10177GE009

ENGINEERING ECONOMICS AND COST ANALYSIS

UNIT – 1: BASIC ECONOMICS

DEFINITION OF ECONOMICS:

We can have a good idea about the nature and scope of economics by studying some of the important definitions of economics. Some of the important definitions of economics are those of leading economists like Adam Smith, Alfred Marshall, Lionel Robbins and Samuelson.

Adam Smith's Definition (Wealth Definition)

Adam Smith (1723-90) defined economics as follows :"*Economics is the science of wealth*". He is the author of the famous book "*Wealth of Nations*" (1776). He is known as the Father of Political Economy 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. But we should remember all goods which satisfy human wants are not wealth. For example, air and sunlight are essential for us. We cannot live without them. But they are not regarded as wealth because they are available in abundance and unlimited in supply. 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. J.S. Mill defined economics as "the practical science of the production and distribution of wealth". Adam smith was of the view that economics was concerned with the problems arising from wealth-getting and wealth-using activities of people. He was interested mainly in studying the ways by which the wealth of all nations could be increased.

Samuelson's Definition (Modern Definition of Economics)

Samuelson's definition is known as a modern definition of economics. According to Samuelson, *"Economics is a social science concerned chiefly with the way society chooses to employ its resources, which have alternative uses, to produce goods and services for present and future consumption".*

The above definition is general in nature. There are many common points in the definitions of Robbins and Samuelson.

Samuelson's definition tells us that economics is a social science and it is mainly concerned with the way how society employs its limited resources for alternative uses. All this we find in the definition of Robbins. But Samuelson goes a step further and discusses how a society uses limited resources for producing goods and services for present and future consumption of various people or groups.

An interesting point that Samuelson tells is that the society may or may not make use of money.

NATURE AND SCOPE OF ECONOMIC SCIENCE:

Economics is a social science which deals with human wants and their satisfaction. It is mainly concerned with the way in which a society chooses to employ its scarce resources which have alternative uses, for the production of goods for present and future consumption.

Political economy is another name for economics. “Polis” in Greek means a State. The early writers used the term “Political Economy” for the management of the State. A person who runs a family is expected to make the best use of the income of the household. Similarly, the State is expected to get the maximum benefit for the society. Hence the term “Political Economy”.

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. We may say economics is the science of wants. But 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. Though science has increased our resources, our wants have also increased. We may satisfy some wants now. But soon, new wants appear. But all our wants cannot be satisfied because means are limited.

We study economics because there is scarcity of many goods we want. This problem is common to the individual as well as the State. That is why we say Economics is the science of scarcity. And scarcity is the basic fact of life.

Our wants are unlimited but means are limited. This leads to choicemaking. If there is unlimited supply of goods which satisfy our wants, the problem of choice will not arise. It is true that we have many wants. But all wants are not of equal importance. So we choose the more activity. We may also say that economics is the science of choice. Of course, all goods we want are not scarce. There are certain things like air and sunshine which are available in abundance. Though they are very essential for our life, we do not pay any price for them. They are free goods and they are not very important for our study. But many things we want are scarce and we have to pay a price for them. So, in economics, we study how prices of different things are determined. We may also say that economics is a science that deals with pricing process.

Modern economy is a monetary economy. Prices are paid in money. So money plays an important role in the economic life of a society. It 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.

We shall now sum up our discussion about the nature of economics. Economics is a social science which studies about human wants and their satisfaction. Human wants are unlimited. So scarcity is the fundamental fact of life. As all wants are not of equal importance, this leads to choice. Economics is the science of choice. As there is scarcity of goods, we have to pay a price for them. So, economics studies about the pricing process. And, as prices are paid in money, we

study about the part played by money in the economic life of a society. We study how people get and spend money, how they earn a living and how it affects their way of life and so on. 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.

BASIC TERMS AND CONCEPTS:

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 wealth, goods, income, value, price and market. If we do not understand their meaning properly, it may result in a lot of confusion.

WEALTH

In ordinary speech, when we refer to wealth, we mean money. But in economics, it has a special meaning. It refers to those scarce goods which satisfy our wants and which have money value. We may consider anything that has money value as wealth in economics. All economic goods have value–in–exchange. So wealth includes all economic goods. Wealth has been defined as *"stock of goods existing at a given time that have money value".*

Characteristics of Wealth

The following are the characteristics of wealth :

1. It must possess utility. It must have the power to satisfy a want. As Marshall says "they must be desirable".
2. It must be limited in supply. 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.
3. Wealth should be transferable. That is, it should be possible for us to transfer the ownership from one person to another.
4. It must have money value.
5. It may be external. For example, the goodwill of a company is external wealth. Utility, scarcity and transferability are thus important characteristics of wealth.

Classification of Wealth

Wealth may be classified into

- personal wealth (individual wealth)
- social wealth (collective wealth)
- national wealth (a + b)
- cosmopolitan wealth (e.g. ocean).

GOODS

Anything that satisfies a human want can be considered as “good” in economics, In economics, the term “goods” refer to material and non-material things. Just as an apple or a chair is a good, music or the services of actors, musicians and teachers are some of the examples of goods.

Goods can be classified into *free goods and economic goods*. Goods like air and sunlight which are the gifts of nature are free goods. They are not scarce. So they do not command a price in the market. They are known as free goods. Economic goods command a price in the market. In other words, they have value-in-exchange. For, they are scarce in relation to demand. In this connection, we have to remember 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, in some villages firewood is a free good. But in a town where we have to pay a price for it, it becomes an economic good. Similarly, water which is a free good becomes an economic good when there is scarcity of water.

Goods may be further classified into (1) consumers goods and (2) producers goods. Consumers goods satisfy our wants directly. They can be classified into (1) perishable goods (eg. vegetables, fish and music) and (2) durable goods (eg. a house, a car, a radio). Capital goods satisfy our wants indirectly. Machines that are used to make machines are called capital goods. For example, car is a sort of machine. It is a consumers’ good. But there must be some other machine to make a car. That machine is known as capital good or producer good. But what is a consumers’ good in one place can become a producers’ good in another place. For example, when electricity is used for lighting purposes at home, it is a consumers’ good. But the same electricity when used in factories for industrial purposes, it becomes a producers’ good.

INCOME

In economics, when we refer to income, generally we mean money income. According to Seligman, “Income in the economic sense, is the flow of satisfactions from economic goods”. We know that all economic goods form wealth. The main source of income is wealth. For example, if you own a house, it is your wealth. If you get rent from it, it is your income. There are two points about income – time and amount.

There are two kinds of income – (1) money income and (2) Real Income. Generally people earn their incomes in the form of money.

Money income is also known as nominal income. But the standard of living of people of a country depends on their real income. Real income depends upon the purchasing power of money and that in turn depends on the price level. Real income refers to the command of a person over actual commodities and services. Just because money incomes of people increase, we cannot say they are better off. It all

depends upon how many goods they can command.

Suppose, my money income is Rs. 10, and price of one kilo of rice is Rs. 10, then I can buy one kilo of rice or my income is worth of only one kilo of rice. In the next month, my money income is raised to Rs. 15, but the price of one kilo of rice is increased to Rs. 20. Now my income is worth only ¾ kilo of rice. Therefore, in spite of increase in money income, my real income has come down due to higher increase in price. *Real income is price adjusted money income*.

National Income : National income refers to the value of commodities and services produced by a country during a year.

Marshall defined national income as follows : "The labour and capital of a country acting on its natural resources produce annually a certain net aggregate of commodities, material and immaterial, including services of all kinds…… This is true net annual income or revenue of the country, or the national dividend".

From the national income of a country, we can find out whether the country is rich or poor. And from the composition of national income, we can find out the relative importance of agriculture, industry and service sector in the economy.

We get per capita income [(i.e) income per person per year] by dividing national income by the population of the country.

$$\text{Per capita income} = \frac{\text{National Income}}{\text{Population}}$$

VALUE

The term "value" refers to the exchange qualities of a good. According to Marshall, "the term value, is relative and expresses the relation between two things at a particular place and time".

Value is of two kinds (1) value–in–use and (2) value–in– exchange. Although air, rain and sunshine have value–in–use, they do not have value–in–exchange. In economics, we are interested only in those goods which have value–in–exchange. For a good to have value– in–exchange, it must possess utility, it must be scarce in relation to demand and it must be possible for us to exchange it. In other words, all economic goods have value-in-exchange.

Value is generally measured in money and it is a relative term. The value of a thing changes according to time and situation. For example, ice has more value in summer than in winter.

PRICE

When value is expressed in money, it is called price. Generally, economists make no distinction between value and price. All prices are related to one another. They form the price system. The prices most familiar to us are the prices we pay for

goods sold in market, that is, retail prices. Many payments like rent, wages and interest are also prices which we pay respectively to land, labour and capital. Price system 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.

MARKET

In the ordinary language, market refers to a place where goods are bought and sold. Thus Koyambedu market in Chennai refers to a place where vegetables are sold. In economics, market does not refer to any particular place in which goods are bought and sold. But it refers to buying and selling of a commodity. In a market a commodity is bought and sold under given conditions and there will be a number of buyers and sellers who will be in close touch with each other. For example, a fish market refers to buying and selling of fish; here both buyers and sellers are in close contact. According to Benham, “Market is any area over which the buyers and sellers are in close touch with one another either directly or through dealers, that prices obtainable in one part of market affect the prices paid in other parts”. Generally speaking, when we talk of markets, we refer to commodities that are bought and sold. But there are markets for things other than commodities. Thus there are labour markets, foreign exchange market, capital market and so on. For example, we may say the market for an actor, say ‘X’, is dull. So there may be a market for anything which has a price.

Classification of Markets : Markets may be classified according to space, time and the nature of competition. According to space, markets are classified into local market (eg. vegetables, flowers), national market (e.g. sarees) and international market (e.g steel, cotton, sugar, tea).

