fixed cost is Rs. 150.
2. Total variable costs varies with the output. When production is not done, total variable cost is zero.
3. Total cost varies directly as total variable cost. In the short run fixed cost remains same and change in total cost are affected due to change in variable costs.

![Graph of Average Cost Curves](image_url)

**Behaviour of total cost, total variable cost and fixed cost**

**Short Run Average Cost Curves**

For a hypothetical example, average cost curves are shown in the following table.
### Average cost

<table>
<thead>
<tr>
<th>Output (Units)</th>
<th>Total Fixed cost (TFC) (Rs.)</th>
<th>Total Variable (TVC) (Rs.)</th>
<th>Total Cost (Rs.)</th>
<th>Average Fixed cost AFC = ( \frac{TFC}{Q} )</th>
<th>Average Variable Cost AVC = ( \frac{TVC}{Q} )</th>
<th>Average Total Cost ATC = ( \frac{TC}{Q} )</th>
<th>Marginal Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>220</td>
<td>0</td>
<td>220</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>220</td>
<td>100</td>
<td>320</td>
<td>220</td>
<td>100</td>
<td>320</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>220</td>
<td>140</td>
<td>360</td>
<td>110</td>
<td>70</td>
<td>180</td>
<td>40</td>
</tr>
<tr>
<td>3</td>
<td>220</td>
<td>160</td>
<td>380</td>
<td>73.33</td>
<td>53.33</td>
<td>126.66</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>220</td>
<td>192</td>
<td>412</td>
<td>55</td>
<td>48</td>
<td>103</td>
<td>32</td>
</tr>
<tr>
<td>5</td>
<td>220</td>
<td>260</td>
<td>480</td>
<td>44</td>
<td>52</td>
<td>96</td>
<td>68</td>
</tr>
<tr>
<td>6</td>
<td>220</td>
<td>400</td>
<td>620</td>
<td>36.66</td>
<td>66.66</td>
<td>103.33</td>
<td>140</td>
</tr>
</tbody>
</table>

**Behaviour of average cost**

From the above figure, following conclusions can be drawn about short run cost curve:

1. As output increases, average fixed cost decreases. The total fixed cost remains same for all level of output, but average fixed cost decreases continuously because of spreading it over more number of units as output increases.
2. Average variable cost first decreases and then increase as output increases.
3. Average total cost decreases initially. It remains same at a point for a while and then go on increasing as output increases.
4. Marginal cost decreases initially but then increases as the output is increased.
5. When the average cost is minimum, marginal cost is equal to average cost.

**LONG RUN COST CURVES**

In the long run, all the factor inputs are variable. In the long run it is possible for the organization to change the overall plant capacity as per demand. In the long run there is no distinction of fixed and variable costs. There is only variable or direct cost as total cost.

Long run is a vision of future. It is a planning horizon. In the long run also, all economic activities actually operate in the short run. Thus a long run consists of many possible short run situations and a choice is made for actual courses of operation from them. Thus long run average cost curve is the envelope of the number of short run cost curves. It is drawn as tangent to the short run average cost curves. Long run cost curve is shown in following figure in which long run cost curve is drawn on the basis of 3 possible plant sizes.
Behaviour of long run cost
Chapter 12

SUPPLY

Supply means the quantity of a good or service offered by a producer for sale at different unit prices in a given market at a point of time. It is the willingness of the supplier to offer the goods for sale at different unit prices. More specifically, supply is defined as a schedule that shows the amounts of a product or service, sellers are willing to sell at each unit price in a set of possible prices during some specified period of time in a specified market. Meyers defined supply as “a schedule of the amount of good that would be offered for sale at all possible prices at any one instance of time in which the condition of supply remains the same”. Prof. Mc. Connel defined supply as “a schedule which shows the various amounts of a product which a producer is willing to and able to produce and make available for sale in the market at each specific price in a set of possible prices during some given period”.

Stock

Along with the concept of supply, another concept called stock needs to be explained. Supply is drawn from the stock of the commodity. Supply is the actual quantity that a seller is willing to sell at a particular price, while stock is the amount of output that exists in a market. Depending on the demand for a commodity stock is converted into supply. For perishable commodities stock and supply are the same. For durable commodities stock and supply are different.

Individual Supply Schedule

Supply schedule depicts the list of quantities – price relationships of a commodity in a market at a specific point of time by an individual seller. In other words, it reveals the mind of sellers in offering various quantities of a given commodity against corresponding prices. An example of supply schedule is presented in table.

<table>
<thead>
<tr>
<th>Price (Rs./Q)</th>
<th>Quantity supplied (Q)</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>30</td>
</tr>
<tr>
<td>325</td>
<td>40</td>
</tr>
<tr>
<td>350</td>
<td>50</td>
</tr>
<tr>
<td>375</td>
<td>60</td>
</tr>
<tr>
<td>400</td>
<td>70</td>
</tr>
<tr>
<td>425</td>
<td>80</td>
</tr>
</tbody>
</table>

It reveals that at price of Rs. 300 the quantity supplied by a seller is 30 Q at Rs. 325, 40 Q and so on. As the price per unit of the commodity rises, the quantity supplied is also increasing. As price increases, sellers are committed to increase their sales. When a supply schedule is plotted on a graph it becomes a supply curve. The supply curve will have a positive slope *i.e.*, it slopes upwards from left to right.
Market Supply

It is the sum of the quantity of commodity that is brought into a market for sale by the sellers in a given market at a specific point of time. Assume that there are three sellers in a market viz., A, B and C with individual supply schedules as shown in table.

<table>
<thead>
<tr>
<th>Price (in Rs./Q)</th>
<th>Individual seller’s supply/week (Q)</th>
<th>Market supply (Q) = (A + B + C)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>300</td>
<td>30</td>
<td>35</td>
</tr>
<tr>
<td>325</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>350</td>
<td>50</td>
<td>65</td>
</tr>
<tr>
<td>375</td>
<td>60</td>
<td>80</td>
</tr>
<tr>
<td>400</td>
<td>70</td>
<td>95</td>
</tr>
<tr>
<td>425</td>
<td>80</td>
<td>110</td>
</tr>
</tbody>
</table>

The price quantity relationship of the three sellers reveals that at Rs. 300 per quintal, seller ‘A’ is prepared to sell 30 Q, while seller ‘B’ 35 Q and seller ‘C’ is not prepared to sell at all at this particular price. The seller ‘C’ is not prepared to sell the commodity at any price less than Rs. 350/Q. Market supply is the sum total of output that is sold by the three sellers as presented in the last column of the table. Thus the market supply is 65, 90, 165 Q and so on. It is the lateral or horizontal summation of the supply of individual sellers at each unit price. The market supply curve is drawn based on the first and last columns of the table.
**Law of Supply**

The law of supply indicates the functional relationship between the quantity supplied of a commodity and its unit price. The law signifies the positive relationship *i.e.*, as the price of a commodity rises its supply extends and as the price falls its supply contracts, with other things remaining the same. Producers normally tend to increase the supplies in the wake of rising prices and reduce the same when the prices are on the lower side. Supply varies directly with the price, *ceteris paribus*.

**Extension and Contraction of Supply (Change in Quantity Supplied)**

Extension and contraction of supply refer to the movement of product supply on the same supply curve. Extension of supply means offering more quantity for sale at a higher price, while contraction means offering less quantity at a lower price. As seen from table that the quantity of commodity supplied by ‘A’ at Rs. 300 is 30 Q and it is 40 Q when the price rose to Rs. 325. Here the quantity supplied has increased from 30 to 40 Q. It is the case of extension of supply, conversely if the price falls from Rs. 325 to Rs. 300, the quantity supplied too falls from 40 to 30 Q. It is the contraction of supply.

Graphically, when it is depicted, it shows that the upward movement from A to B is extension of supply and downward movement from B to A is contraction of supply.

![Supply Graph](image)

**Increase and Decrease in Supply (Shift in Supply)**

Increase in supply implies more supply at the same price and decrease in supply means less supply at the same price. The change in supply (increase and decrease in supply) results in a shift of the supply curve. An increase in supply results in the shift of the supply curve towards right side of the initial supply curve SS as shown in figure. The new supply curve is $S_1S_1$. On the other hand, a decrease in supply causes a shift of the supply curve towards the left side of the initial supply curve. The new supply curve thus formed is $S_2S_2$. Originally, OQ quantity is supplied at OP price. But due to changes in supply conditions at the same price OP, OQ$_1$ quantity of commodity is supplied indicating increase in supply. On the other hand, again influenced by changing supply conditions at the same price, OQ$_2$ is supplied. This is decrease in supply.
Factors Causing Changes in Supply (Shift Factors)

1. Changes in Technology: Technological innovations viz., new varieties of crops and their consequent increased yields per unit area, help to increase the supply of the commodity.
2. Reduction in Resource Prices: When the price of input factors become cheaper than before, it encourages producers to use more of them in producing more output. Supply curve shifts towards the right side.
3. Reduction in the Relative Prices of Other Products: A reduction in relative prices of other related products compel the producers to increase the production of that particular commodity whose prices are relatively higher.
4. Market Infrastructure: When good communication and transport network increase, the supply of the commodity also increases.
5. Number of Producers: Changes that are found regarding number of producers producing a given commodity influence the supplies. More the number of producers, greater the supply and vice versa.
6. Producers’ Expectations about Future Prices: Price expectations influence the sales strategies of the producers positively.

Elasticity of Supply

Elasticity of supply of a commodity is the responsiveness, or sensitiveness of supply to the changes in price. Supply is said to be elastic, if a small change in price causes considerable change in the quantity supplied. The supply is inelastic when a given change in price leads to little or less change or no change in the quantity supplied. In short, elasticity measures the adjustability of supply of a commodity to price.

Elasticity of supply (price elasticity of supply) is expressed as the ratio of percentage change in the quantity of good supplied and percentage change in price of the good ceteris paribus.

\[
\text{Elasticity of supply (E}_S) = \frac{\text{Percentage change in quantity of good supplied}}{\text{Percentage change in price of good supplied}}
\]

Algebraically elasticity of supply is expressed as
\[
\frac{\Delta Q}{Q} \times 100 \quad \frac{\Delta P \times 100}{P}
\]

\[= \frac{\Delta Q \times P}{\Delta P \times Q}\]

**Degrees of Elasticity of Supply**

There are five degrees of elasticity of supply. They are as follows:

**Perfectly Elastic Supply**

When the supply of commodity increases to infinite quantity or unlimited quantity, even though there is invisible rise or minute rise in the price, the elasticity of supply is said to be infinity (\(E_s = \infty\)).

![Perfectly Elastic Supply Diagram](image)

**Perfectly Inelastic Supply**

It means that the quantity supplied is not responsive to change in prices. Elasticity of supply in this case is zero (\(E_s = 0\)).