Markets can also be classified according to the type of competition. Thus, broadly we have perfect markets and imperfect markets.

Markets can also be classified into short period markets and long period markets according to time. If the period is short, demand plays an important role in the market and if the period is longer, supply plays an important role. Thus markets can be classified according to space, time and the nature of competition that prevails.

PRODUCTION

Production refers to the creation of wealth. Strictly speaking, it refers to the creation of utilities. And utility refers to the ability of a good to satisfy a want. There are three kinds of utility. They are form utility, place utility and time utility. Production refers to all activities which are undertaken to produce goods which satisfy human wants. Land, labour, capital and organization are the four factors of production. In the subdivision dealing with production, we study about the laws which govern the

factors of production. They include Malthusian Theory of population and the laws of returns. We also study about the localization of industries and industrial organization.

CONSUMPTION

Consumption deals with the satisfaction of human wants. There is economic activity in the world because there are wants. When a want is satisfied, the process is known as consumption. Generally, in plain language, when we use the term “consumption”, what we mean is usage. But in economics, it has a special meaning. We can speak of the consumption of the services of a lawyer, just as we speak of the consumption of food.

In the sub-division dealing with consumption, we study about the nature of wants, the classification of wants and some of the laws dealing with consumption such as the law of diminishing marginal utility, Engel’s law of family expenditure and the law of demand.

WANTS

The existence of human wants is the basis of all economic activity in a society. All desires, tastes and motives of human beings are called wants in economics.

1. Wants may arise due to elementary and psychological causes. The wants for food, clothing and housing are elementary and psychological.
2. Wants may arise due to social causes. As members of society, we may require a particular type of dress and food.
3. Wants arise due to customs and habits like drinking tea and chewing.
4. Wants may arise due to advertisements.

In the early stages of civilisation, wants of men were few and simple. With advancement of civilisation, wants have become unlimited and also complex. Man tries to satisfy most of his wants through economic activity. Since the resources are limited, he has to choose between urgent wants and not so urgent wants. A systematic survey of this process is called consumption. Consumption means using up of goods and services in the satisfaction of human wants. The economics of consumption is related to a study of nature of wants and the behaviour of demand.

Characteristics of wants

1. **Wants are unlimited:** Man is a bundle of desires. There is no limit to human wants. If one set of wants are fulfilled, immediately another set of wants would be felt. Even the richest man will have a list of wants to be fulfilled.
2. **Every want is satiable:** wants in general are unlimited. But a single or a particular want is satiable. We can completely satisfy a single want. A man is hungry and he requires food. By spending some money on food, he can get food and satisfy his hunger.

3. **Wants are competitive:** Wants are unlimited. The resources and time at our disposal are much limited and we cannot satisfy all wants. So the wants will be competing to get satisfied. One set of wants may be competing with other set of wants to get preference of choosing first. For example, Raju has a sum of Rs.20. With this amount of Rs.20, he has to choose between going to a movie, buying a magazine or buying vegetables. Of course, a consumer will choose the more urgent wants and distribute his income on several goods in such a manner as to get maximum satisfaction.
4. **Wants are complementary:** Some wants are complementary in nature, i.e. they have to be satisfied together. Though the want may be a single one, we require many commodities and services to satisfy that want. Want for 'writing' includes want for paper, pen and ink. In some cases, wants may be both 'competitive' and 'complementary'. For example, labour and machinery. Labour can be displaced by machinery. Machines cannot work without the help of labour.
5. **Wants are alternative:** A want can be satisfied by two or more goods or by two or more methods. A want for hot drink may be satisfied by coffee or tea. We may go by 'bus' or 'train' or by 'taxi' to reach our destination. Thus, a want can be satisfied by many ways. These alternative goods or methods are called 'substitutes'.
6. **Wants vary with time, place and person:** Wants are not static in character. They are changing with time, place and person. We require hot drinks in winter and cool drinks in summer. People of England require warm woollen suits and rain coats. People of India require only cotton. The wants of a villager in Andhra Pradesh are different from a business magnet living in Bombay. The wants of our forefathers were different from the wants of the present generation. So, wants vary with generation, culture, society, geographic location and the extent of economic development.
7. **Some wants recur again:** Some wants are felt again and again. The want for food can be satisfied by eating food. Again the same want appear after a few hours. That is why we say wants are recurring in nature.
8. **Wants are influenced by advertisements:** Effective advertisements through films, journals, radio and TV will create new wants and the existing wants get modified. Through advertisements and clever salesmanship, businessmen create tastes for their products.
9. **Wants become habits and customs:** If a particular want is satisfied repeatedly by a commodity, then it becomes a habit. Example: drinking coffee and tea. Wants become habits and habits are responsible for wants.

Classification of Wants

In Economics, wants are classified into three categories, viz., Necessaries, Comforts and Luxuries.

1) Necessaries

Necessaries are those which are essential for living. Man requires certain basic things to live. He wants food, clothing and shelter. Without these things, life is impossible.

2) Comforts

Comforts refer to those goods and services, which are not essential for living but which are required for a happy living. A TV, a sofa-combed, a cushioned revolving chair may be stated under 'comforts'. Eating superior varieties of food may also add to the happiness of the consumer. Example: eating fruits, drinking milk etc. Comforts promote efficiency also.

(3) Luxuries

Those goods that are used to show off one's higher status in life (e.g. diamond - studded jewels) are luxuries.

Significance of Necessaries, Comforts and Luxuries

The classification of goods and services into necessaries, comforts and luxuries are only relative in their concept. They are not absolute concepts. What is 'comfort', to one may be a 'necessity' to another and a 'luxury' to a third man. A motorcar is necessary for a businessman and a doctor. It is a luxury for a student. What is necessary for a man in town may be a luxury for a villager. These classifications depend on the income of a person, his social status, his tastes and preferences.

CONCEPT OF UTILITY: MARSHALLIAN APPROACH

There are two basic approaches to the study of consumer demand theory. The first approach is the utility approach. It involves the use of measurable (cardinal) utility to study consumer behaviour. Marshall is the chief exponent of the utility approach to the theory of demand. It is known as cardinal utility analysis or marginal utility analysis or Marshallian utility analysis. The second approach is the indifference curve approach which uses the idea of comparable utility (ordinal utility). J.R.Hicks and R.G.D.Allen introduced the indifference curve approach.

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 is the utility derived from the 10th unit. It is nothing but the total utility of 10 biscuits minus the total utility of 9 biscuits.

Thus

$$MU_n = TU_n – TU_{n-1}$$

Where,

MU_n = Marginal Utility of 'nth ' commodity.

TU_n = Total Utility of n units.

TU_{n-1} = Total Utility of n-1 units.

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.

Gossen, Bentham, Jevons, Karl Menger contributed initially for the development of these ideas. But Alfred Marshall perfected these ideas and made it as a law. This Law is also known as Gossen's I Law.

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*".

Assumptions of the Law

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 maximise the total utility.
8. Utility is measurable.

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.

Total and Marginal utility schedule

Units of apple	Total utility	Marginal utility
1	20	20
2	35	15
3	45	10
4	50	5
5	50	0
6	45	-5
7	35	-10

The above table gives the utility derived by a person from successive units of consumption of apples.

From 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.

Importance of Law of DMU

I. 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.

II. 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

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

IV. 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.

Criticism

The Law of DMU is criticised on the following grounds.

i. 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.

ii. 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.

iii. According to the Law, a consumer should consume successive units of the same good continuously. In real life it is not so.

iv. 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.

v. As utility itself is capable of varying from person to person, marginal utility derived from the consumption of a good cannot be measured precisely.

UNIT – 2: DEMAND AND SCHEDULE

DEMAND:

Demand for a commodity refers to the desire backed by ability to Pay and willingness to buy it. 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 purchasing power is demand. 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

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

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.

Law of Demand

The law of demand states that there is a negative or inverse relationship between the price and quantity demanded of a commodity over a period of time.

Definition: Alfred Marshall stated that " the greater the amount sold, the smaller must be the price at which it is offered, in order that it may find purchasers; or in other words, the amount demanded increases with a fall in price and diminishes with rise in price". According to Ferguson, the law of demand is that the quantity demanded varies inversely with price. Thus the law of demand states that people will buy more at lower prices and buy less at higher prices, other things remaining the same. By other things remaining the same, we mean the following assumptions.

Assumptions of the Law

1. No change in the consumer's income
2. No change in consumer's tastes and preferences
3. No changes in the prices of other goods
4. No new substitutes for the goods have been discovered
5. People do not feel that the present fall in price is a prelude to a further decline in price

DEMAND SCHEDULE

Demand schedule is a tabular statement showing how much of a commodity is demanded at different prices

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DEMAND SCHEDULE AND DEMAND CURVE

The table given below 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.

PRICE (Rs)	QUANTITY DEMANDED (units)
5	10
4	20
3	30
2	40
1	50

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 Figure 4.1.

In Figure, 4.1 DD1 is the demand curve. 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.

Why does the demand curve slope downwards?

The demand curve slopes downwards mainly due to the law of diminishing marginal utility. The law of diminishing marginal utility states that an additional unit of a commodity gives a lesser satisfaction. Therefore, the consumer will buy more only at a lower price. The demand curve slopes downwards because the marginal utility curve also slopes downwards.

Factors determining demand

1. Tastes and preferences of the consumer

Demand for a commodity may change due to a change in tastes, preferences and fashion. For example, the demand for dhoties has come down and demand for trouser cloth and jeans has gone up due to change in fashion.

2. Income of the consumer

When the income of the consumer increases, more will be demanded. Therefore, we can say that as income increases, other things being equal, the

demand for a commodity also increases. Comforts and luxuries belong to this category.

3. Price of substitutes

Some goods can be substituted for other goods. For example, tea and coffee are substitutes. If the price of coffee increases while the price of tea remains the same, there will be increase in the demand for tea and decrease in the demand for coffee. The demand for substitutes moves in the opposite direction.