![Perfectly Inelastic Supply Diagram](image)
Relatively Elastic Supply
Supply is referred as relatively elastic, when the percentage change in quantity supplied is more than the corresponding percentage change in price. It is also called elastic supply. Elasticity of supply is more than one (Es > 1).

Relatively Inelastic Supply
Supply is said to be relatively inelastic, when the percentage change in quantity supplied is less than the corresponding percentage change in price. In this case the elasticity of supply is less than one (Es < 1).

Unitary Elastic Supply
When percentage change in quantity supplied equals the percentage change in price, it is called unitary elastic supply. Here the elasticity of supply is equal to one (Es = 1).
Factors Influencing Elasticity of Supply
1. Availability of Inputs of Production: If the needed inputs are available as per the requirement, the supply is elastic. If any one of the factors is not available which is absolutely necessary, supply would be inelastic.
2. Length of Time Period: It is the period of time required to adjust the supplies to the changes in price. The biological characteristics of the product dictate the changes of responsiveness.
3. Diversification of Production Activity: When the producer is engaged in production of a number of products and facilities exist for shifting of production from one product to the other, in such a case for each product the supply is elastic.
4. Availability of Alternative Markets: Suppose there exists several markets for the producer to sell the goods, a fall in price in one market would prompt him to shift his goods to other markets and a rise in price in one market induces him to shift his goods to that market. In such a case the supply is elastic.
5. Flexibility in Starting and Winding up the Business: If a particular production activity is quickly taken up and quickly wound up, the supply of the goods is elastic.

Price Determination
We know that market demand curve is a horizontal summation of individual demand curves, and similarly horizontal summation of individual supply curves become market supply curve.

Price determination can be examined by the following ways:

Arithmetic Approach
The information in table reveals that at Rs. 12, the quantities demanded and supplied are both equal i.e., 80 Q. At this price, what the buyers are willing to purchase and what the sellers are willing to offer are the same. Therefore, Rs. 12 per unit is the equilibrium price and quantity amounting to 80 Q is the equilibrium output.

<table>
<thead>
<tr>
<th>Price/ unit (Rs.)</th>
<th>Quantity demanded (Q)</th>
<th>Quantity supplied (Q)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>60</td>
<td>120</td>
</tr>
<tr>
<td>13</td>
<td>70</td>
<td>100</td>
</tr>
<tr>
<td>12</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>11</td>
<td>90</td>
<td>60</td>
</tr>
<tr>
<td>10</td>
<td>100</td>
<td>40</td>
</tr>
</tbody>
</table>

Graphic Approach
The intersection of market demand curve (DD) and the market supply curve (SS) indicates the equality of quantity demanded by the consumers and that supplied by the producers. This equality of quantity demanded and quantity supplied is called equilibrium quantity (OQ) and the price that occurs at this balancing point is called equilibrium price (OP). When such a condition prevails in a market, the market is said to be in equilibrium, because there are neither shortages nor surpluses of commodities.
Chapter – 13

Distribution

In the process of production, the producer coordinates different factors of production i.e., land, labour, capital and management. In the process of distribution the returns obtained through the production activity are apportioned to these factors that are employed in the production process. Consequently land gets rent, labour gets wages and interest is paid to capital and finally organization is rewarded with profit. Such an apportionment of returns among different factors of production is called distribution. It is also called factor pricing.

Rent

Rent is the return for the fertility status of the land. In fact the land is defined in a broad sense. All the natural resources existing on the surface and beneath the surface of land like mines, rivers, etc., are also treated as land, from which rent is received. Some resources are publicly owned, while others are privately owned. Rent is almost zero for publicly owned resource because one cannot use it for one’s own purpose. These are meant for public welfare. Rent is expressed in two forms i.e., one is economic rent and the other is contract rent.

Economic Rent

Economic rent is the rent received exclusively from the use of land only. We use the term, exclusively because the rent of a building refers to the return obtained by the owner on the capital invested in the construction of building as well as the land. It is the return obtained from the combined values of both. Then it does not become rent. In farming the rent paid by a tenant to the landlord is not economic rent.

Contract Rent

This implies the money paid by the tenant to the landlord for cultivating the land in a given year. Normally a certain rent is charged by a farmer not only for land but also for making availability of certain infrastructure on land like buildings, machinery, wells, fencing, etc. This means that he would like to realize some return on the investment made on the farm. Then it is not exclusively rent for land only. Thus economic rent is a part of contract rent.

Quasi Rent

The basis for evolving this rent is the short run fixity of man made assets of production like machines, buildings, etc. When in the short run, the demand for these assets increases, consequently their income also increases. This results in a surplus income due to increased demand. This surplus income of assets is called quasi rent This rise in quasi rent is a temporary phenomenon. In fact, the supply of these assets being elastic it is increased in the long run to match with the demand causing the surplus earnings to disappear. The concept of quasi rent does not apply to land because supply of land is inelastic.

Scarcity Rent

This is the rent which arises due to scarcity of land in relation to demand. Scarcity rent is due to inelastic supply of land. This is surplus rent over the market rent for land due to increased demand for land.

Modern Theory of Rent

Modern economists assert that rent arises for any factor of production. It is the surplus payment in excess of transfer earnings of a factor. Transfer earnings imply the amount of money which any particular unit of factor could earn in its next best alternative use.
The rent of the land is determined by the two market forces viz., demand for and supply of land. Demand curve for land slopes downwards because the rent of land is influenced by the marginal productivity. On the other hand supply of land is fixed i.e., supply is inelastic. Supply curve is vertical to X – axis. Equilibrium between demand and supply determines the rent of land.

As seen from figure, D2 is the demand curve for land and S is the supply curve of land. The two curves intersect at ‘E2’ and hence the rent is OR2. Changes in population and consequent additional pressure on land increase the demand for land. Therefore the new demand curve is D3 and the rent is OR3. Contrary to this when demand for land falls the new demand curve D1 is formed and its corresponding rent is OR1.

![Graph showing demand and supply curves for land with rent and equilibrium points]

Wages

Wages are the rewards paid for the labourers for sparing their productive services. It may be paid either in cash or kind or both. A wage may be defined as a sum of money paid under contract by an employer to a worker for services rendered (Benham). Wages are paid for casual labourers, while salaries are paid for permanent staff and consultation fee for doctors, lawyers, etc.

Methods of Wage Payment

Based on the payment, wages are classified as (1) Cash wages and kind wages (2) Time wages (3) Piece wages; and (4) Task wages.

1. Cash Wages and Kind Wages: Wages for the workers are paid in cash or kind or both. With the advent of currency, wages are paid in cash. However, kind payment is also in vogue along with the cash payment.
2. Time Wages: It is the wage per unit of time. It is the payment of wages on hourly, daily, weekly, fortnightly and monthly basis. In farming, casual labourers are paid on daily basis, workers for domestic services are paid on monthly basis and attached servants in farming are paid on half – yearly or yearly basis.
3. Piece Wages: It is based on the work performed by an individual in the production of goods and services. In the manufacturing process of a good, the entire production activity is divided into various sub – processes. An individual attending to a sub – process is paid according to the work he completes on a particular day.
4. Task Wages: Wages are paid for a given work after its completion, say in farming, paddy transplanting, weeding, harvesting, etc., are completed by a group of labourers. Wages are decided based on the work assigned to the group and it has nothing to do with the number of labourers in that group. The task is given to the group for completion of work in time according to agreed wages. They are also called as contract wages.
Types of Wages
1. Nominal Wage or Money Wage: It is the wage paid in terms of money at current market prices.
2. Real Wage: It indicates the purchasing power of money wage. Real wage of the worker is obtained by dividing nominal wage of the workers at different time periods by general price index. Real wage is measured by

\[ R = \frac{W}{P} \]

Where,
- \( R \) = Real wage
- \( W \) = Money wage
- \( P \) = General price index

Modern Theory
Modern theory is based on demand for and supply of labour. Demand for labour is a derived demand. If there is a higher demand for products from consumers, there would be more demand from producers for labour for helping to bring the expected level of output.

A rise in demand for a commodity pushes up the demand for the labour involved in the production of that commodity.

The supply of labour is represented by the number of workers willing to work in a production activity at various wage rates taking into consideration the number of hours, number of days in a week, etc. These two forces i.e., demand and supply determine the wages.

DD is the demand for labour and SS is the supply of labour. The wage rate is OW.

Interest
Interest is the amount paid by the borrower to the lender for the use of capital. According to Marshall “the payment made by a borrower for the use of loan for, say a year, is expressed as the ratio which that payment bears to the loan” is called interest.

Interest is the price paid for the use of loanable funds (Meyers).

The interest charged by a lender from the borrower is termed as gross interest. It is because lending activity is fraught with risk as well as inconvenience which are also considered. Taking these items into account the gross interest is considered under the following terms.
1. Net or Pure Interest: This interest is the payment exclusively made for the loan amount.
2. Insurance Against Risk: In the lending activity there is always the risk of not getting back the funds lent by the lender. The loan may turn out into a bad debt. This risk needs to be insured. For this purpose, some more interest is added to the net interest.
3. Payment for Inconvenience: Through the lending activity the lender gets interest but in the same process he is placed in inconvenience to get back his funds at the time he wants, because the funds are locked up for a certain period of time. Unless the loan period was over he cannot get back his funds. For this inconvenience, he charges some additional interest to the net interest.

4. Reward for Management: The business of lending requires perfect maintenance of the records to keep a close watch on the business performance. Apart from this, the borrowers are to be pursued for prompt repayment. This calls for efficient management of the business. Hence reward for management is included in gross interest.

**Determination of Interest Rate**

Liquidity preference and supply of money determine the rate of interest. Liquidity preference here means the liquidity preference for speculative purpose according to Keynes. Therefore, the equilibrium between liquidity preference for speculative purpose and supply of money determine the rate of interest.

In figure, LP indicates liquidity preference for speculative purpose. It is the demand for money. OQ represents the fixed amount of money available to meet the requirements of liquidity preference for speculative purpose. Rate of interest is determined by the equality of demand of money for speculative purpose and supply of money. The interest rate that prevails is OR, which is the equilibrium interest.

![Equilibrium Interest Diagram](image)

**Profit**

Profit is the reward for entrepreneurial function of decision – making and uncertainty bearing. Profit can be either positive or negative, since it is a residual income. Profit differs from rewards of other factors of production like rent, wages and interest on the point that these are all certain, while profit is tentative. These rewards are paid even before the ultimate product is obtained, while profit happens to be the surplus of returns over total costs, and it is obtained at the end of production activity.

**Various Concepts of Profit**

Gross Profit: It is the surplus of gross revenue over paid out costs (explicit costs) obtained in a production activity. Gross profit cannot be treated as ultimate profit, for it includes several items which are not actually profits as presented below:

Remuneration for Entrepreneur Himself: It is a practice for the entrepreneur to contribute his own capital in the business besides offering his services as a manager. In such a situation the opportunity cost of owned capital and the services rendered in his own business are also included in the gross profit. These imputed costs are to be deducted from the gross profit to arrive at the net profit.

Depreciation and Maintenance Charges: When the plant is in operation there will be wear and tear (depreciation) on equipment and machinery which needs to be duly accounted for. In addition to this, interest on fixed capital and insurance premium are other fixed cost items that are incurred in a production activity. These cost items need to be deducted from the gross profit to arrive at net profit.
Extra Personal Profits: These are the profits which accrue to a business unit not due to the managerial ability of the entrepreneur, but due to other factor, say the profits of monopoly. These are not due to the businessman’s managerial abilities but for his position as a monopolist. The monopoly profit needs to be deducted from gross profit to arrive at net profit. Another source of getting unexpected high profit is from windfall gains or chance profits. Any sudden happening, say outbreak of war, natural calamities in certain pockets of the country etc., lead to a rise in the product prices, resulting in abnormal profits for the entrepreneur. Such unexpected profits should be deducted from gross profit to find out the net profit.

Net Profit: The aforesaid three items viz., remuneration for entrepreneur himself, depreciation and maintenance charges and extra personal profits are to be deducted from gross profit to work out the net profit. It is the reward of the entrepreneur for coordination and risk – taking.

Net profit = Gross income – Total cost
Chapter – 14
National Income

Concepts

In an economy goods and services keep on being produced, which need to be valued.

**National Income is nothing but the aggregate money value of all goods and services produced in a country in a year.** It can also be viewed as income distributed among the factors of production in the form of rent (to land), wages (to labour) interest (to capital) and profits (to entrepreneurs).

According to Alfred Marshal National Income is defined as the labour and capital of a country acting on its natural resources produce annually a certain net aggregate of goods and services.

**Limitations**

- In an economy in which numerous goods and services are produced, it is really a difficult proposition to estimate them correctly to arrive at the national income. Coming to the farming, farmers do retain some part of production for personal consumption and the rest is only marketed. In such a case, the methodology to evaluate the amount of produce not reached the market has not been given.

- Double counting: It implies the same good being counted twice: say, cotton may be counted in agricultural production and the cotton cloth in industrial production.

Marshall approached national income from **production end.** On the other hand, some other economist approached from **consumption end.** At the same time this approach in reality poses problems. Consumers who number in millions, consumes the same good at different places, and the estimation of their total consumption is a difficult proposition. Hence, there are problems in measurement of national income.

**Modern View**

Simon Kuznets defined national income as “the net output of goods and services flowing during the year from the production to the hands of ultimate consumers”. Here the income side as well as expenditure side is included to present the concept of national income.

**Gross National Product (GNP)**

GNP is the basic social accounting measure of the total production of goods and services in an economy. **GNP is defined as the total market value of all final goods and services produced in a year.** It includes the market value of such products as are produced in agriculture, mines, forests, industries etc. and of services like transport, communication, banks, lawyers, doctors, teachers, etc. and these are added together during one year.

**GNP is a measure of current output of economic activity in a country.** Goods and services produced in an economy are subjected to purchase and sale several times. Therefore,
to avoid the possibilities of double counting, GNP includes the market value of final goods only ignoring the transactions involving intermediate goods.

**Those which are not included in GNP are as follows:**

1. Services which are rendered freely e.g. free services offered by family members to others in the family.
2. The sale and purchase of old goods (resale of used items).
3. The sale and purchase of shares, bonds, etc... because they do not add anything to the national produce as they are simply transformed from one to other.
4. Old age pensions, unemployment allowances etc. as they do not provide any services.
5. The change in value of the capital assets as a result of changes in the market prices as they have nothing to do with the current production.

**Measures of GNP**

Three methods to measure GNP are as under:

1. **Income Method**

   According to this method GNP is the sum total of the following items:

   a. Wages and salaries
   b. Rents
   c. Interest
   d. Income of Non-company Business (individual proprietors/partners/self-employed person)
   e. Corporate profits
   f. Indirect taxes
   g. Depreciation
   h. Transfer payments (payments received by individuals as pension, unemployment allowance are called transfer payments. These are received by the people for not doing any work, so these should be deducted from GNP.

   Thus, **GNP = Wages and salaries + Rents + Interest + Incomes of Non-company Business + Corporate profits + Indirect taxes + Depreciation - Transfer payments**

2. **Expenditure Method**

   Through this, GNP is the sum total of expenditure incurred on goods and services during a period of one year. The expenditures included are as under:

   a. **Personal consumption expenditure (C):** It includes all types of expenditure on personal consumption by individuals of a country. It includes expenses on durable goods (car, bike, tv, mobile, etc.) non-durable goods or consumable articles (food, cloth, soaps, etc.) and also the expenditure incurred on services of all kind (doctor, transportation, etc.)

   b. **Gross domestic private investment (I):** It includes private investment on capital and producer goods like buildings, machinery, equipments, etc which are produced in the year only. Purchase of used items and old buildings are not included here because they were included earlier. Investment on purchase of share in stock exchange is also not included, since it dose not help in new production.
c. **Net foreign investment** (X-M): In an economy, the entire production may not be consumed within the country and part of it is exported to other countries. Similarly, the country imports some products from other countries. The difference between the value of exports and of imports should be worked out. If the difference is positive, it should be added to other items of expenditure and it should be deducted from the other items of expenditure, if the difference is negative.

d. **Government expenditure on goods and services** (G): The Central and State Governments purchase consumer goods as well as investment goods for their own enterprise. Apart from this, the Government spends on defense, police, education, etc. These are included in GNP however, expenditure on transfer payments such as pension, unemployment allowances, etc are not included in GNP.

In short, \( GNP = C + I + (X-M) + G \)

**Value added Method**

It is always difficult to distinguish between intermediate goods (raw materials, fuel, etc.) and the final goods as it may be intermediate product for one industry and final product for the other industry. For example, electricity is intermediate good when consumed by industry and it is final good when consumed directly by consumers. So, to overcome this problem the value of the intermediate goods used in a manufacturing industry should be deducted from the value of the final goods. The difference that is arrives at is called value addition. If the same procedure is adopted for all the industries in the economy, we can find the GNP by value added method.

**National Income at Market Price or Net National Product (NNP)**

In the production process, the capital goods are worn-out. This amount of decline in the value of capital goods due to wear and tear is called depreciation. To estimate NNP, depreciation is deducted from GNP. NNP therefore is the market value of all final goods after duly accounting for depreciation; hence, it is called National Income at Market Price. In other words, NNP is the net money value of final goods and services produced at current prices in a an year in a country.

Thus, \( NNP = GNP – Depreciation \)

**National Income at Factor Cost**: It implies the sum of all incomes earned by resource suppliers for their contribution of land, labour, capital and entrepreneur which go into the net production in a year. In fact national income depicts how much it costs the society in terms of resources to produce net output. Hence, it is called national income at factor cost.

Thus, **National Income at Factor Cost = NNP – indirect taxes + subsidies.**

**GDP vs GNP (or GNI)**

Gross Domestic Product (GDP) can be contrasted with Gross National Product (GNP) or Gross National Income (GNI). The difference is that GDP defines its scope according to location, while GNP defines its scope according to ownership. GDP is product produced within a country's borders; GNP is product produced by enterprises owned by a country's citizens. The two would be the same if all of the productive enterprises in a country were owned by its own citizens, but foreign ownership makes GDP and GNP non-identical.
Production within a country's borders, but by an enterprise owned by somebody outside the country, counts as part of its GDP but not its GNP; on the other hand, production by an enterprise located outside the country, but owned by one of its citizens, counts as part of its GNP but not its GDP.

To take the India as an example, the India's GNP is the value of output produced by Indian-owned firms, regardless of where the firms are located.

**Adjustments to GDP** (the real, or constant, GDP)
When comparing GDP figures from one year to another, it is desirable to compensate for changes in the value of money – inflation or deflation. The raw GDP figure as given by the equations above is called the nominal, or historical, or current, GDP. To make it more meaningful for year-to-year comparisons, it may be multiplied by the ratio between the value of money in the year the GDP was measured and the value of money in some base year. For example, suppose a country's GDP in 1990 was $100 million and its GDP in 2000 was $300 million; but suppose that inflation had halved the value of its currency over that period. To meaningfully compare its 2000 GDP to its 1990 GDP we could multiply the 2000 GDP by one-half, to make it relative to 1990 as a base year. The result would be that the 2000 GDP equals $300 million x one-half = $150 million, in 1990 monetary terms. We would see that the country's GDP had, realistically, increased by 1.5 times over that period, not 3 times, as it might appear from the raw GDP data.

The GDP adjusted for changes in money-value in this way is called the real, or constant, GDP. The factor used to convert GDP from current to constant values in this way is called the **GDP deflator**. Constant-GDP figures allow us to calculate a GDP growth rate, which tells us how much a country's production has increased (or decreased, if the growth rate is negative) compared to the previous year.

**Per Capita GDP**
Another thing that it may be desirable to compensate for is population growth. If a country's GDP doubled over some period but its population tripled, the increase in GDP may not be deemed such a great accomplishment: the average person in the country is producing less than they were before. **Per-capita GDP** is the measure compensated for population growth.

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**THE BASIC CIRCULAR FLOW MODEL**

The Circular Flow in a Simple Economy
The concept of circular flow is described in its simplest form, a simple economy is considered in which there is no government, no financial markets, and no imports or exports. As an illustration, imagine that the households in this economy live entirely from hand to mouth, spending all their income on consumer goods as soon as they receive it, and that the firms sell all their output directly to consumers as soon as they produce it.

**Methods of Measuring National Income**

There are four methods of measuring national income. Which method is to be employed depends on the availability of data in a country and the purpose in hand.

1. **Product Method:** According to this method, the total value of final goods and services produced in a country during a year is calculated at market prices. To find out the GNP, the data of all productive activities, such as agricultural products, wood received from forests, minerals received from mines, commodities produced by industries, the contributions to production made by transport, communications, insurance companies, lawyers, doctors, teachers, etc. are collected and assessed at market prices. Only the final goods and services are included and the intermediary goods and services are left out.

2. **Income Method:** According to this method, the net income payments received by all citizens of a country in a particular year are added up, i.e., net incomes that accrue to all factors of production by way of net rents, net wages, net interest and net profits are all added together but incomes received in the form of transfer payments are not included in it. The data pertaining to income are obtained from different sources, for instance, from income tax department in respect of high income groups and in case of workers from their wage bills.

3. **Expenditure Method:** According to this method, the total expenditure incurred by the society in a particular year is added together and includes personal consumption expenditure, net domestic investment, government expenditure on goods and services and net foreign investment. This concept is based on the assumption that national income equals national expenditure.

4. **Value Added Method:** Another method of measuring national income is the value added by industries. The difference between the value of material outputs and inputs at each stage of production is the value added. If all such differences are added up for all industries in the economy, we arrive at the gross domestic product.