4. Number of consumers

Size of population of a country is an important determinant of demand. For instance, larger the population, more will be the demand, for certain goods like food grains, and pulses etc. When the number of consumers increases, there will be greater demand for goods.

5. Expectation of future price change

If the consumer believes that the price of a commodity will rise in the future, he may buy a larger quantity in the present. Suppose he expects the price to fall, he may defer some of his purchases to a future date.

6. Distribution of income

Distribution of income affects consumption pattern and hence the demand for various goods. If the government attempts redistribution of income to make it equitable, the demand for luxuries will decline and the demand for necessities of life will increase.

7. Climate and weather conditions

Demand for a commodity may change due to a change in climatic conditions. For example, during summer, demand for cool drinks, cotton clothes and air conditioners will increase. In winter, demand for woollen clothes increases.

8. State of business

During boom, demand will expand and during depression demand will contract.

9. Consumer Innovativeness

When the price of wheat flour or price of electricity falls, the consumer identifies new uses for the product. It creates new demand for the product.

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.

The concept of elasticity of demand was introduced by Alfred Marshall. According to him “the elasticity (or responsiveness) of demand in a market is great or small according as the amount demanded increases much or little for a given fall in price, and diminishes much or little for a given rise in price”.

Types of Elasticity of Demand

There are three types of elasticity of demand;

1. Price elasticity of demand;
2. Income elasticity of demand; and
3. Cross-elasticity of demand

1. Price elasticity of demand

"The degree of responsiveness of quantity demanded to a change in price is called price elasticity of demand"

$$\text{Price elasticity of demand} = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in price}}$$

Symbolically,

$$e_p = \frac{\Delta Q / Q}{\Delta P / P}$$

Δ – change

P - price

Q - quantity

UNIT – III: ORGANISATION

INTRODUCTION:

Literally speaking, business means " State of being busy" throughout. In economic sense, the word business means work efforts and acts of people which are connected with the production of wealth. Functionally, " those human activities which involve production or purchase of goods with the object of selling them at a profit." are called business.

The term business organisation is very often used in different senses. Firstly it is used to represent a business enterprise such as Tata Iron & Steel. " Secondly business organisation is a subject of study consisting of topics concerned with organisation and management of industrial and commercial organisation. Thirdly, the term 'Organisation' is used to mean bringing together various elements of business with the object of establishing harmonious relationship and adjustment in their functioning.

Objectives

The objects of business organisation are

1. Profit motive
2. Service motive
3. To get the economies of large scale production
4. To achieve in time and efforts
5. Harmonious relations with employees

Functions

The important functions of business are as follows

1. Production function
2. Marketing function
3. Finance function
4. Personnel function
5. Purchase function
6. Public relations function
7. Legal function

Sound organisation is essential for the success of a business. The reason is that it makes administration easy. It consists of determining the activities to be undertaken for achieving the objectives. The activities are arranged in groups. Each group of activities are entrusted to each department. The duties and functions of each individual in each department are defined. So organisation consists of department and grouping of activities, delegation of work and establishment of relationship between various persons.

The word organisation has originated from the word 'organism' which means any system with parts dependent upon each other. In a human body, it is the brain which controls, directs and co-ordinates the activities of different parts of the body. The human body is a combination of various limbs. If any one of the limbs stops

functioning properly, then some defects will develop in the body. If the goals of an enterprise are to be achieved, the activities of the different departments must be welded together. Organisation does this co-ordination. It establishes inter-relations between departments.

Definition:

According to Urwick and Hunt, " A business is an enterprise which makes, distributes or provides an article or service which other members of the community need and are able and willing to pay for it".

According to Lewis H.Haney, "Organisation is a harmonious adjustment of specialised parts for the accomplishment of some common purpose or purposes".

Louis A. Allen has defined organisation as "the process of identifying and grouping the work to be performed, defining and delegating responsibility and authority and establishing relationship for the purpose of enabling people to work most effectively together in accomplishing objectives".

Organisation means finding out the objectives, grouping the activities aimed at their achievement, assigning them for performance and coordinating them, are the features of an organisation. The study of organisation is important for the following reasons.

a. Organisation pervade all the important phases of human life. A man is born in organisation (hospitals and clinics). He is educated in an organisation (Schools, Colleges and universities). He works in an organisation (office, factories and business).
b. Knowledge of organisation helps the manager to work effectively.
c. Organisation satisfies and sometimes frustrates, if it is not well organised.

PRINCIPLES OF ORGANISATION

The following principles are helpful in developing a sound and efficient organisation to achieve the objectives of the business successfully.

1. Unity of Objectives

The term objective means a goal to be achieved.The organisation structure depends upon the objectives of the enterprise. Therefore the objectives of an enterprise must be clearly fixed. Every part of the organisation should be designed to facilitate the accomplishment of common objectives.

2. Division of Work

The total work should be divided. This is known as departmentation. All the activities must be planned. This gives an idea of the total workload of the enterprise. Effective organisation must promote specialisation.

3. Span of Control

No executive in the organisation should be required to supervise more subordinates than he can effectively manage. An executive should be asked to supervise a reasonable number of subordinates.

4. Scalar Principle

Line of authority must proceed from the highest executive to the worker at the bottom level through a downward flow. This is known as ‘chain of command’. The superior has a direct authority over his immediate subordinate. He is responsible for efficient performance of the work entrusted.

5. Unity of Command

Each individual should receive orders from only one boss. A person cannot serve under two masters. He is accountable to his immediate superior. Dual subordination should be avoided. It creates disorder and confusion and leads to indiscipline.

6. Functional Definition

The authority and responsibility of every individual should be clearly defined. The relationship between different jobs should be clearly specified.

7. Unity of Direction

There must be one head and one plan for a group of activities directing towards the same objectives. This is necessary to ensure completion of tasks and co-ordination of activities.

8. Co-Ordination

The various activities of undertaking should be co-ordinated to secure the desired results. The different departments may have to function frequently in close consultation with other departments in a departmental store. The purchase department and sales department activities must be well coordinated to increase profit.

9. Delegation of Authority

Delegation means the entrustment of part of the work or some duties to the subordinates. Superior has to entrust some of his duties to his immediate subordinate. The subordinates should be granted necessary powers and rights. He becomes accountable to his superior. Delegation creates obligation on the part of the subordinate.

10. The Principle of Responsibility

The superior should be held responsible for the acts of his subordinates. He cannot escape from the responsibility. He is accountable to his higher authorities.

11. Flexibility

The organization should be flexible. It should be adaptable to changing circumstances. There should be scope for expansion without disrupting the basic design.

12. Efficiency

Efficiency should be the watchword of the organisation. The organisation structure should enable the enterprise to function efficiently and accomplish its objective with the lowest possible cost.

13. Personal Ability

As people constitute an organisation there is need for proper selection, placement and training of staff. The organisation must ensure optimum use of human resources and encourage development programmes.

14. Simplicity

Another principle of organisation is that it should be simple. Too many levels of authority for example, complicate communication channels and by causing confusion and friction makes achievement of co-ordination impossible.

The above principles are the essential requirements for a sound organisation. In olden days, the needs and requirements of the people were very much limited. As such, the size and volume of business was at a low level. In course of time, the population increased and the demand for goods and services increased correspondingly. As a result 'Machine age' emerged resulting in large scale production. This task necessitated more investment in labour. It involved more risk. Small business concern could not face these challenges. These failures led to the establishment of corporate enterprises. On the basis of ownership, the following are the main forms of organisation. They have emerged to cope up with the needs of the people.

Since we are going to deal at length, the other forms of business organisation under separate chapters, only a very brief description of them is given below: A Business organisation can be classified in two types, viz,. Individualistic Institutions and Government Institutions. The following chart exhibits the various types of business organisation

TYPES OF BUSINESS ORGANISATION

INDIVIDUALISTIC ORGANISATION	GOVERNMENT ORGANISATION
Sole trader	Departmental Undertaking
Joint Hindu family	Public corporation
Partnership	Government company
Joint stock company	Board organisation
Co-operatives	
Multi national companies	

PARTNERSHIP:

The need for partnership form of organisation arose from the limitations of sole proprietorship. In sole proprietorship, financial resources and managerial skills are limited. One man cannot supervise personally all the business activities. Moreover, risk - bearing capacity of an individual is also limited. It is at this stage that a need for associating more persons arises. So more persons are associated to form groups to carry on business. The partnership form of organisation comes into existence in two ways. It may come into existence either as a result of expansion of the sole trading concern or two or more persons joining together through an agreement to form a partnership. In otherwords, it is an extension of sole trading concern. History reveals that the partnership organisation was started with the

enactment of Partnership Act in 1907 in England. In India, the Act was approved in 1932. The Act governs the formation, management and control of various partnership firms in the country. A number of partnership enterprises are seen in market today. Examples of partnership firms are: running a cinema theatre, a book shop, chit funds etc.

Definition of partnership

According to the Section 4 of Indian Partnership Act of 1932, partnership is "the relation between persons who have agreed to share the profits of a business carried on by all or any of them acting for all". In the words of Prof. Haney, "partnership is the relation existing between persons, competent to make contracts, who have agreed to carry on a lawful business in common with a view to private gain".

According to Dr. William R.Spriegel, "partnership has two or more members, each of whom is responsible for obligation of the partnership. Each of the partners may bind the others and the assets of partners may be taken for the debts of the partnership".

In the words of Kimball and Kimball, "A partnership or firm as it is often called, is thus a group of men who have joined capital or services for the prosecuting of some business".

Partnership may be defined as, "that form of business organisation in which, partners agree to share the profits of a lawful business , managed and carried on either by all or by any one of them acting for all".

Partner, Firm and Firm Name

Persons who enter into partnership are individually called "Partners" and collectively called "a firm" and the name under which the business is carried on is called "firm name".

FEATURES OF PARTNERSHIP

The following are the main features of partnership firm.