**Problems of Measurement of National Income in a Developing Economy**

In a developing economy, complete and reliable information relating to the various methods of estimating national income are not available due to the following problems:

1. **Non–monetized sector:** There is a large non–monetized sector in a developing economy. This is the subsistence sector in rural areas in which a large portion of production is partly exchanged for the other goods and is partly kept for personal consumption. Such production and consumption cannot be calculated in national income.

2. **Lack of Occupational Specialisation:** There is the lack of occupational specialization in such a country which makes the calculation of national income by product method difficult. Besides the crop, farmers in a developing country are engaged in supplementary occupations like dairying, poultry, cloth making, etc. But income from such productive activities is not included in the national income estimates.

3. **Non–market Transactions:** People living in rural areas in a developing country are able to avoid expenses by building their own huts, tools, implements, garments and other essential commodities. Similarly, people in urban areas having kitchen gardens produce vegetables which they consume themselves. All such productive activities do not enter the market transactions and hence are not included in the national income estimates.
4. **Illiteracy**: The majority of people in developing countries are illiterate and they do not keep any accounts about the production and sales of their products. Under the circumstances, the estimates of production and earned incomes are simply guesses.

5. **Non-availability of Data**: Adequate and correct production and cost data are not available in a developing country. Such data relate to crops, forestry, fisheries, animal husbandry, and the activities of petty shopkeepers, small enterprises, construction workers, etc. For estimating national income by the income method, data on unearned incomes and on persons employed in the service sector are not available. Moreover, data on consumption and investment expenditures of the rural and urban population are not available for the estimation of national income by the expenditure method. Moreover, there is no machinery for the collection of data in such countries.

**Importance of National Income Analysis**

The national income data have the following importance.

1. **For the Economy**: National income data are of great importance for the economy of a country. These days the national income data are regarded as accounts of the economy, which are known as social accounts. These refer to net national income and net national expenditure, which ultimately equal each other. Social accounts tell us how the aggregates of a nation’s income, output and product result from the income of different individuals, products of industries and transactions of international trade. Their main constituents are interrelated and each particular account can be used to verify the correctness of any other account.

2. **National policies**: National income data form the basis of national policies such as employment policy, because these figures enable us to know the direction in which the industrial output, investment and savings, etc. change, and proper measures can be adopted to bring the economy to the right path.

3. **Economic Planning**: In the present age of planning, the national data are of great importance. For economic planning, it is essential that the data pertaining to a country’s gross income, output, saving and consumption from different sources should be available. Without these, planning is not possible. Similarly, the economists propound short-run as well as long-run economic models or long-run investment models in which the national income data are very widely used.

4. **Economic Models**: Economists build short-run and long-run economic models in which the national income data are widely used.

5. **For research**: The national income data are also made use of by the research scholars of economics. They make use of the various data of the country’s input, output, income, saving, consumption, investment, employment, etc., which are obtained from social accounts.

6. **Per Capita Income**: National income data are significant for a country’s per capita income which reflects the economic welfare of the country. The higher per capita income, the higher the economic welfare and vice versa.

7. **Distribution of Income**: National income statistics enable us to know about the distribution of income in the country. From the data pertaining to wages, rent, interest and profits we learn of the disparities in the incomes of different sections of the society. Similarly, the regional distribution of income is revealed. It is only on the basis of these that the government can adopt measures to remove the inequalities in income distribution and to restore regional equilibrium. With a view to removing these personal and regional disequilibria, the decisions to levy more taxes and increase public expenditure also rest on national income statistics.

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Chapter – 15

Population

Theories of Population

The theory of population is studied because the supply of labour depends upon population and its growth. Observing the abnormal growth of population and consequent fall in the standard of living, Thomas Malthus (1760 – 1834) an English Clergyman first studied population growth in various countries of Europe. Later he wrote a book entitled “An Essay on the Principles of Population” in 1798. His observations compelled him to foresee a gloomy future for the human race and hence emphasized the immediate need to keep the population growth under check. Now his theory is popularly known as Malthusian theory of population. To quote the theory in his own words “By nature human food increases in a slow arithmetic ratio, man himself increases in a quick geometric ratio unless want and vice stop him.”

Propositions of Malthusian Theory

These are briefly presented below:

1. Population is necessarily limited by means of subsistence (food supply). According to Malthus in a country the size of population depends on its food production. Greater the food production, larger would be the size of population, which a country can support and smaller the food production then the country would be in a position to support smaller population only.

2. The power of population is infinitely greater than the power in the earth to produce subsistence for men. He further adds that population growth always overtakes food production, since agricultural production is constrained by the law of diminishing returns. This prevents the food production to grow as faster as that of population. As such, there is no limit to the growth of population.

3. Population increases in geometric progression, whereas food production increases in arithmetic progression. This means that population tends to grow in quick geometric progression i.e., 1, 2, 4, 8, 16, 32, etc., while, food production tends to grow in arithmetic progression i.e., 1, 2, 3, 4, 5, 6, etc. This implies that population doubles in every 25 years.

4. Population always increases, when the means of subsistence increase, unless it is prevented by some powerful checks. When the food production of a nation increases, the tendency is that it encourages people to have more children and consequently it leads to large families. After certain time, the population would become excessive relative to the food production and the per capita availability of food decreases.

5. There are two types of checks, which can keep population on a level with the means of subsistence viz., preventive checks and positive checks.
   a. Preventive checks: These are man – initiated checks to keep the population under control. They aim at decreasing the birth rate. These checks are: 1. celibacy 2. late marriage 3. moral restraints, etc.
   b. Positive checks: These are the checks caused by the nature when man fails to take control of the situation. These checks cause the reduction of excess population and thereby bring an equilibrium between demand and supply. We have often the famines, epidemics, wars, floods, earthquakes, etc. These positive checks are also called as natural checks, since they are caused by nature.
Criticism of Malthusian Theory of Population

This theory was criticized by many economists on several grounds. Some of the important ones are presented below:

1. Presenting the mathematical precision for population growth and food production was objected because as these ratios are found to be unrealistic. There were no instances in the world, where this trend of population growth and food production recorded and the case of doubling of population in every 25 years.
2. Malthus did not foresee the scientific advances that are bound to come in agricultural production, even in the presence of operation of law of diminishing returns.
3. He did not consider total production of nation but confined to agricultural production alone while presenting his theory. In fact it is total production of a country which gives the true picture of its economic position. Consider the example of Great Britain. It was not self–sufficient in agricultural production but it could make great progress through its industrial production. Less agricultural production cannot make the country to be called over – population.
4. It was viewed that increase in population would cause greater demand for foodgrains, ignoring its contribution in the production of goods and services. Further it was criticized that increase in population in an over – populated country is a matter of serious concern, as it imposes heavy strain on the limited resources of the nation. In respect of an under populated country, increase in population is a welcome sign and it helps to raise economic growth and per capita income.
5. Malthus also failed to view that the education and civilization would transform the people to have smaller families. Hence, there would be no danger of over population.
6. Natural calamities which are in fact the acts of nature are commonly found everywhere regardless of whether a particular country is over populated or under – populated. So, the statement that natural calamities would occur only in the over populated countries to reduce population is not true.

Optimum Theory of Population

Prof. Sidgwick gave the foundation of the optimum theory in his principles of political economy. It was later developed by Edwin Cannon. It is also called as the modern theory of population.

Definitions of Optimum Population

1. It generally refers to that size of population which provides maximum income per head at a given amount of resources and technology.
2. Optimum population is that population which produces maximum economic welfare (Carr–Saunders).
3. Optimum population is that which gives the maximum income per head (Dalton).
4. Optimum population in a country ensures 1) best possible utilization of all resources; and 2) highest per capita income. More specifically, optimum population is the right size of population that is most desirable in a country consistent with its supply of resources.

Under Population

If the population of a country is below optimum size i.e., below what it ought to be, the country is said to be under – populated. In such a case the per capita income will not be the
highest, as the population is insufficient to use the available resources (both natural and capital) of the country efficiently. The resources are left unharvested to their optimum level.

**Over Population**

If the population of a country is in excess of optimum level, the country is said to be over populated. Since the resources are insufficient in relation to the population, the per capita income will not be the highest. Gainful employment is not available to people in view of the insufficiency of resources and requisite technology.

When we say optimum population, it is not fixed for all times. It keeps on changing with the development of technology and growth of capital.

In figure, population is measured on X – axis and output per capita on Y – axis. It is observed that output per capita increases with every increase in population till OQ is reached. At this level of population (optimum population) the per capita output is the highest and is equal to QP. Any further increase of population beyond OQ leads to reduction of output per capita. If the actual population of a country is less than optimum population (OQ), it is under populated and if it is more it is over populated.

**Dalton’s Formula for Maladjustment**

Dalton’s maladjustment means the extent of deviation of population from optimum size of population. To measure maladjustment, Dalton gave the following formula.

\[ M = \frac{A - O}{O} \]

Where,
- \( M \) = Maladjustment
- \( A \) = Actual population
- \( O \) = Optimum population

A positive ‘\( M \)’ indicates that the country is over – populated.

A negative ‘\( M \)’ indicates that the country is under – populated.

A zero value of ‘\( M \)’ indicates that the actual population is equivalent to optimum population.

**Malthusian Theory of Population Vs Optimum Theory of Population**

1. Malthusian theory is based on the relationship between food production and the size of population, while modern theory is based on the relationship between total production of a country and the size of population.

2. Malthusian theory is more a pessimistic theory, while optimum theory is an optimistic one.

3. Malthusian theory has a limitation in its application as it is applicable to over populated countries only, whereas the optimum theory is applicable universally.
Natural and Socio – economic Determinants

Natural Factors
The abundance of resources influences the growth of population. In the presence of abundant resources, populations can grow at geometric or exponential rates. If resources become limited, population growth rate slows and eventually stops; this is known as logistic population growth. Population growth stops when populations reach a maximum size called the carrying capacity, the number of individuals of a particular population that the environment can support. Population growth is a function both of per capita growth rates and population size.

The environment limits population growth by changing birth and death rates. The factors affecting population size and growth include biotic factors such as food, disease, competitors, and predators and abiotic factors such as rainfall, floods, and temperature. Because the effects of biotic factors, such as disease and predation, are often influenced by population density, biotic factors are often referred to as density-dependent factors. Meanwhile, abiotic factors such as floods and extreme temperature can exert their influences independently of population density and so are often called density-independent factors.

Socio – economic Factors
The socio-economic factors play an important role in the growth of population. The socioeconomic factors which affect the growth of population are industrialization, education, religious beliefs, marriage, social status, family structure, health care, nutritional status etc.

There is an inverse relationship with the industrial growth and the rate of population growth. The developed or industrialized countries have less growth of the population. They are mostly stable. The zero growth occurs in Germany and around 1 percent growth occurs in America and France. In Austria there is a negative growth. But in the developing countries there has been an increase in the growth of population. They show a direct relationship.

The education shows an inverse relationship with the rate of population growth. The developed or industrialized countries which have a high literacy rates show less growth of the population. But it is not the only criteria which define the rate of growth of population. In some states like Kerala the literacy rate is very high but they are thickly populated also. There are few religious beliefs which prevent the people to undergo family planning. In such religion dominated countries the population will continue to rise. This occurs despite the higher literacy rates and economic growth. It occurs in the United Arab Emirates and Saudi Arabia. They have a very high population growth rate.

The women can give rise to offspring mainly from the age 15 to 45. If she gets married late naturally the chances of giving birth to more offspring will reduce. It is common in the industrialized countries. The women marry late but in the developing countries the women marry very early around 15 to 20 years of age.

The social status of women shows an inverse relationship with the rate of population growth. The higher status women marry later in their age. The family structure also plays an important role in the growth of population. The child labor plays a crucial role in the growth of population. These families consider the children as their earning hands. So, more are the children and more are their sources of income.

The health care shows a direct relationship with the rate of population growth. The better is the health care system less is the mortality rate and higher is the natality rate. The families
with the gainful employment show low mortality. It decreases the incidence with the large
number of children. A well maintained diet helps to reduce the mortality.

The sources of entertainment also play an important role in the growth of population. They keep a routine check on the population. More are the sources of entertainment and lesser are the chances of high natality. The population education shows an inverse relationship with the rate of population growth. The better is the population education the lesser is the growth of population.

National Population Policy (NPP) 2000

1. **The Immediate Objective:** The immediate objective is to address the unmet needs for contraception, health care infrastructure and health personnel and to provide integrated service delivery for basic reproductive and child health care.

2. **The Medium Term Objective:** The medium term objective is to bring the Total Fertility Rate (TFR) to replacement level by 2010 through vigorous implementation in inter-sectorial operational strategies.

3. **The Long Term Objective:** The long term objective is to achieve a stable population by 2045 at a level consistent with the requirements of sustainable economic growth, social development, and environment protection.

**Targets:** The following are the targets of National Population Policy:

1. Achieve zero growth rate of population by 2045.
2. Reduce infant mortality rate of below 30 per thousand live births.
3. Reduce maternal mortality ratio of below 100 per 1,00,000 live births.
4. Reduce birth rate to 21 per 1000 by 2010.
5. Reduce total fertility rate (TFR) to 2.1 by 2010

As a result of the initiatives of the Government, the country’s Total Fertility Rate (TFR) has declined from 2.7 in 2006 to 2.2 in 2016. The Crude Birth Rate has declined from 23.8 in 2005 to 20.8 and 24 states/UTs have already achieved the replacement level TFR of 2.1 or less out of 36 states/UTs.

**National Socio-Demographic Goals for 2010:**

To fulfill these objectives and targets, National Socio-Demographic goals have been formulated which in each case are to be achieved by the year 2010.

**They are as follows:**

1. Make school education free and compulsory up to the age of 14 and reduce dropouts at primary and secondary school levels to below 20 per cent for both boys and girls.
2. Address the unmet needs for basic reproductive and child health services, supplies and infrastructure.
3. Achieve universal immunization of children against all vaccine preventable diseases.
4. Promote delayed marriage for girls, not before 18 and preferably after the age of 20 years.
5. Prevent and control communicable diseases.
6. Achieve universal access to information/counselling and services for fertility regulation and contraception with a wide basket of choices.
7. Achieve 80 per cent institutional deliveries and 100 per cent deliveries by trained persons.
8. Achieve 100 per cent registration of births, marriage and pregnancy.
9. Integrate Indian Systems of Medicine (ISM) in the provision of reproductive and child health services and in reaching out to households.
10. Contain the spread of Acquired Immuno-Deficiency Syndrome (AIDS) and promote greater integration between the management of Reproductive Tract Infections (RTI) and Sexually Transmitted Infections (STI) and the National AIDS Control Organisation.
11. Bring about convergence in implementation of related social sector programmes so that family welfare becomes a people centred programme.
12. Promote vigorously the small family norm to achieve replacement levels of TFR.

**Implementation of NPP, 2000: National Commission on Population:**

In pursuance of NPP, 2000, the Central Government has set up a National Commission on Population (NCP) on 11 May, 2000. It is presided over by the Prime Minister, with the Chief Ministers of all States and UTs and the Central Minister-in-charge of concerned Central Ministries and Departments, reputed demographers, public health professionals and non-government organisations as members. State Level Commissions on Population presided over by the Chief Minister have been set up with the objective of ensuring implementation of the NPP.

**The functions of the Commission are:**

(i) To review, monitor and give direction for the implementation of the NPP with a view to achieve the goals set by it;
(ii) To promote synergy between health, educational, environmental and developmental programmes so as to hasten population stabilization;
(iii) To promote inter-sectoral co-ordination in planning and implementation of the programmes through different agencies at the Centre and in the States; and
(iv) To develop a vigorous people’s programme to support this national effort.

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Chapter – 16

Money

When the human civilization was not developed, people used to exchange those goods which they produced for those which others produced. Such an act of exchanging goods for goods is called barter. But as the years rolled by and when the social organization became more complex, barter system was found to be not practicable. The following are the main difficulties which were found in the barter system.

1. Double coincidence of wants
2. Lack of a standard unit of account
3. Impossibility of subdivision of goods
4. Lack of information
5. Production of large and very costly goods not feasible

The difficulties in barter system were replaced with the introduction of money. Money has been defined as the medium of exchange. According to Robertson money is defined as “Anything which is widely acceptable in discharge of obligations”. The different stages in the development of money are as follows.

1. Commodity Money: The earliest form of money consisted of goods like rice, wheat, cattle, skins, elephant tusks etc. These were accepted as they were all desired by all the people.
2. Metallic Money: As the civilization advanced, people found it difficult to carry on the exchange transaction with commodities, as they were found to be very inconvenient. Commodity money gave way for the metals to be used as money. These metals include gold, silver, copper, bronze, etc. From the beginning of their introduction, Government kept the right to issue coins and certify their weight and quality. Metals were converted into coins for this purpose.
3. Paper Money: Paper money is introduced to supplement the metallic money. When paper money was introduced, it was backed up by exactly equal amount of gold or silver kept in reserve by the issuing authority. But now paper money is not backed up by metals like gold and silver, but only proportional reserves are maintained. Their issue rests more on people’s confidence on the issuing authority. Such a currency is called fiduciary issue and Indian currency largely is of fiduciary issue.
4. Bank Money: Paper money has been supplemented or at times replaced by bank money. It refers to the bank deposits. Deposits can be converted into money by the depositors through cheques.

Kinds of Money

The main kinds of money are (1) Metallic money and (2) Paper money. These are further divided into standard money and token money.

1. Standard Money: For such type of money, intrinsic value (real value) is equal to face value (the value written on the coin). It is subjected to free coinage. The coins are made of gold and/or silver. As such, no country has such a money in circulation.
2. Token Money: This money is made up of cheaper metal. Its face value is greater than its intrinsic value. The rupee is a standard unit of money in India, but its face value is greater than its real value and also it is not subjected to free coinage. It is a mixture of standard and token money.

Characteristics of Money: Following are the characteristics of money.

1. Cognisability: The medium used, as money should be easily recognized by one and all. Keeping this in view, the citizens of a nation give value to their respective currencies, issued by monetary authorities. In India the quantum of currency and its value are determined by RBI and Ministry of Finance.
2. Utility: When money is deposited by the public in different financing institutions, they will get different interest rates. This is due to the fact that money receiving agency (borrowing agency) will have different time utilities for money. In other words, they use the money for the best alternative and accordingly pay the interest to the lenders, depending on the need. Similarly money will have possession utilities and place utilities also.

3. Portability: It should facilitate easy carrying from one place to another without expense or inconvenience to the individual user. In other words, the bulkiness, weight and other inconveniences in the transactions are reduced with the help of currencies of different denominations, such as Rs. 5, Rs. 10, Rs. 20, Rs. 50, Rs. 100, Rs. 500 and Rs. 1000 notes.

4. Durability: Coins are more durable than the paper currencies. Particularly, currencies of lower denominations viz., 10 paise, 25 paise, 50 paise, one rupee and 5 rupees are being in circulation in the form of coins in order to provide durability. Similarly keeping the same purpose in view, the standard paper is used for printing currency notes.

5. Indestructibility: In the normal usage the coins should not get disfigured easily and the paper currency should not get torn easily in the circulation.

6. Stability: The value of money should not be changing. It should be more stable. For this to achieve there is need to eliminate inflation in the economy.

7. Homogeneity: All coins of the same metal should be as identified as possible with regard to quality and weights. Similarly notes should be printed with the same quality paper with utmost caution and use of sophisticated machinery, otherwise fake notes come into circulation and cause inflation.

8. Universal Acceptability: The value of the currency issued by monetary authority in the country should be recognized uniformly in all the states of the nation. Such currency of the nation will be accepted internationally also, provided the currency follows the norms of international monetary authority.

**Functions of Money:** Money performs five important functions.

1. Medium of Exchange: Money facilitates the buying and selling of goods and services as a medium of exchange.

2. A unit of account: Money is used as the measure of value of all goods and services. Rupee is the monetary unit in India. The value of all goods and services is expressed in rupees.


4. Store of value: Money is a form of holding wealth. If one feels that the available money is in excess of his requirements it is convenient to save and use it as and when the need arises.

5. Transferable: It facilitates the easy transfer of value. The disposal and purchase of assets can be done very easily with money.

**Money Supply**

The supply of money conforms to the ‘stock’ concept and not the ‘flow’ concept. Just as the demand for money is the demand for money to hold, similarly, the supply of money means the supply of money to hold. Money must always be held by someone, otherwise it cannot exist. Hence, the supply of money means the sum total of all the forms of money which are held by a community at any given moment.

The stock of money, which constitutes the supply of it, constitutes of (a) metallic money or coins (b) currency notes issued by the currency authority of the country whether the Central bank or the government and (c) chequable bank deposits. In old times, the coins formed the bulk of money supply of the country. Later, the currency notes eclipsed the metallic currency and now the bank deposits in current account withdrawable by cheques have overwhelmed all other forms of money. In modern times, the supply of money really means the chequable bank deposits.

The modern economists include in money stock not only currency or cash balances and demand deposits in banks together called M1. In addition to the items of M1, the concept of money supply M2 includes savings deposits with the post office savings banks. M3 is a broad
concept of money supply. In addition to the items of money supply included in measure M1, in money supply M3 time deposits with the banks are also included. The measure M4 of money supply includes not only all the items of M3 but also the total deposits with the post office savings organisation.

The total supply of money in a country, by and large, depends on the credit control policies pursued by the banking system of the country.

**Inflation**

In economics, **inflation** is a rise in the **general price level** of goods and services in an economy over a period of time.

When the price level rises, each unit of currency buys fewer goods and services; consequently, annual inflation is also an **erosion in the purchasing power of money** – a loss of real value in the internal medium of exchange in the economy.