1.Agreement

A partnership is created by an agreement. The agreement may be oral or in writing. It is better to put it in writing to avoid misunderstanding in future.

2. Multiplicity of Person

Partnership is the relationship between two or more persons. So, there must be more than one person. The maximum number of partners has been limited to 10 in the case of banking business and 20 in the case of other business.

3. Contractual Relation

The relation that exists between the partners in a partnership is said to be contractual and not natural relation arising out of mutual love and affection. According to Indian Partnership Act, "the relation of partnership arises from contract and not from status". Only persons legally capable of making an agreement can become partners. Lunatics, insolvents cannot become a partner.

4. Lawful Business

Partnership is formed to do a business. Business means any trade or occupation or profession. [E.g., Partnership of chartered accountants, partnership of lawyers, general stores etc.,] The business must be legal i.e., not against any law in force in the country. A partnership to smuggle goods from one country to another is illegal.

5. Sharing of Profits

The profit or loss of partnership is shared by the partners in the ratio as given in the agreement. Normally profit or loss is shared according to the capital contribution of partners. But sometimes the partners may agree that a particular partner need not share any loss. If there is no agreement regarding sharing of profit or loss, all the partners share equally.

6. Agency Relationship

There must be agent and principal relationship between the partners. Every partner is a proprietor as well as an agent of the firm. The business of the firm may be carried on by all or any of them acting for all. Partnership is, therefore, described as an extension of the 'Principle of Agency'.

7. Unlimited Liability

The liability of partners is unlimited. Each and every partner has unlimited liability for business debts. If the assets of partnership are not sufficient to repay all the business debts in full, the private assets of all the partners can be used to settle the debts. Therefore, a partner's liability for business debts is not limited to his contributed capital. But the unlimited liability of a partner is also joint and several.

8. Joint and Several Liability

The liability of partners is joint and several. The creditors of partnership firm can claim their dues from the private assets of all the partners taken together or they can take action against the private properties of any one of the partners to get back their dues

9. No Separate Legal Entity

A partnership firm has no separate legal entity. The firm and the partners are one and the same. A collective name of partners is known as "firm". No firm can exists without partners. The rights and liabilities of the partners are the rights and liabilities of the firm. Management and control of the firm vests with the partners who are also the owners.

10. Implied Agency

Each and every partner is considered to be an agent of the business. Unless otherwise agreed, all the partners are entitled to take part in the management of the business. Every partner as an agent can bind the firm by his acts done in good faith and on behalf of the firm. This is known as the implied authority of partnership.

11. Utmost Good Faith

The basis of partnership business is good faith and mutual trust among the partners. Each and every partner should act honestly and faithfully in the conduct of business. They must render true account and complete information regarding the conduct of

the business. No partner can make any secret profit. Distrust and suspicion among the partners may lead to the failure of firms.

12. Non-Transferability of Interest

No partner can transfer his interest or sell his share to any other person without the consent of all other partners. This is based on the principle that a partner, being an agent himself, cannot further delegate his authority unilaterally to others.

13. Registration

In India the registration of partnership firm is not compulsory. It is only optional. If it is registered, it can enjoy certain advantages. A firm can be registered at any time.

ADVANTAGES

The following are the advantages of partnership form of organisation.

1. Easy Formation.

A partnership firm is very easy to form. No formal documents is required to be prepared as necessary in the case of joint stock company. A simple agreement among the partners is sufficient to start a partnership firm.

2. Registration not compulsory

A partnership firm is relieved of registration because registration is not compulsory. It is left to the discretion of the partners.

3. Larger Financial Resources

As a number of partners contribute to the capital of the firm, it is possible to collect larger financial resources than the sole proprietorship. Creditworthiness of the firm is also higher because every partner is personally and jointly liable for the debts of the business. Larger resources gives greater scope for the expansion of business.

4. Greater Managerial Talent

The partners may be assigned duties according to their talent. Different functional departments may be managed and controlled by different partners. The talent and experience of partners will help to increase the efficiency of the business resulting in more profit.

5. More Credit Standing

The partners may have sufficient contacts in the market. They can offer more guarantees to the financial institutions to obtain loans. The liability of partners being unlimited, they will be able to raise more finance. As compared to sole trading business, partnership concern has more credit worthiness.

6. Quicker and Better Business Decisions

In partnership, there are many partners. Every partner has the right to be consulted. Hence business problems can be thoroughly discussed and the best decisions can be arrived. ***"***Two or more persons are better than one". Partners meet often and take decisions promptly. Thus it avoids taking hasty business decisions.

7. Sharing of Risk

The risk in a business is shared by more persons. The burden of every partner will be much less as compared to the burden of sole trader. Further, the business expansion will not be hampered for fear of risk.

8. Relationship between Reward and Work

The partners work hard to earn more profits. There is a direct relationship between hard work and reward. The more they work, the more will be the reward.

9. Protection of Minority Interests

All important matters connected with the business are decided only by unanimous agreement of all the partners. So the majority of partners cannot disregard the interest of the minority partners. Thus minority interest is well protected.

10. Flexibility

By mutual consent the partners can change the nature of business easily as they like. So business can always be responsive to changing needs. Its price policy, capital, profit sharing ratio etc. can be changed easily.

11. Close Supervision

Wastages can be avoided as the partners themselves look after the business. They have direct access to the employees and can encourage them for more production. The management of partnership is much cheaper as compared to a joint stock company where experts are paid higher salaries.

12. Easy Dissolution

The partnership can be easily dissolved on insolvency, lunacy or death of a partner. If the partnership is at will, then any partner can get the firm dissolved by giving a notice to other partners. No legal formality is required at the time of dissolution.

13. Better Human and Public Relations

Presence of more number of partners help to develop personal touch with the employees, customers, government and the public. Cordial relations with the public help to enhance the goodwill of the firm.

DISADVANTAGES

The following are the disadvantages of partnership

1. Unlimited Liability

Every partner is jointly and severally liable for the entire debts of the firm. A partner has to suffer not only for his mistakes but also for the lapses and dishonesty of other partners. Unlimited liability discourages many people from becoming a partner in the firm.

2. Limited Resources

The resources of partnership firm is limited. The borrowing capacity of the partners is also limited. Therefore, partnership form of business is not suitable for undertaking business involving huge investment of capital.

3. Danger of Implied Agency

The acts of partners legally bind the business and every other partner in the normal course of business. A dishonest or inefficient partner may bring loss to others by his actions. An innocent partner may be required to loose his personal assets for the mistake on the part of other partners.

4. Distrust

The distrust among partners is the main cause for the dissolution of partnership firms. It is difficult to maintain harmony among partners because they may have different opinions and may not agree unanimously on certain matters. Lack of

confidence may lead to misunderstanding and quarrels and it will result in dissolution of the firm.

5. Limitation on Transfer of Share

No partner can transfer his share to a third party without the consent of the other partners. If a partner wants to withdraw his share, it is not possible without the consent of other partners. This makes investment in a partnership firm non-liquid, fixed and less attractive.

6. Lack of Continuity

A partnership comes to an end with the retirement, incapacity, insolvency and death of a partner. Even a single partner, if he is dissatisfied with the business, can dissolve the partnership. The lack of trust among partners can also lead to dissolution.

JOINT STOCK COMPANY:

With the advent of Industrial Revolution and the factory system of production, large scale production has become the order of the day. To meet the ever-expanding needs of the fast growing population, large-sized industrial organisation has become indispensable. The traditional forms of business units, namely, sole proprietary concerns and partnership firms, with their limited financial resources and managerial capability, cannot meet the challenges forced by the need for massive production and speedy distribution. Joint stock company form of organisation provides the key to this problem. This is better suited for mobilising large capital resources and ensuring highly sophisticated managerial skills for running giant-sized industrial enterprises.

Company – Meaning

The term “company” refers to a body corporate. In other words, it is a body incorporated in accordance with the provisions of a specified Act. It is viewed to be a person created by law – a jurisidical person. Its legal entity is distinct from its members and independent of even its promoters who give birth to it.

Definition

In the words of Lord Justice Lindley, “ By a company we mean, “an association of many persons who contribute money or money’s worth to a common stock and employ it in some trade or business and also share the profit and loss, as the case may be, arising therefrom”.

Even this definition is incomplete; it is Haney’s definition, which brings out all its essentials. He observes, “ A company is an incorporated association; it is an artificial person created by law, having a separate entity, with a perpetual succession and a common seal.”

Salient Features

1. Separate legal entity

A company is a person created by law. It means that it comes into existence only by complying with all formalities prescribed under the Companies Act, 1956. It enjoys a separate personality of its own, different from the members composing it. This enables a company to enter into valid contracts with others including its members and deal with the property in any way it likes. It can sue others in its own name and be sued in its own name by others including its members.

2. Perpetual Succession- Continuity of Life

"Members may come and go but the company can go on forever" (Lord Gower). This is because company's existence does not depend upon the existence of even promoters who were instrumental in its formation. Neither change in the membership of the company nor the death of its members has any impact on the continuity of its life.

3. Common Seal

Though the separate personality of the company is legally recognised, it needs human agency to act. Obviously it cannot sign. Any contract entered into by a company, to be valid, must bear the official seal of the company.

4. Limited Liability

The liability of the members of a company is generally limited to the value of shares. When once the full value of the shares is paid up, there is no more liability for the shareholders. The feature of limited liability attracts a large number of investors to subscribe to the shares of the company.

5. Easy Transferability of Shares

In the case of public limited companies, their fully paid shares can be transferred to others without any difficulty. However, in the case of private limited companies, the right to transfer the shares is subject to certain restrictions.

Merits of the Company form of Organisation

The distinctive features of a joint stock company are in fact its merits. They make this form of organisation very popular and better fitted for starting large-sized business ventures.