**What is Inflation Rate?**

Inflation rate is the rate at which prices of goods and services increase in its economy. It is an indication of the rise in the general level of prices over time. Since it's practically impossible to find out the average change in prices of all the goods and services traded in an economy due to the sheer number of goods and services present, a sample set or a **basket of goods and services** is used to get an indicative figure of the change in prices, which we call the inflation rate.

**Measuring inflation**

Suppose the price of 1 kg of wheat changes from Rs. 20 to Rs. 25 over the course of a year, with no change in quality, then this price difference represents inflation. This single price change would not, however, represent general inflation in an overall economy. To measure overall inflation, the price change of a large "basket" of representative goods and services is measured. This is the purpose of a price index, which is the combined price of a "basket" of many goods and services. The **combined price is the sum of the weighted average prices of items in the "basket"**. A weighted price is calculated by multiplying the unit price of an item to the number of those items the average consumer purchases. Weighted pricing is a necessary means to measuring the impact of individual unit price changes on the economy's overall inflation. Those weighted average prices are combined to calculate the overall price. To better relate price changes over time, indexes typically choose a **base year** price and assign it a value of 100. Index prices in subsequent years are then expressed in relation to the base year price.

Inflation measures are often modified over time. New products may be introduced, older products disappear, the quality of existing products may change, and consumer preferences can shift. Both the sorts of goods and services which are included in the "basket" and the weighted price used in inflation measures will be changed over time in order to keep pace with the changing marketplace.

Inflation numbers are often seasonally adjusted in order to differentiate expected cyclical cost shifts. For example, price of air-conditioner is expected to rise in summer months. In such cases, seasonal adjustments are used when measuring for inflation.

**How does India calculate inflation?**

In India, inflation is calculated on a weekly basis. India uses the Wholesale Price Index (WPI) to calculate and then decide the inflation rate in the economy while most developed countries use the Consumer Price Index (CPI) to calculate inflation.
Wholesale Price Index (WPI)

WPI is the index that is used to measure the change in the average price level of goods traded in wholesale market. It was first published in 1902, and was one of the more economic indicators available to policy makers until it was replaced by most developed countries by the Consumer Price Index in the 1970s.

In India, at present a total of 697 commodities are included in the commodity basket in which Primary articles contribute 117 items, Fuel and Power contribute 16 items, and Manufactured Products provide 564 items. The base year is 2011-12.

How is WPI (Wholesale Price Index) calculated in India?

For calculation, WPI for the base year is assumed to be 100. Assume that WPI for the year 1993-94 is considered as the base year. Let's calculate WPI for the year 2009-10 for a particular commodity, say wheat. Assume that the price of a kilogram of wheat in 1993-94 = Rs 7.00 and in 2009-10 = Rs 15.00

\[ \text{WPI of wheat (2009-10)} = \frac{\text{Price of wheat in 2009-10} - \text{Price of wheat in 1993-94}}{\text{Price of wheat in 1993-94}} \times 100 \]

\[ = \frac{15.00 - 7.00}{7.00} \times 100 \]

\[ = 114.28 \]

Since WPI for base year is assumed as 100, WPI for 2009-10 will become 100+114.28 = 214.28.

In this way individual WPI values for all the commodities are calculated and then the weighted average of individual WPI figures are found out to arrive at the overall Wholesale Price Index. Commodities are given weight age depending upon its influence in the economy.

How is inflation rate calculated?

If we have the WPI values of two time zones, say, beginning and end of year, the inflation rate for the year will be, (WPI of end of year – WPI of beginning of year) / WPI of beginning of year x 100. For example, WPI for 1st Jan 2009 was 200 and WPI for 1st Jan 2010 was 210 then inflation rate for the year 2009 is (210-200)/200 x 100 = 5%.

Since WPI figures are available every week, inflation for a particular week (which usually means inflation for a period of one year ended on the given week) is calculated based on the above method using WPI of the given week and WPI of the week one year before.

Consumer Price Index (CPI)

CPI is a measure estimating the average price of consumer goods and services purchased by households. A consumer price index measures a price change for a constant market basket of goods and services from one period to the next within the same area (city, region, or nation). It is a price index determined by measuring the price of a standard group of goods meant to represent the typical market basket of a typical urban consumer.

Effects of Inflation

Inflation's effects on an economy are manifold and can be simultaneously positive and negative.

Negative effects

1. Decrease in the real value of money and other monetary items over time
2. Uncertainty about future inflation may discourage investment and saving, or may lead to reductions in investment of productive capital and increase savings in non-producing assets. e.g. selling stocks and buying gold.
3. Reduce overall economic productivity rates, as the capital required to retool companies becomes more elusive or expensive.
4. High inflation may lead to shortages of goods if consumers begin hoarding out of concern that prices will increase in the future.

**Positive effects**

1. Mitigation of economic recessions
2. Debt relief by reducing the real level of debt.

**Causes of Inflation**

1. High rate of inflation is caused by an excessive growth of the money supply. A long sustained period of inflation is caused by money supply growing faster than the rate of economic growth.
2. Low or moderate inflation may be attributed to fluctuations in real demand for goods and services, or changes in available supplies such as during scarcities, as well as to growth in the money supply.
3. Generally during war and in the post-war period, there will be inflation. This is so because during war, there will be shortage of goods and there may be rationing, control and things like that. So during the post-war years, people who have been forced to save money will spend. That is, demand for all sorts of goods will increase during that period but supply will not increase so fast as that. This leads to inflation. Inflation occurs during war because the one great aim at that time is that of winning the war. Since modern wars are so expensive, the Government has to depend upon created money to finance war. This leads to inflation.
4. And inflation breeds inflation. It means that inflation leads to inflation. During a period of inflation, prices will be high. Since prices are high, workers will demand high wages. High wages result in high costs. High costs in turn lead to high prices. Thus it forms a vicious circle. **Wages force up prices; prices force up wages.** This is the inflationary spiral.
5. Deficit financing is another cause of inflation. This applies particularly to underdeveloped countries with planned economies.

**Kinds of Inflation**

There are three major types of inflation

1. **Demand-pull inflation**

   It is caused by increases in aggregate demand due to increased private and government spending, etc. Demand inflation is constructive to a faster rate of economic growth since the excess demand and favourable market conditions will stimulate investment and expansion.

   Demand-pull theory states that the rate of inflation accelerates whenever aggregate demand is increased beyond the ability of the economy to produce (its potential output). Hence, any factor that increases aggregate demand can cause inflation. However, in the long run, aggregate demand can be held above productive capacity only by increasing the quantity of money in circulation faster than the real growth rate of the economy.

2. **Cost-push inflation**

   It is also called supply shock inflation. It is caused by a drop in aggregate supply (potential output). This may be due to natural disasters, or increased prices of inputs. For example, a sudden decrease in the supply of oil, leading to increased oil prices, can cause cost-push inflation. Producers for whom oil is a part of their costs could then pass this on to consumers in the form of increased prices.

3. **Built-in inflation**

   It is induced by adaptive expectations, and is often linked to the "price/wage spiral". Rising inflation can prompt employees to demand higher wages (above the rate of inflation), to keep up with consumer prices and firms passing these higher labor costs on to their customers as
Higher prices, leading to a **vicious circle**. Built-in inflation reflects events in the past, and so might be seen as hangover inflation.

**Other types of Inflation**

**Repressed Inflation**: Generally price rise results in inflation. However, there can be inflation even without a rise in the price level. This is known as Repressed Inflation. Usually this happens during a war period. On account of many controls and rationing that exist during wartime, prices will be kept under check. But the moment controls are withdrawn, prices will go up. So the real test of inflation is neither an increase in the amount of money nor a rise in prices, but the appearance of **abnormal profits**. Whenever businessmen and producers make huge profits, it is a sign of inflation.

**Runaway or Galloping or Hyper – Inflation**: This is a serious type of inflation. For example, it was experienced in Germany after World War I and in Hungary and China after World War II. In this situation, prices rise to a very great extent at high speed and high prices have to be paid even for cheap things. And money becomes quite worthless and new currency has to be introduced. This situation is known as galloping inflation or hyper-inflation.

**Profit – Push Inflation**: Just as trade unions manage to push up wages, oligopolists and monopolists will raise prices more than enough to cover increase in costs with the aim of making monopoly profits.

**Controlling inflation**

Since inflation has many evils, every government tries to check it. A variety of methods have been used in attempts to control inflation. Today, most mainstream economists favor a low positive steady rate of inflation. Low inflation may reduce the severity of economic recessions. The primary tool for controlling inflation is **monetary policy**. The task of keeping the rate of inflation low and stable is usually given to monetary authorities. Generally, these monetary authorities are the central banks that control the size of the money supply through the setting of interest rates, through open market operations, and through the setting of banking reserve requirements.

**Some other measures**

1. Increased taxation
2. By reducing government expenditure on capital projects. (In India, this measure has been suggested to check inflation. Many capital projects proposed in our Third Five Year Plan were either suspended or dropped completely.
4. Rationing and
5. Price controls.

Sometimes a “wage freeze” is recommended to check inflation. That is, trade unions will be requested not to ask for an increase in wages during a given period. The success of the above measures in tackling inflation depends upon the efficiency of the government in implementing the measures.

**Related definitions**

**Deflation**

Deflation is a state in which the value of money is rising, i.e., prices are falling. **Deflation is the opposite of inflation**. Generally inflation is a period characterized by rising activity and employment. But during deflation, there will be **bad trade** and **unemployment**. During deflation, since prices fall faster than costs, there will be heavy losses for producers and businessmen. There will not be profits in any branch of economic activity. So there will be a fall in investment. This results in unemployment. **Both inflation and deflation are evils**. There is nothing much to choose between them. While rising prices can be checked to some extent by the monetary policy of the government, the latter is of little help in raising the price
level during deflation. It does not work. That is why during such periods, modern economists suggest that the State must play an active role in the economic field and step up economic activity by undertaking a series of public works programmes.

**Disinflation** – a decrease in the rate of inflation

**Hyperinflation** – an out-of-control inflationary spiral

**Stagflation** – a combination of inflation, slow economic growth and high unemployment

**Reflation** – an attempt to raise the general level of prices to counteract deflationary pressures.
Chapter – 17
Economic Systems

The term economic system refers to the mode of production and the distribution of goods and services within which economic activity takes place. In a broader sense, it “refers to the way different economic elements (individual workers and managers, productive organisations such as factories or firms, and government agencies) are linked together to form an organic whole.” The term also refers to how the different economic elements will solve the central problems of an economy: What, how, and for whom to produce.

Capitalism or Free Enterprise Economy

Capitalism is an economic system in which each individual in his capacity as a consumer, producer, and resource owner is engaged in economic activity with a large measure of economic freedom. Individual economic actions conform to the existing legal and institutional framework of the society which is governed by the institution of private property, profit motive, freedom of enterprise, and consumers’ sovereignty. All factors of production are privately owned and managed by individuals. The raw materials, the machines, the firms, and the factories are owned and managed by individuals who are at liberty to dispose of them within the prevalent laws of the country. Individuals have the freedom to choose any occupation, and to buy and sell any number of goods and services.