1. Stability (Perpetual Life)

While certain contingencies such as death, insanity or insolvency of partners lead to the dissolution of partnership, they do not have any effect on the continued existence of a company. The company enjoys perpetual succession despite change in its membership or change in its Board of directors. Large sized enterprises which take a long time to reach profit earning stage can be started only as company form of organisations which ensures long life.

2. Limited Liability

The liability of a member of a joint stock company is limited to the amount remaing unpaid on his shares. Once the full value of the shares is paid, a shareholder will not be called upon to contribute anything further even if the assets are inadequate to meet business debts. In view of this feature of limited liability, people come forward

readily to invest in the shares of joint stock companies. Thus the savings of the community which lie scattered can be easily mobilised for financing business enterprises.

3. Easy and Speedy Transferability of Shares

The fully paid up shares of a public limited company can be easily transferred from one person to another by following the procedure prescribed by the Companies Act, 1956. This facility is another attraction for the investing public to subscribe to the shares of the company.

4. Professionalisation of Management

In a company form of organisation there is complete divorce between ownership and management. Though shareholders are the real owners, they do not have any right to manage its affairs. Management of a company is entrusted to a Board of Directors elected by the shareholders from among themselves. The Board can secure the services of experts in various fields of production and management.

5. Economies of large scale

In view of the suitability of the company form of organisation for undertaking large sized industries, it can reap all the advantages of economies of large scale operation. Further there is scope for tremendous growth through expansion of its activities as raising of capital is not a problem for sound companies.

6. Better credit

A company enjoys greater public confidence and reputation in the capital market as its functioning is subject to many legal restrictions with a view to protecting the interest of all the shareholders. In view of these merits joint stock form of organisation is very popular and is preferred to other forms especially for setting up large sized industrial undertakings.

Demerits of the Company form of Organisation:

1. Complicated legal formalities

The legal formalities to be complied with at the time of forming a company are complicated and difficult. Even after incorporation, its functioning is subject to severe restrictions. A number of documents have to be filed with the Registrar of joint stock companies from time to time and every failure in this regard invites penalties.

2. Heavy cost of Floating a company

At the promotion and incorporation stage itself, the company has to get the services of specialised professionals. Many documents are to be drafted and printed. Further, huge expenditure is to be incurred for publicising the issue of prospectus, inviting the public to subscribe to the shares of the company. Cost of merchant bankers to whom the entire issue of shares is entrusted, also adds considerably to the cost of raising capital.

3. Separation of Ownership and Control

Though divorce of ownership and control is an advantageous feature of a company form of organisation, it also acts as a setback in that the shareholders are not entitled to participate directly in its management. Their interest may not be well taken

furthering their own selfish motives, and thereby harming the larger interest of the company and the shareholders.

4. Fraudulent Promoters

Unscrupulous promoters may mobilise large capital through attractively designed prospectus, swindle the money and disappear, despite the stringent legal restrictions. Shareholders lose their entire money. Such companies, known as 'fly by night companies' are a threat to a healthy capital market.

5. Oligarchic Management

In theory, the management of a company is democratic, as it is in the hands of the Board of Directors who are elected by the shareholders from among themselves. However, in reality it proves to be a case of oligarchy. Due to the apathy and ignorance of a vast number of shareholders and because of their being widely scattered throughout the length and breadth of the country, a very few shareholders tend to get themselves elected as directors and manage the affairs of a company. Since the voting strength depends on the number of shares, the power is concentrated in a few hands. Also the shareholders attending the meeting is far less. They do not have any voice in the management and the general meetings prove to be only a farce.

COOPERATIVE ORGANISATION:

Introduction

In the previous chapters we have studied sole trading business, partnership and joint-stock companies. All these forms of business organisation are profit oriented. The shares are in their control. Their profit is distributed in the ratio of capital invested.

Co-operative society is just the opposite of these in which members, inorder to achieve a common economic objective, voluntarily work together. Co-operation is a mid-way between capitalism and communism.

There are many economically weaker sections in the society. Among them are, farmers, craftsmen and small traders. These illfated people are crushed under the clutches of the mediators and money lenders. Their main aim is to earn profits. For instance, the farmers are unable to sell their produce at remunerative prices. They also buy the agricultural inputs at an unreasonable prices. They are facing hardships from middlemen and brokers. In these circumstances co-operative enterprises emerged as an instrument to protect the interest of the weaker sections. The philosophy behind the concept is " All for each and each for all".

The word co-operation is derived from the Latin word "Cooperari" meaning " to work with". So co-operation means working together with others for a common purpose.

Definition

The co-operative society is yet another form of business organization. It is formed in a similar manner like a joint stock company. It is a unique form of organisation. It is started with the motive of organising and rendering services to its members. The definitions provided by different authors and leaders of the movements are given below.

1. According to H.C. Calvert “A co-operative society is” a form of organisation wherein persons voluntarily associate together as human beings on the basis of equality for the promotion of economic interests of themselves”.
2. According to Sir Horace Plunkett “Co-operation is self-help rendered effective by organisation. It is better farming, better business, better living”.
3. According to Talmaki “ It is an association of the weak who gather together for a common economic need and try to lift themselves from weakness into strength through business organisation.
4. The Indian Co-operative Societies Act, 1912 defines a cooperative enterprise as, “A society which has its objectives for promotion of the interests of its members in accordance with the principles of co-operation”.
5. Prof. Lambert defines a co-operative society as “An enterprise formed and directed by an association of users, applying within itself, the rules of democracy and directly intended to serve both its own members and the community as a whole”.

Principles of Co-operation

A co-operative enterprise works on the basis of the following principles to protect the interests of its members. The features of a co-operative society can be studied as under.

1. Voluntary Organisation

A co-operative society is a voluntary association of persons. Any person can join the society . There is no compulsion to become a member of a co-operative society . A person can join a co-operative society whenever he likes and leaves it whenever he wants.

2. Equality

In a co-operative society all persons are equal. Its members have equal rights and more capital does not provide more rights to an individual.

3. Democratic Managements

Co-operative societies are managed on democratic lines. Every member has only one vote irrespective of the number of shares held by him. The society is formed on the principle of democracy which means “ One vote for one member”. A General body meeting is conducted annually. Representatives are elected by the members to manage the society.

4. Combination of resources

In this organisation members pool their own resources. They use their resources in the interest of all members.

5. Concentrated Effort

In this organisation all individuals work together. The main principle of co-operation is that " Each for all and all for each ".

6. Spirit of service

The objective of co-operative organisation is that the service is primary and profit is secondary. It strives to provide required services to the members. Provision of credit facility, construction of buildings, supply of seeds, fertilizers etc., are some of the services offered by the societies.

7. Plural Membership

It is an association of persons. A minimum of 25 persons are required to form a co-operative society. There is no limit on the maximum membership.

8. Legal Capacity

An individual must have the legal capacity to make any agreement. They are bound by the rules and regulations of the society. The members forming the co-operative society must have attained the age of majority.

9. Open Membership

Any man or woman having a common interest can join a society at any time. No discrimination is made on the basis of caste, creed or religion. Both the rich and the poor can join. Illiteracy is also not a bar to membership.

10. Finance

The capital of co-operative society is divided into many shares of equal value. The society also gets capital from its members. But the share value is fixed at low. A person becomes a member by purchasing its shares.

11. Limited return on Capital

A co-operative society gives less importance to money power. A minimum of 9 % of the profits is to be distributed as dividends. This prevents rich people from dominating the society.

12. Local Membership

Generally, in any co-operative society people from the particular locality become members. This is because only people in a particular locality can have a common economic problem. They are also well known to each other.

13. No Political Influence

A politician can join a co-operative society as a member, but politics should not enter into its management. This makes a cooperative society, non – political.

14. State Control

Though the co-operatives are voluntary enterprises, the Government exercises control and supervision over their functioning. They have to observe all the rules framed by the Government. Every society has to submit to the Government, its annual statements and audited accounts. The details of deposits and loans are to be reported regularly.

15. Distribution of Surplus

The profit of co-operative society is distributed to the members in the proportion of purchases made by the them, and not on shares held by them. In the case of credit societies, a minimum of 9 % of the profit is distributed as dividends. 25 % of profit is

transferred to reserve fund and 10 % of profit is used for general social welfare activities. The rest is used to give bonus to members or rebate on the sales effected by them . This is known as “Distribution Justice”

16. Registration

Registration is compulsory for all the societies. Every society should be registered as per the provisions of the Co-operative societies Act of 1912 or any Act passed by the state Government. An unregistered society cannot use the word “co-operative” in its name.

17. Separate legal entity

A co-operative society becomes a separate legal body after its registration. It can own property and make contracts in its own name. It can also sue and be sued in its own name.

18. Liability

The liability of the members of a co-operative society is generally limited to the capital taken by them. But in a village society, the members liability can be unlimited.

19. Mutual Help

The main principle of co-operative organisation is the mutual help. Every member of the society is expected to help himself and also help every other member.

20. Statutory Audit

The Government inspects the activities and the accounts through co-operative audit department.

21. Cash Trading

Credit transactions are not permitted in the societies. The entire trading is carried on cash basis. All the receipts and payments are made in terms of cash. As such, it eliminates bad debts.

22. No share transfer

A co-operative society is formed by persons who join on their own. A person can join or leave the society whenever he wishes. But a member cannot transfer his membership to another. But it will repay the share capital to an outgoing member.

23. No Speculation

The list of shares of a co-operative undertaking is always open to new members. Moreover, the shares are sold at par value. Therefore, a co-operative society is free from speculation on its shares.

24. Corporate Status

When a co-operative society is registered it becomes a body corporate. It has separate legal existence. It has perpetual succession and common seal.

25. Training in Co-operation

The success of co-operative enterprise depends upon the awareness of its members. Training is provided to the members to educate them about the objectives of the society.