Features of Capitalism

The principal features of capitalism are:
1. Private Property: It means that the owner of a firm or factory or mine may use it in any manner he likes. He may hire it to anybody, sell it, or lease it at will in accordance with the prevalent laws of the country.
2. Profit motive: The decisions of businessmen, farmers, producers, including that of wage–earners are based on the profit motive.
3. Price Mechanism: Under capitalism, the price mechanism operates automatically without any direction and control by the central authorities. It is the profit motive which determines production. Capitalism is a system of mutual exchanges where the price–profit mechanism plays a crucial role.
4. Role of the State: During the 19th century, the role of the state was confined to the maintenance of law and order, protection from external aggression, and provision for educational and public health facilities. This policy of laissez-faire – of non-intervention in economic affairs by the state – has been abandoned in capitalist economies of the West after the Second World War. Now the state has important tasks to fulfil. They are monetary and fiscal measures to maintain aggregate demand; anti–monopoly measures and nationalised monopoly corporations; and measures for the satisfaction of communal wants such as public health, public parks, roads, bridges, museums, zoos, education, flood control, etc.
5. Consumers’ Sovereignty: Under capitalism, ‘the consumer is the king.’ It means freedom of choice by consumers. There is also freedom of production whereby producers are at liberty to produce a vast variety of commodities in order to satisfy the consumer who acts like a ‘king’ in making a choice out of them with his given money income. These twin freedoms of consumption and production are essential for the smooth functioning of the capitalist system.
6. Freedom of Enterprise: Freedom of enterprise means that there is free choice of occupation for an entrepreneur, a capitalist, and a labourer. But this freedom is subject to their ability and
training, legal restrictions, and existing market conditions. It is on account of the presence of this important feature of freedom of enterprise that a capitalist economy is also called a free enterprise economy.

7. Competition: Competition is one of the most important features of a capitalist economy. It implies the existence of large number of buyers and sellers in the market who are motivated by self-interest but cannot influence market decisions by their individual actions. It is competition among buyers and sellers that determines the production, consumption and distribution of goods and services.

**Socialism**

A socialist economy is an economic organization in which the means of production are owned and regulated by the state. The production and distribution of goods and factors of production are done by the state under the direction of the planning commission. The decisions as to how much to produce, which methods of production to employ and for whom to produce are taken by the planning authority. That is why, a socialist economy is also called planned economy. Such economies are China, Cuba, Vietnam and North Korea. They possess the following features.

**Features of Socialism**

1. Public Ownership: A socialist economy is characterised by public ownership of the means of production and distribution. There is collective ownership whereby all mines, farms, factories, financial institutions, distributing agencies (internal and external trade, shops, stores, etc.), means of transport and communications, etc. are owned, controlled, and regulated by government departments and state corporations.

2. Central Planning: A socialist economy is centrally planned which functions under the direction of a central planning authority. It lays down the various objectives and targets to be achieved during the plan period.


4. Freedom of Consumption: Under socialism, consumers’ sovereignty implies that production in state-owned industries is generally governed by the preferences of consumers, and the available commodities are distributed to the consumers at fixed prices through the state-run department stores.

5. Equality of Income Distribution: In a socialist economy, there is great equality of income distribution as compared with a free market economy. The elimination of private ownership in the means of production, private capital accumulation, and profit motive under socialism prevent the amassing of large wealth in the hands of a few rich persons.

6. Planning and the Pricing Process: The pricing process under socialism does not operate freely but works under the control and regulation of the central planning authority. There are administered prices which are fixed by the central planning authority. There are also the market prices at which consumer goods are sold. There are also the accounting prices on the basis of which the managers decide about the production of consumer goods and investment goods, and also about the choice of production methods.

**Mixed Economy**

A mixed economy is a golden mean between a capitalist economy and a socialist economy. It is an economic system where the price mechanism and economic planning are used side by
side. There is mixture of private and public ownership of the means of production and distribution. Some decisions are taken by households and firms and some by the planning authority. All developing countries like India are mixed economies.

**Features of Mixed Economy**

A mixed economy possesses the following features:

1. **Public Sector:** The public sector is under the control and direction of the state. All decisions regarding what, how and for whom to produce are taken by the state. Public utilities, such as rail construction, road building, canals, power supply, means of communication, etc., are included in the public sector. They are operated for public welfare and not for profit motive. The public sector also operates basic, heavy, strategic and defence production industries which require large investment and have long gestation period. But they earn profits like private industries which are utilized for capital formation.

2. **Private Sector:** There is a private sector in which production and distribution of goods and services are done by private enterprises. This sector operates in farming, plantations, mines, internal and external trade, and in the manufacture of consumer goods and some capital goods. This sector operates under state regulations in the interest of public welfare. In certain fields of production, both public and private sectors operate in a competitive spirit. This is again in the interest of the society.

3. **Joint Sector:** A mixed economy also has a joint sector which is run jointly by the state and private enterprises. It is organised on the basis of a joint stock company where the majority shares are held by the state.

4. **Cooperative Sector:** Under a mixed economy, a sector is formed on cooperative principles.

5. **Freedom and Control:** A mixed economy possesses the freedom to hold private property, to earn profit, to consume, produce and distribute, and to have any occupation. But if these freedoms adversely affect public welfare, they are regulated and controlled by the state.

6. **Economic Planning:** There is a central planning authority in a mixed economy. A mixed economy operates on the basis of some economic plan.

7. **Social Welfare:** The principal aim of a mixed economy is to maximize social welfare. This feature incorporates the merits of socialism and avoids the demerits of capitalism. To remove inequalities of income and wealth, and unemployment and poverty, such socially useful measures as social security, public works, etc., are adopted to help the poor. On the other hand, restrictions are placed on the concentration of monopoly and economic power in the hands of the rich through various fiscal and direct control measures.

**Forms of Business Organization**

A business activity can be organized in different ways. In practice we come across business organization owned and run by a single person or group of persons. The ownership patterns of business when looked into, reveal five distinct forms viz., 1) Individual organization or single proprietorship or sole trader concern organization or the sole proprietorship; 2) Partnership; 3) Joint stock company; 4) Co-operative – organization; and 5) State enterprise.

The selection of each form of business organization by the entrepreneurs is influenced by several factors viz., 1) type of business unit contemplated; 2) the care with which an enterprise can be run; 3) owned funds available with the entrepreneur; 4) total capital
requirements; 5) possibilities of securing borrowed capital; 6) the risk and liability aspects which the entrepreneur has to assume; 7) tax aspects of different forms of business organization; 8) Organizational, managerial and controlling aspects, etc.

**Individual Enterprise or Single Proprietorship or Sole Trader or the Sole Proprietorship**

The individual enterprise is the most common form of business organization. Many small business enterprises belong to this form. These enterprises are owned and operated by a single person, who takes all the responsibilities of outcome of the business. These enterprises are found to be small with a few exceptions here and there. This is more or less a family proprietorship with all the family members participating in the business affairs. As far as the size of the business is concerned, it is left to the desire of the entrepreneur keeping in view of the resources at his disposal.

**Partnership**

It is an association of two or more individuals who join together as co – owners to share profits or losses in agreed proportions. Partnership comes into existence based on the goals of the co – owners. To safeguard the business interests of the partners, normally a written partnership agreement is made covering various dimensions of business viz., capital contribution, managerial responsibilities, sharing of profit and losses, withdrawal from the business, termination of the business, etc.

There are two kinds of partnership, viz., general partnership and the limited partnership. General partnership is the most common in partnership dealings. Every partner, irrespective of the percentage of capital contributed to the business, has equal say in the management of business. Each partner has equal rights and liabilities. In limited partnership, any number of limited partners are allowed, but there should be at least one general partner. Liability of each member is limited to the extent of investment made only. Profits are also distributed among the partners according to the contribution of capital in the business.

There are different kinds of partner, viz., active partner, sleeping partner, nominal partner, secret partner, etc. Active partner is one who is actively involved in running the business. He performs various roles like manager, organizer and adviser of business. A sleeping partner is one who contributes capital, shares profits and takes the responsibilities of losses of the business, but he does not participate in running the business. Normally persons having capital but who do not find time in the business affairs, prefer to be sleeping partners. Nominal partner is one who joins a business but does not contribute capital. He just lends his name for the business and on his virtues the business prospers. But he is identified as a partner by the third party. In the event of loss of a business, he is liable to the third party. This is because third party thinks him as partner. Secret partner is one whose name is kept secret. His name is not disclosed to outsiders. He is liable for the losses, if any. He differs from sleeping partner in the matter that he takes part in running the business.

**Joint Stock Private Limited Company**

The minimum number of members is two but the number cannot exceed 50. There is no need for the private limited company to call for a statutory meeting. Similarly, the company need not submit its annual balance sheet to the registrar of joint stock companies. The transfer of share is generally restricted by articles. It cannot issue prospectus inviting the public to
subscribe to the share capital. The word ‘Pvt. Ltd’ must be used with the name of the company.

**Joint Stock Public Limited Company**

The business can be started with seven persons and there is no maximum limit for members. The business shall commence only after getting the certificate of incorporation from the registrar of joint stock companies. The public limited company must issue a prospectus inviting the public to contribute to the share capital. A statutory meeting must be held within a prescribed period and its annual balance sheet must be submitted to the registrar of joint stock companies. The main sources of finance for the company are through shares and borrowings. The shares are freely transferable. A shareholder can sell his shares at any time he prefers. The company will not return the shares to the shareholder till it winds up the business, but shareholders can easily sell their shares through stock exchange. The common types of shares are: 1) ordinary shares 2) preference shares; and 3) deferred shares. Ordinary shares are those for which no special privilege is given. Ordinary shareholders get dividend from the net profits of the company. Preference shares are those which carry a certain fixed dividend from the net profits. This dividend is paid to the preference shareholders before dividend is paid to other kind of shareholders. At the time of liquidation of the company after paying outside creditors, preference share capital is returned. Ordinary shareholders will be paid only when preference share capital is paid in full. Deferred shareholders receive dividend, after payment of dividend to ordinary and preference shareholders.

Apart from selling shares the company raises required capital by floating debentures. A debenture is a document under the company’s seal which provides for the payment of a principal sum and interest there on at regular intervals, which is usually secured by a fixed or floating charge on the company’s property or undertaking and which acknowledges a loan to the company. Debentured are not shares but are just like promissory notes from which funds are raised. It is a form of loan and debenture holders (creditors) are paid interest as promised whether the company gets profits or not.

**Co – operative Organization**

The term, co – operation implies the self help made effective through mutual help. The philosophy behind co – operative movement embodies in a slogan called “all for each and each for all”. The basic objective of co – operation is protecting weaker sections of the society so that they fulfill their needs. Various types of co – operative societies are: 1) Consumers’ co – operatives 2) Producers’ co – operatives and 3) Credit co – operatives.