MIXED ECONOMY

In a mixed economy, both public and private institutions exercise economic control. The public sector functions as a socialistic economy and the private sector as a free enterprise economy. All decisions regarding what, how and for whom to produce are taken by the State. The private sector produces and distributes goods and services. It manufactures consumer and capital goods in the interest of public welfare. 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 affect public welfare adversely, they are regulated and controlled by the State. The main features of mixed economic system are:

- Co-existence of Public and Private Sectors: In a mixed economy, both the public and the private sectors initiatives will be there. The most strategically and nationally important sectors of the economy will be reserved for the public sector. The rest will be left for private operation. While the public sector will have social welfare as the prime motive, the private sector will function with profit motive.
- Consolidation of merits of Capitalism and Socialism: As seen above, both capitalism and socialism have merits and demerits. Mixed economy is expected to retain only the merits of the two systems. For instance, the government is expected to allow private investment, but the government also controls monopolies.
- Planning: Economic planning is another important feature of the mixed economy. Planning will direct the relative roles of public and private sectors and their respective jurisdictions.

Merits of Mixed Economy

1. Efficient resource utilisation: The resources are utilized efficiently as good features of both capitalism and socialism coexist. If there is misallocation of resources, the State controls and regulates it. This ensures the efficient utilization of resources.
2. Prices are administered: The prices are not fixed always by forces of demand and supply. In the case of goods which are scarce, the prices are administered by the government and such goods are also rationed.
3. Social Welfare: In a mixed economy, planning is centralized and there is overall welfare. Workers are given incentives and reward for any innovations. There is social security provided to the workers. Inequalities of income and wealth are reduced.

Demerits of Mixed Economy

1. Lack of Co-ordination: The coordination between the public and private sectors is poor in a mixed economy. Public sector spends huge public resources for infrastructure. The private sector aims at profit maximization by

using the infrastructure created by the public sector. But they lack social responsibility and fail to spend for public causes like health, education. The private sector also dislikes any restriction imposed on it by the government.

2. Red –tapism and delay by Public Sector: There is every chance that the public sector works inefficiently. There is too much of red-tapism and corruption leading to delays in decision-making and project implementation. They result in inefficiency and also affect production.
3. Economic Fluctuations: The mixed economies experience economic fluctuations. On the one hand, the private sector does not operate under very rigid conditions prescribed by the government. On the other hand, the public sector too does not operate under very rigid conditions enforced by the planned economy. The lack of policy coordination between private and public sector results in economic fluctuations.

UNIT – IV: FINANCING

Production Possibilities

Another important question about the basic economic problems is: How do we make choice in an economy?. At the individual level you must choose among alternatives like,

- ✓ whether to watch cricket highlights in T.V. or study for another extra hour;
- ✓ whether to buy a text book for Rs.50 or spend the money for a movie;
- ✓ whether to help your mother in shopping or play hockey during that time;

It is important to note that choices are made due to scarcity. If there is no scarcity, there would be no need to choose. Similarly as choice must be made from alternatives, it involves comparison of cost and benefit.

OPPORTUNITY COST

When you choose a particular alternative, the next best alternative must be given up. For example, if you choose to watch cricket highlights in T.V., you must give up an extra hour study. The choice of watching cricket in T.V. results in the loss of the next best alternative an extra hour study instead. Thus by watching T.V., you have forgone the opportunity of scoring an extra five or ten marks in examination. Thus the “opportunity cost” is the cost of something in terms of an opportunity forgone (and the benefits that could be received from that opportunity). In other words, the opportunity cost of an action is the value of next best alternative forgone. The consideration of opportunity costs is one of the key differences between the concepts of ‘economic cost’ and ‘accounting cost’. Choices are mostly made on the basis of opportunity cost.

BANKING:

Before the Industrial Revolution, the size of business units was very small. After some years, there was a great increase in the size of the business units. Therefore, joint stock forms of business organisations were established. Such form of business organisation widened the circle of investors, by enabling people with small means to become share holders of big industrial enterprises. Still, some people did not want to undertake any kind of risk by investing their money. Hence, an institution was created to mobilize funds on terms acceptable by the people. Such an institution is called ‘Bank’, whose business is to mobilize capital. And hence, banks are connecting link between the people, who have surplus money and the people who are in need of money. In addition to this, banks undertake the risk arising out of the possible default of the ultimate borrower.The early stages of banks included three types of institutions

1. The merchant banker, who was primarily a trader. He accepted customer's money and kept it under safe custody.
2. The money lender, who lent his surplus money to the needy persons on deriving some interest payment.
3. The gold smith, who accepted the valuables like gold and diamond of the customers and kept it under his safe custody. It will be returned to the customer on demand and interest will be collected for that.

Modern banks retain all the characteristics of above three types of institutions. The advancement of society and economic thinking, specialization and extended market resulting from Industrial revolution paved the way for developing modern commercial banking system. The role of banks extended from merely being institutions of 'deposits and discounts' to custodians of national finance and trustees of the surplus balances of the public. The modern banks have now become the lifeblood of our commercial and industrial activities.

Definition of Banking

On account of multifarious activities of modern banks, the 'Bank' or 'Banking' has been defined by several economists as follows:

Dr.L. Herber and L. Hart define the banker, "as one who in the ordinary course of business honours cheques drawn upon him by persons from and for whom he receives money on current accounts".

Chamber's Twentieth century Dictionary defines a bank as an, "institution for the keeping, lending and exchanging etc. of money".

According to Crowther, "The banker's business is to take the debts of other people to offer his own in exchange, and thereby create money".

Prof. Kent defines a bank as, "an organisation whose principal operations are concerned with the accumulation of the temporarily idle money of the general public for the purpose of advancing to others for expenditure". It is evident from the above definitions that a bank is an institution which accepts deposits from the public and in turn advances loans by creating credit.

Role of Banks in economic development

Banks play a very useful and crucial role in the economic life of every nation. They have control over a large part of the supply of money in circulation, and they can influence the nature and character of production in any country. In order to study the economic significance of banks, we have to review the general and important functions of banks.

1. Removing the deficiency of capital formation

In any economy, economic development is not possible unless there is an adequate degree of capital accumulation (or) formation. Deficiency of capital formation is the result of low saving made by the community. The serious capital deficiency in developing economies is reflected in small amount of capital equipment per worker and the limited knowledge, training and scientific advance. At this juncture, banks play a useful role. Banks stimulate saving and investment to remove this deficiency.

A sound banking system mobilizes small savings of the community and makes them available for investment in productive enterprises. The important implications of this activity include

i. Banks mobilise deposits by offering attractive rates of interest and thus convert savings into active capital. Otherwise that amount would have remained idle.
ii. Banks distribute these savings through loans among productive enterprises which are helpful in nation building.
iii. It facilitates the optimum utilization of the financial resources of the community.

2) Provision of finance and credit

Banks are very important sources of finance and credit for industry and trade. It is observed that credit is the lubricant of all commerce and trade. Hence, banks become nerve centers of all trade activities and therefore commerce and trade could function in the presence of sound banking system. The banks cover foreign trade transactions also. Big banks also undertake foreign exchange business. They help in concluding deferred payments, arrangements between the domestic industrial undertakings and foreign firms to enable the former import machinery and other essential equipment.

3) Extension of the size of the market

Commercial bankers help commerce and industry in yet another way. With the sound banking system, it is possible for commerce and industry for extending their field of operation. Commercial banks act as an intermediary between buyers and the sellers. Goods are supplied on bank guarantees, making it viable for industry and commerce to cultivate and locate markets for their products. The risks are undertaken by the bank. When the risks have been set free by the banks, the industry can look forward to derive economies of the large size of the market.

4) Act as an engine of balanced regional development

Commercial banks help in proper allocation of funds among different regions of the economy. The banks operate primarily for profits. When the banks lend their funds for more productive uses, their profits will be maximized. Introduction of branch banking makes it possible to choose between different regions. A region with growth potential attracts more bank funds. But in recent years, the approach of banks towards regional growth has been undergoing a change. Banks help create infrastructure essential for economic development. Thus banks are engines of balanced regional development in the country.

5) Financing agriculture and allied activities

The commercial bank helps the farmers in extending credit for agricultural development. Farmers require credit for various purposes like making their produce, for the modernization and mechanization of their agriculture, for providing irrigation facilities and for developing land. The banks also extend their financial assistance in the areas of animal husbanding, dairy farming, sheep breeding, poultry farming and horticulture.

6) For improving the standard of living of the people

The standard of living of the people is estimated on the basis of the consumption pattern. The banks advance loans to consumers for the purchase of consumer durables and other immovable property, which will raise the standard of living of the people. Stimulating human capital formation, facilitating monetary policy formulation and developing entrepreneurs are some of the other roles played by commercial banks in the economic life of every nation.

COMMERCIAL BANKS

A commercial bank is an institution that operates for profit. The traditional functions of a commercial bank relate to the acceptance of deposits from the public and provision of credit to different sectors of the economy. However, with the evolution of modern banking and growth of banking system as an integral part of the national economy, there has been a perceptible change in the attitude and outlook of the commercial banks. These banks have started providing a host of banking services to their customers. Nevertheless, the basic character of commercial banking remains unchanged. In the early days, commercial banks are organized as a joint stock company to earn profit. They cater to the needs of short-term, medium term credit and provide capital to businessmen and industrialists. In the recent days, the banks lend long term funds to businessmen and industrialists.

Functions of Commercial Banks

The various functions performed by commercial banks can be classified as follows:

1. Accepting or attracting deposits

Commercial banks accept deposits by mobilizing the savings of the people. These deposits can be of three forms.

a) Savings deposits: It is a kind of safety vault for the people with idle cash. These deposits are kept under savings account. Deposits in this account earn interest at nominal rates and the banks are entitled to release deposits on demand by the deposit holder. In practice, the bank imposes a limit on the number and amount of withdrawals during a period. Cheque facilities are also given to the deposit holder.

b) Demand deposits: Demand deposits are kept under current account. The depositor can withdraw the money on demand. But, the account holder should specify the amount and the number of withdrawals. Banks do not pay any interest on these accounts. On the contrary, bank imposes service charges on maintaining these accounts.

c) Fixed deposits: These are also known as time deposits. The amount deposited cannot be withdrawn before the maturity period for which they have contracted. These deposits carry interest at higher rates varying with the length of the contract.

2) Advancing of loans

Banks adopt several ways for granting loans and advances. These operations take different forms.

a) Cash credit: The bank sanctions loans to individuals or firms against some collateral security. The loan money is credited in the account of the borrower and he

can withdraw the amount as and when it is required. The ceiling of the loan amount is determined by the bank on the basis of the stock value of the borrower which in turn becomes Banker's possession. The borrower can withdraw the cash within or upto the credit limit. The bank charges interest for the amount withdrawn only.

b) Provision of overdraft facilities

The respectable and reliable customers enjoy these facilities. The customer can issue cheques and overdraw the money in times of need, even if there is no adequate balance in his account. The customer will pay the interest to the bank for the amount overdrawn.

c) Discounting bills of exchange

This operation is done through discounting of commercial papers, promissory notes and bills of exchange, usually for three months. The banks after deducting interest charges and collection charges from the face value of the bills, give the balance amount to the customer. When the exchange bill matures, the banks collect the payment from the party.

3) Creation of money or credit

Every loan sanctioned by the banker creates a deposit. Because, when a bank sanctions loan to a customer, an account is opened in his name and the loan amount is credited into his account. The borrower withdraws money whenever the amount is required. The creation of such deposits leads to increase in the money stock of the economy and through its circulation creates new money.

4) Other functions

Some of the other important functions performed by these banks are as follows:

a) Transfer of funds

In the complexity of trade and commerce in the modern days, the transfer of funds from one place to another becomes difficult. Banks help in eliminating this difficulty through the use of various credit instruments like cheques, bank drafts and pay orders, traveller cheques, etc. This process is called 'clearing' and it is efficiently done by bank operations.

b) Agency functions

Commercial banks are increasingly acting as financial agents for their clients. They make all sorts of payments on behalf of their clients like insurance premium, pension claims, dividend claims or capital demands etc. Likewise, they buy and sell gold, silver and securities on behalf of their clients.

c) General utility services

A commercial bank performs general utility services such as

a. providing safety lockers for the safer custody of valuables of the customers.
b. Issuing of letter of credit to the customers.
c. Under-writing loans to be raised by public bodies and corporations.
d. Compiling statistics and information relating to trade, commerce and industry.

Thus, commercial banks render valuable services to the community. Developed banking system ensures industrial and economic progress. It constitutes the lifeblood of an advanced economic society. In developing countries like India, commercial banking may be described as 'development banking'. It plays a critical developmental role in making their funds available to the priority sectors, weaker sections and employment-oriented schemes.

CENTRAL BANKS

The banking system of a country can work systematically in coordinated manner, only if there is an apex institution to direct the activities of the banks. Such apex institution is popularly known as 'central bank'. The central bank of the country is an autonomous institution, entrusted with powers of control and supervision. It controls the monetary and banking system of the country. After World War II, the International Monetary conference held at Brussels in 1929 recommended the setting up of a central bank in every country. The central bank of our country, known as Reserve Bank of India was set up in 1935. The central bank of England called Bank of England was established in 1694. It is known as the 'mother of central banks', since it provides the fundamentals of the art of central banking.

The central bank of France called 'Bank of France' was founded in 1800. The USA established a central banking system in the form of Federal Reserve Banks in 1914.

Definition of a central bank

A central bank has been defined in terms of its functions. The following are some of the definitions given by economists.

According to Smith, "the primary definition of central banking is a banking system in which a single bank has either complete control or a residuary monopoly of note issue".

H.A. Shaw defines a central bank, "as a bank which controls credit". In the words of Hawtrey "a central bank is that which is the lender of the last resort".

According to Samuelson, "a central bank is a bank of bankers. Its duty is to control the monetary base and through control of high-powered money to control the community's supply of money.

Distinction between central banks and commercial banks

The central bank is basically different from commercial banks in the following respects.

1. The central bank is the apex institution of the monetary and banking system of the country. A commercial bank is only a constituent unit of the banking system and a subordinate to the central bank.
2. While the central bank possesses the monopoly of note-issue, commercial banks do not have this right.

3. The central bank is not a profit making institution. Its aim is to promote the general economic policy of the government. But, the primary objective of commercial banks is to earn profit for their shareholders.
4. The central bank maintains the foreign exchange reserves of the country. The commercial banks only deal in foreign exchange under the directions of the central bank.
5. The central bank is an organ of the government and acts as its banker and the financial advisor, whereas commercial banks act as advisors and bankers to the general public only.

Functions of Central bank

The main functions of a central bank are common all over the world. But the scope and content of policy objectives may vary from country to country and from period to period depending on the economic situations of the respective country. Generally all the central banks aim at achieving economic stability along with a high growth rate and a favourable external payment position through proper monetary management. The common functions of central banks are discussed below.

1. Regulator of currency

The issue of paper money is the most important function of a central bank. The central bank is the authority to issue currency for circulation, which is a legal tender money. The issue department of the central bank has the responsibility to issue notes and coins to the commercial banks. The central bank regulates the credit and currency according to the economic situation of the country. In the methods of note issue, the central bank is required to keep a certain amount or a fixed proportion of gold and foreign securities against the total notes issued. The Reserve Bank of India is required to keep Rs.115 crore in gold and Rs.85 crore in foreign securities, but there is no limit to the issue of notes.

Having the monopoly of note issue, central bank gains advantages as

a. Ensuring uniformity of the notes issued and a proper control over the supply of money can be exercised.
b. Bring stability in the monetary system and creates confidence among the public.
c. Government is able to earn profits from printing currencies.

2. Banker, Agent and Adviser to the Government

The central bank of the country acts as the banker, fiscal agent and advisor to the government. As a banker, it keeps the deposits of the central and state governments and makes payments on behalf of governments. It buys and sells foreign currencies on behalf of the government. It keeps the stock of gold of the country. As a fiscal agent, the bank makes short-term loans to the government for a period not exceeding 90 days. It floats loans and advances to the State governments and local bodies. It manages the entire public debt on behalf of the government. As

an adviser, the bank gives useful advice to the governments on important monetary and economic problems like devaluation, foreign exchange policy and budgetary policy.

3. Custodian of cash Reserves of commercial banks

Commercial banks are required to keep a certain percentage of cash reserves with the central bank. On the basis of these reserves, the central bank transfers funds from one bank to another to facilitate the clearing of cheques.

4. Custodian and Management of Foreign Exchange reserves

The central bank keeps and manages the foreign exchange reserves of the country. It fixes the exchange rate of the domestic currency in terms of foreign currencies. If there are any fluctuations in the foreign exchange rates, it may have to buy and sell foreign currencies in order to minimize the instability of exchange rates.

5. Lender of the last resort

By giving accommodation in the form of re-discounts and collateral advances to commercial banks, bill brokers and their financial institutions, the central bank acts as the lender of the last resort. The central bank lends to such institutions in order to help them when they are faced with difficult situations so as to save the financial structure of the country from collapse.

6. Clearing Function

The central bank acts as a ‘clearing house’ for other banks and mutual obligations are settled through the clearing system. Since it holds cash reserves of commercial banks, it is easier for the central bank to act as a ‘clearing house’.

7. Controller of credit

The most important function of the central bank is to control the credit creation power of commercial banks in order to control inflationary and deflationary pressures within the economy. For this purpose, the central bank adopts Quantitative methods and Qualitative (selective) methods.

Quantitative methods aim at controlling the cost and quantity of credit by adopting

i. bank rate policy
ii. open market operations
iii. variations in reserve ratios of commercial banks.

Qualitative methods control the use and direction of credit. It involves

- regulation of margin requirements
- regulation of consumer credit
- rationing of credit
- direct action by the central bank
- moral suasion

Besides the above functions, the central bank performs many additional functions. It has to study all problems relating to i) credit, ii) fluctuations in price level iii) fluctuations in foreign exchange value. It has to collect monetary and financial

statistics, conduct research and provide information. It has to look after the matters relating to IMF and the World Bank. All together, the central bank is the financial and monetary guardian of the nation.

Methods of credit control employed by the central bank

Credit control is an important function of the central bank. Various methods are employed by the central bank to control the creation of credit by the commercial banks. The principal methods are classified under two heads viz. Quantitative methods and Qualitative methods. Quantitative credit control methods are used to expand or contract the total volume of credit in the banking system. For example, the central bank of India believes that the safe limit for bank credit is Rs.50, 000 crore. Suppose, at a particular time the actual bank credit is Rs.75, 000 crore. Reserve Bank of India may now use bank rate as a weapon to reduce the volume of credit by Rs.25,000 crore. As such the volume of bank credit is reduced in the country. On the other hand, Qualitative credit control methods are used to control and regulate the flow of credit into particular industries or businesses depending on the economic priorities set by the government. Suppose RBI estimates that the inflationary pressure in India is due to commercial banks' loan to speculators and hoarders who have managed to control the supply of inflation-sensitive goods and thus have pushed up the price level. Now RBI may direct commercial banks not to lend to speculators and hoarders. It is concluded from the above analysis that Quantitative controls are indirect, while Qualitative controls are direct.

Quantitative or General Credit control methods

The important general methods of credit control are as follows:

1) Bank Rate (or) Discount Rate Policy

The rate of interest of every central bank is known as 'Bank Rate'. It is otherwise known as 'discount rate'. At this rate the central bank rediscounts bills of exchange and government securities held by the commercial banks. When the cash reserves of the commercial banks tend to fall below the legal minimum, the banks may obtain additional cash from the central bank either by rediscounting bills with the central bank or by borrowing from the central bank against eligible securities. The central bank charges interest rate for this service. The central bank controls credit by making variations in the bank rate. A rise in the bank rate makes borrowing costly from the central bank. So commercial banks borrow less and in turn they raise their lending rates to customers. This discourages business activity. Thereby there is contraction of demand for goods and services and ultimately fall in the price level. Therefore bank rate is raised to control inflation. In the opposite case, lowering the bank rate offsets deflationary tendencies.