**Consumers’ Co – operatives**

These are present in rural and urban areas. Members in an area contribute capital to form into a society. Any person, regardless of caste, creed or religion can become a member of the society. The society is run by the elected executive members. The society undertakes bulk purchases of consumer goods and sells to the members. In this process the middlemen are eliminated. Non – members are also allowed to buy the goods but they are charged extra price. The society makes small profits to cover the administrative costs. The surplus of profits are distributed among the members as dividends. A certain percentage of profits is kept aside as reserve fund for contingencies and growth of the co – operatives.
Producers’ Co – operatives
These are the associations of producers which help them in procuring inputs and in marketing their produce. These societies are formed with a sole aim of improving the economic conditions of producers. The society supplies the raw materials to these members who produce the goods. The society takes the responsibility of selling the goods. The members as workers are paid wages for their services. Part of the profits is retained as reserve fund and the balance is distributed among members. Examples: Weavers’ societies, co – operative farming societies, etc.

Credit Co – operatives
Credit co – operatives are established to protect the small farmers and other weaker sections. Here, through the co – operatives, weaker sections of the society are protected from the clutches of moneylenders, who charge exorbitant rates of interest. Credit co – operatives are categorized into two. 1) Rural Credit Co – operative Societies and 2) Urban Credit Co – operative Societies
1. Rural credit co – operatives can be formed with at least 10 members. Individuals join as members by contributing to the share capital in the form of shares. The societies receive loans from State Co – operative Bank, and these are advanced to the members as short term loans. These societies keep up a margin while advancing loan to meet the administrative costs. The area of coverage of these societies is confined to one or two villages.
2. Urban co – operative credit societies are meant to advance loans to small traders, artisans and employees receiving small incomes. The members are provided short term loans. Liability is limited. Urban co – operatives raise their capital from Governmental agencies and members.

State or Public Enterprise
State enterprise is an undertaking, owned and controlled by the local or State or Central Government. Entire investment or major part of the investment is done by the Government. The major considerations for the States to undertake the business are heavy investment requirements, need to protect weaker sections against economically strong, and when private traders are hesitant to venture into the enterprise. State enterprises are found in manufacturing, trading and service activities. These enterprises are managed by the Government. The Government programmes are implemented through State enterprises.

International/ Foreign Trade:
With the introduction of the process of globalization of the economy and the advantage of WTO, the degree of inter-dependence among the countries of the world has increased. Many factors have favored international specialization and international trade in tangible goods & in intangible goods and services.

Definition: Foreign trade/ international trade mean “Trade done outside the boundaries of country and with other countries, e.g. Tea is exported from India to England.

a. Import Trade: It means purchase goods or services from other countries. E.g. Machineries Purchased from USA and brought to India.
b. Export Trade: It means to sell the goods, services or technology produced in our country to other countries. e.g. Mango Juice sale in Australia

c. Re-export Trade: It means to purchase goods from other country and to sell the same directly to other country. e.g. Machinery purchase from Russia and unloaded at Bombay port and from Bombay, sent to Sri Lanka.

Differences between Inter Regional Trade (Domestic Trade) and International Trade

The classical economists proposed a specific theory of international trade which is popularly known as the Theory of “Comparative Costs” or the theory of “Comparative advantage”

While modern economists views against that of classical economist and states that the difference between inter Regional trade and international trade are of only in degree rather than in the kinds of trade.

1. Factor Immobility: The factors of production are perfectly mobile between the regions of a country while they are perfectly immobile between the countries entering into international trade. Labour and capital are regarded as immobile between countries while they are perfectly mobile within a country. The factor prices are almost equal in a country but differ widely between countries. It was due to the differences in languages, customs, tastes and preferences, operational skills, economic, social, political and legal restrictions etc. But above problems do not arise in the case of inter regional trade.

2. Differences in Natural Resources Endowments: The production of those commodities in which they are richly endowed and trade them with other countries where such resources are scarce. In Australia land is in abundance while labour and capital are relatively scarce, whereas in England the capital is abundant and cheap, while land is scarce and dear. Countries trade with each other on the basis of comparative cost differences in the production of different commodities.

3. Geographical, Ecological and Climatic Differences:- Every country cannot produce all commodities due to geographical, ecological and climatic conditions except at prohibitive cost.

4. Different Markets: International markets are separated by differences in language, usage, customs, habits, styles etc. e.g. the car models in France and the USA are quite different and they are trade better within the country rather than across the country. Thus the goods differ for sale in the inter-regional markets and international markets.

5. Different Currencies: The principal difference between inter-regional markets and international markets lies in the use of different currencies in the international markets but the same currencies in the inter-regional markets. To overcome this problem a common currency has been introduced in the European countries (Euro-dollars).

6. Problems of Balance of payment: The problems of BOP are perpetual in the international trade, but there is no such problem in inter-regional trade because of greater mobility of capital within different regions of country. The problem of BOP is due to the problems of deflection, devaluations, import restrictions, restrictions on the movement of currency etc.

7. Transport Costs: International trade involves huge transport costs while it was less in inter-regional trade.

8. Different Economic Policies: Different countries follow different economic policies with regards of taxation, tariff, commerce and trade considering a policy of free trade.

Advantages of International Trade:
The advantages of international trade rests on international division of labour. There is world wide specialization in industries which results in increased total production and other advantages which are as follows.

1. The productive resources of the world are utilized to the best advantage.
2. A country is able to consume goods which it cannot produce at all or only at an impossible high cost.
3. Violent price fluctuations are turned down.
4. Shortage in time of famine and scarcity can be met from the imports.
5. Countries economically backward but rich in unused resources are able to develop their industries.
6. Trade develops racial sympathies and creates common interests.
7. The existence of international trade promotes peace.

Disadvantages:
1. The worst effect of foreign trade on backward countries is the destruction of their handicrafts and cottage industries.
2. The empire builder follows the trader e.g. a powerful country can easily find some excuse for attacking a weak country.
3. Dependence on foreign goods creates difficulties in time of war when the country is cut off by enemy action.
4. Countries which sell primary commodities and by manufactured goods in return are losers.
5. Foreign trade may completely exhaust a country’s natural resources.
6. Imports of harmful drugs and luxuries, as opium in china, ruin the health of the nation, negative and vulgar movie etc. affects the cultural value of the country.
7. Through foreign trade, the economic troubles of one country are transmitted to other. For example, the collapse of American market in 1929 resulted in a world wide depression.

Balance of payment:
The balance of payments is a comprehensive record of economic transactions of the residents of a country with the rest of the world during a given period of time. It includes all ‘visible’ and ‘invisible’ items. The main purpose of keeping these accounts is to inform the government of a country of the international economic position of the country and to help it in making decisions on monetary and fiscal policies to be pursued as well as on the trade and payment issues.

Importance of Balance of Payments
A study of BOP is important because –
1. It serves as an indicator of the changing international economic or financial position of a country.
2. It helps in formulation of a country’s monetary, fiscal and trade policies.
3. It helps in determining the influence of foreign trade & transactions on the level of national income of a country.
4. It is useful to banks, firms, financial institutions and individuals which are directly or indirectly involved in international trade and finance.
5. It is an economic barometer of nation’s progress vis-à-vis rest of the world.
GST is one indirect tax for the whole nation, which will make India one unified common market. GST is a single tax on the supply of goods and services. GST is a destination-based tax, which is levied only on value addition at each stage because credits of input taxes paid at procurement of inputs will be available. Thus, the final consumer will bear only the GST charged by the last dealer in the supply chain.


Proposed broader structure under GST
What taxes will be levied under GST?

**Answer:** Since India is federal country, Centre Government and State Government both have powers to levy taxes. Under GST regime, Centre and State both have power to levy GST. Therefore, GST in India is divided into two parts:

1. Central GST (CGST)
2. State GST (SGST)
GST will be divided into two components, one is CGST, which is levied by Central Government, and other is SGST, which is levied by State Government. However, there will be one more type of GST is Integrated GST (IGST). IGST will be levied on inter-state transactions. Since, there are chances that people will get confused in case of transactions between two persons of two different States and there will be difficulty setting off dues of taxes between two States, thus IGST will be levied by Centre. Now, Centre will apportion the State’s portion of GST from IGST to relevant State.

Basic Rates on Agricultural Sector

<table>
<thead>
<tr>
<th>Goods</th>
<th>Rate(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed, Organic compost without brand</td>
<td>0</td>
</tr>
<tr>
<td>Head pump and its parts</td>
<td>5</td>
</tr>
<tr>
<td>Tractor</td>
<td>12</td>
</tr>
<tr>
<td>Chemical fertilizer</td>
<td>5</td>
</tr>
<tr>
<td>Tractor Tire &amp; Rim</td>
<td>18</td>
</tr>
<tr>
<td>Other tractor parts</td>
<td>18</td>
</tr>
<tr>
<td>Harvester, Earth, Grader, Parts</td>
<td>12</td>
</tr>
<tr>
<td>Insecticide</td>
<td>18</td>
</tr>
</tbody>
</table>

Source: http://www.alankitgst.com

Benefits of GST

- Reduction in Cascading of Taxes
- Overall Reduction in Prices
- Common National Market
- Benefits to Small Taxpayers
- Self-Regulating Tax System
- Non-Intrusive Electronic Tax System
- Simplified Tax Regime
- Reduction in Multiplicity of Taxes
- Consumption Based Tax
- Abolition of CST
- Exports to be Zero Rated

Impact of GST on Agriculture

Impact on input-side

- Fertilisers that were subjected to a 0% to 8% VAT will henceforth attract 12% tax under GST. This will increase the prices of fertilisers by 5% to 7% unless the government offers to increase subsidy.
- Pesticides have been placed in 18% slab. This is an increase from the pre-GST 12% excise and VAT of 4-5% in some states.
- While tractors are placed in 12% slab, several components and accessories of tractors are placed in the 28% slab. It is not clear what impact GST will have on the prices of tractor. However, it is expected that there is a scope for reduction in tractor prices.
Overall, from the input side, the cost of cultivation is expected to increase marginally. 

Impact on Output side

Highly used agri-commodities such as rice, wheat, milk, fresh fruits and vegetables are placed in the zero tax slab. This will help in avoiding tax, cess and arhatiya commission levied by some States.

The taxation structure for processed food is not very encouraging. The processed foods like fruit and vegetables juices under GST will be taxed at 12% up from 5%. Some items like fruit jams, jellies, marmalades etc will be taxed at even higher 18%. The higher tax rates are expected to discourage the development of food processing industry, especially for perishable fruits and vegetables. This may also affect the employment in food processing industry.

GST will help to do away with mandi taxes and associated cess and levies, which were distorting agricultural markets. It is one of the biggest gains for agriculture. Introduction of GST could also help in reinvigorating the interest of private sector in agriculture.

Source: www.gktoday.in

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