2) Open Market Operations

Direct buying and selling of securities, bills, bonds of government as well as private financial institutions by the central bank, on its own initiative, is called open market operations. In periods of inflationary situation, the central bank will sell in the money market first class bills. Buyers of this bill say commercial banks make

payments to the central bank. It reduces the size of the cash reserves held by the commercial bank with the central bank. Some banks are forced to curtail lending. Thus, business activity based on bank loans and which is responsible for boom conditions are curtailed. In times of depression, the central bank will buy bills and securities from the commercial banks. The central bank will pay cash to the commercial banks for such purchases. Hence, the cash reserves of the commercial banks are increased. Thereby banks expand their loans resulting in the expansion of investment, employment, production and prices. Thus central bank through its open market operations influences business activity and economic conditions of the country.

3) Variable Reserve Ratio

Every commercial bank is required by law to maintain a minimum percentage of its time and demand deposits with the central Bank. The excess money remains with the commercial bank over and above these minimum reserves is known as the excess reserves. Commercial banks create credit only based on these excess reserves. Central bank may bring changes in reserve requirements. Consequently, it will affect the amount of reserves that commercial bank must maintain as deposits with the central bank as well as the amounts available for lending or investing. For instance, when the central bank fixes the reserve requirement as 10 percent, a commercial bank will have to maintain a cash reserve of Rs.100 for every deposit of Rs.1000 and hence it can lend only upto Rs.900. To check inflation the central bank may raise the cash reserve ratio from 10 percent to 15 percent. This will force the commercial banks to deposit additional 5 percent by reducing their amount available for lending. On the other hand, to check a deflation the central bank may reduce the reserve ratio from 10 percent to 7 percent. This will raise the excess cash with the commercial banks; consequently credit will be expanded.

Qualitative or selective credit control

Qualitative methods of credit control mean the regulation and control of the supply of credit among its possible users. The aim of such methods is to channelise the flow of bank credit from speculative and other undesirable purposes to socially desirable and economically useful uses. Important selective credit controls are given below.

a) Margin Requirements

The aim of this method is to prevent excessive use of credit to purchase securities by speculators. The central bank fixes minimum margin requirements on loans for purchasing securities. Suppose the central bank fixes a 30 percent as margin requirements, then for Rs.1000 worth of security, commercial bank may keep Rs.300 as margin and the remaining Rs.700 may be used for lending. If the central bank wants to curb speculative activities, it will raise the margin requirements. On the other hand, if it wants to expand credit, it reduces the margin requirements.

b) Regulation of consumer credit

Under this instrument, the central bank regulates the use of bank credit by consumers in order to buy durable consumer goods in instalments. To achieve this, it adopts two devices i) Minimum down payment ii) Maximum periods of repayment.

c) Rationing of Credit

Credit rationing is employed to control and regulate the purpose for which credit is granted by the commercial banks. Credit rationing takes two forms i) variable portfolio ceilings, wherein central bank fixes ceiling on the aggregate portfolios of the commercial bank. They cannot advance loans beyond this ceiling. ii) Variable capital assets ratio wherein the central bank fixes in relation to the capital of a commercial bank to its total assets.

d) Direct Action

Direct action refers to 'directives' of the central bank to enforce the commercial banks to follow a particular policy. The central bank gives direction to commercial banks in respect of i) lending policies ii) the purpose for which advances may be made iii) the margins to be maintained in respect of secured loans.

e) Moral suasion

Moral suasion implies persuasion and request made by the central bank to the commercial banks to follow the general monetary policy in the context of the current economic situation.

f) Publicity

The central bank publishes weekly or monthly or quarterly statements of the assets and liabilities of the commercial banks for the information of the public. It also publishes statistical data relating to money supply, prices, production, employment and of capital and money market etc.

UNIT – V: COST AND BREAK EVEN ANALYSIS

BREAK-EVEN ANALYSIS:

Introduction

In economics & business, specifically cost accounting, the **break-even point** (BEP) is the point at which cost or expenses and revenue are equal: there is no net loss or gain, and one has "broken even". A profit or a loss has not been made, although opportunity costs have been paid, and capital has received the risk adjusted, expected return.

For example, if a business sells fewer than 200 tables each month, it will make a loss, if it sells more, it will be a profit. With this information, the business managers will then need to see if they expect to be able to make and sell 200 tables per month.

If they think they cannot sell that many, to ensure viability they could:

1. Try to reduce the fixed costs (by renegotiating rent for example, or keeping better control of telephone bills or other costs)
2. Try to reduce variable costs (the price it pays for the tables by finding a new supplier)
3. Increase the selling price of their tables.

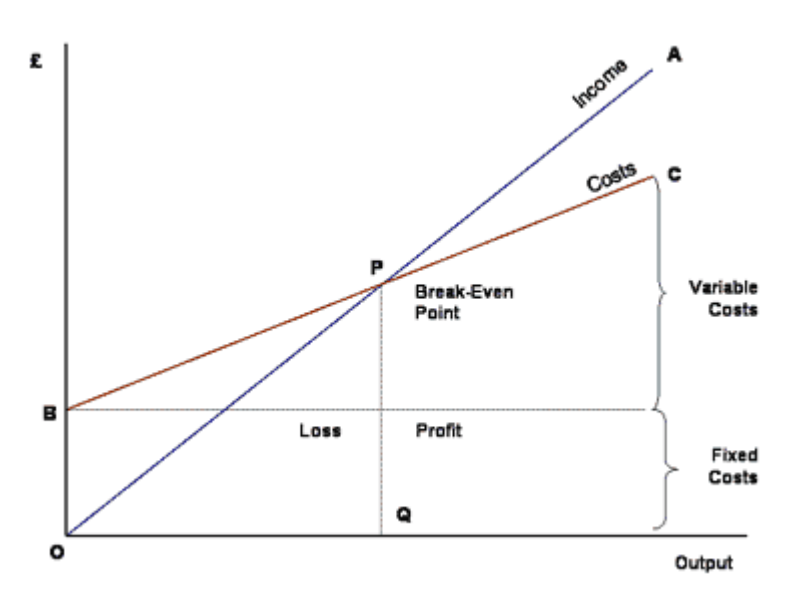
Any of these would reduce the break even point. In other words, the business would not need to sell so many tables to make sure it could pay its fixed costs.

Break-even analysis is a technique widely used by production management and management accountants. It is based on categorising production costs between those which are "variable" (costs that change when the production output changes) and those that are "fixed" (costs not directly related to the volume of production).

Total variable and fixed costs are compared with sales revenue in order to determine the **level of sales volume, sales value or production at which the business makes neither a profit nor a loss (the "break-even point").**

The Break-Even Chart

In its simplest form, the break-even chart is a graphical representation of costs at various levels of activity shown on the same chart as the variation of income (or sales, revenue) with the same variation in activity. The point at which neither profit nor loss is made is known as the "break-even point" and is represented on the chart below by the intersection of the two lines:



In the diagram above, the line OA represents the variation of income at varying levels of production activity ("output"). OB represents the total fixed costs in the business. As output increases, variable costs are incurred, meaning that total costs (fixed + variable) also increase. At low levels of output, Costs are greater than Income. At the point of intersection, P, costs are exactly equal to income, and hence neither profit nor loss is made.

Fixed Costs

Fixed costs are those business costs that are not directly related to the level of production or output. In other words, even if the business has a zero output or high output, the level of fixed costs will remain broadly the same. In the long term fixed costs can alter - perhaps as a result of investment in production capacity (e.g. adding a new factory unit) or through the growth in overheads required to support a larger, more complex business.

Examples of fixed costs:
- Rent and rates
- Depreciation
- Research and development
- Marketing costs (non- revenue related)
- Administration costs

Variable Costs

Variable costs are those costs which vary directly with the level of output. They represent payment output-related inputs such as raw materials, direct labour, fuel and revenue-related costs such as commission.

A distinction is often made between **"Direct"** variable costs and **"Indirect"** variable costs.

Direct variable costs are those which can be directly attributable to the production of a particular product or service and allocated to a particular cost centre. Raw materials and the wages those working on the production line are good examples.

Indirect variable costs cannot be directly attributable to production but they do vary with output. These include depreciation (where it is calculated related to output - e.g. machine hours), maintenance and certain labour costs.

Semi-Variable Costs

Whilst the distinction between fixed and variable costs is a convenient way of categorising business costs, in reality there are some costs which are fixed in nature but which increase when output reaches certain levels. These are largely related to the overall "scale" and/or complexity of the business. For example, when a business has relatively low levels of output or sales, it may not require costs associated with functions such as human resource management or a fully-resourced finance department. However, as the scale of the business grows (e.g. output, number people employed, number and complexity of transactions) then more resources are required. If production rises suddenly then some short-term increase in warehousing and/or transport may be required. In these circumstances, we say that part of the cost is variable and part fixed.

Limitations:

- Break-even analysis is only a supply side (*i.e.* costs only) analysis, as it tells you nothing about what sales are actually likely to be for the product at these various prices.
- It assumes that fixed costs (FC) are constant. Although this is true in the short run, an increase in the scale of production is likely to cause fixed costs to rise.
- It assumes average variable costs are constant per unit of output, at least in the range of likely quantities of sales. (*i.e.* linearity)
- It assumes that the quantity of goods produced is equal to the quantity of goods sold (i.e., there is no change in the quantity of goods held in inventory at the beginning of the period and the quantity of goods held in inventory at the end of the period).
- In multi-product companies, it assumes that the relative proportions of each product sold and produced are constant (*i.e.*, the sales mix is constant).