PRINCIPLES OF AGRICULTURAL ECONOMICS

Principles of Agricultural Economics

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Chapter 1
ECONOMICS: MEANING AND DEFINITION

The word' economics has been derived from the Greek word, OIKONOMICAS, with 'OIKOS' meaning a house hold and 'NOMOS' meaning management. It is understood that the beginning was made by Greeks Philosopher, Aristotle in is his book, '*Economica*' focussed that the field of economics deals with household management. The concepts on which various definitions of economics have been given are Wealth, Welfare, Scarcity and Growth.

Wealth: Different economists have defined economics as below,

Adam Smith –He defined economics as "An enquiry in to the nature & causes of the wealth of Nations". He is also known as father of economics in his book "*Wealth of Nation*".J.S. Mill – The practical science of production & distribution of wealth.

J.E. Carinas- Economics deals with phenomenon of wealth.

J.B. Says– Economics is the science which treats the wealth.

F.A. Walker- Economics is that body of Knowledge which relates to wealth.

F. Benham- Economics is the study of factor affecting the size, distribution and stability of country's national income.

Welfare – Alfred Marshall towards the end of 19th century defined that Economics is on the one side a study of wealth and on the other and more important side, a part of the study of man.It examines that part of individual and social actions which is closely connected with the attainment and with the use of material welfare of human beings.

Scarcity- Lionel Robbins defined economics as "a science which studies human behaviour as relationship between ends & means, which have alternative uses.

ENDS – Refers to wants, which are unlimited in number. MEANS- Refer to resources, which are limited & scare.

Growth- Samuelsson defined that "economics is the study of how men and society choose, with or without money, to employ scarce productive resources which could have alternative uses, to produce various comedies overtime and distribute them for consumption new and in future among various people and groups of society.

J. M. Keynes- He defined economics as "study of the administration of scare resources and of the determinate of employment & income.

COMPARISION OF DEFINITIONS OF MARSHAL AND ROBBINS

ALFRED MARSHALL-He defined economics as "Economics is the study of mankind in ordinary business of life. It examines that part of individual and social actions which is closely connected with the attainment and with the use of material welfare of human beings. His definition emphasis on the following 4 points:

1. Wealth is sought for promoting human welfare. Hence wealth is placed at secondary place position.
2. Economics deals with ordinary man & woman, who are swayed by love, affection, fellow feeling and not merely motivated by desire to get maximum monetary advantage.

3. Economics is a social science and not one which studies isolated individuals. We study persons living in the society influencing other people and being influenced by others.
4. Economics studies only material requites of human being or causes of material welfare. It has thus materialistic aspect and ignores non- material aspects.

Criticism of Marshalls Definition by Robbins-

- Robbins didn't think it right for the economists to configure their attention to the study of material welfare because in the actual study of economics principles, both 'material and 'non- material are taken into account.
- Marshall's definition restricts the scope of economics as it ignores all those sum paid for immaterial sciences or spent on non- materials ends.
- Welfare is too vogue (uncertain) and indefinite , an ideal to provide a sound foundation for building up a respectable science as the ideas of welfare vary from age to age / place to place/region to region/country to country etc.
- Economics according to Robbins, is neutral as regards ends, it is not supposed to be its function to pass moral judgement and say what is good and what is bad?
- As Marshall says, economics deals with persons living a society; it ignores all others who may also have an economic problem.

Robbins main objection to Marshall's theory is that, where economics deals both with material goods & non – material services, the definition points only to the material aspects. Hence, though the contents are correct, the label is wrong.

LIONEL ROBBINS – He defined economics as "a science which studies human behaviour as relationship between ends & means, which have alternative uses. Ends refer to wants, which are unlimited in number and means refer to resources, which are limited & scare.

Robbins claimed that his definition did not suffer from any of the said defects of earlier definitions. He claimed that his definition is analytical rather classificatory. Instead of discussing a certain type of human behaviour, it focussed its attention on a particular aspect of human behaviour, i.e. behaviour concerned with utilization of scarce resources to achieve unlimited ends. Robbins's definition lays down three fundamental prepositions which constitute the basis of structure of economic science; **ends, scarce resources and scarce resources having alternative use**. He claimed that his definition is superior to earlier definitions because-

- It is more scientific, since Marshall's definition was based on artificial classification of wants, as material & non-material, whereas his definition is independent of such classification.
- As defined by Robbins, Economics has a much wider content. It takes into account all type of human wants, material or non- material as well as of all types of persons living in society or not.
- Robbins greatly widened the scope of economics, whereas Marshall restricted it to wealth & activities which are related to material welfare of man only.
- Robbins raised economics to a level of science whereas earlier economist regarded it as a science & an art.
- Robbins made economics, a positive science whereas earlier economists regarded it also a nominative science.

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Chapter 2

NATURE, SCOPE & SUBJECT MATTER OF ECONOMICS, DIVISION OF ECONOMICS & IMPORTANCE METHODS OF ECONOMIC INVESTIGATION, POSITIVE AND NORMATIVE ECONOMICS

MAJOR ECONOMIC PROBLEMS: The economic problems consist in making decisions regarding ENDS to be purchased and the goods to be produced and the MEANS to be used for the achievements of certain ends. From the definition of economics we can derive the following fundamental problems which an economy has to tackle:

- ✓ What to produce – quantity and range of goods to be produced.
- ✓ How to produce – technique of production to be used, e.g., labour or capitalintensive.
- ✓ For whom to produce- sharing of national income.
- ✓ Economical use of resources - economic efficiency or welfare maximization.
- ✓ Problem of full employment- maximum possible use of available resources.
- ✓ Problem of growth – productive capacity must continue to expend. If it is an underdeveloped economy, it must accelerate its process of growth.

DIVISION OF ECONOMICS: The study of economics can be explained under two approaches viz., Traditional approach and Modern approach.

A. Traditional Approach: It considered economics as a science of wealth and divided it into four divisions viz., consumption, production, exchange and distribution

1. **Consumption**: It means the use of wealth to satisfy human wants. It also means the destruction of utility or use of commodities and services to satisfy human wants.

2. **Production**: It is defined as the creation of utility. It involves the processes and methods employed in transformation of tangible inputs (raw materials, semi-finished goods, or subassemblies) and intangible inputs (ideas, information, know-how) into goods or services.

3. **Exchange**: It implies the transfer of goods from one person to the other. It may occur among individuals or countries. The exchange of goods leads to an increase in the welfare of the individuals through creation of higher utilities for goods and services.

4. **Distribution**: Distribution refers to sharing of wealth that is produced among the different factors of production .It refers to personal distribution and functional distribution of income. Personal distribution relates to the forces governing the distribution of income and wealth among the various individuals of a country. Functional distribution or factor share distribution explains the share of total income received by each factor of production viz., land, labour, capital and organisation.

B. Modern Approach: It divided it into two divisions viz., Micro-Economics and Macro- Economics.

MICRO-ECONOMICS

It is also called price theory. In micro-economics we study individual consumer or household (consuming unit), a farm, a firm or a business unit (producing unit) or an individual industry.

SCOPE AND SUBJECT MATTER

Micro. Economics occupies a very important place in the study of economics theory. It has both theoretical and practical importance. From theoretical point of view, it explains functioning of a free enterprise economic. It tells us how millions of consumers and

producers in an economy take decision about the allocation of productive resources among millions of goods & services.

- It explains how through market mechanism goods & services produced in a community are distributed.
- It also explains the determination of relative prices of various products and productive services.
- It explains the conditions of efficiency both in consumption and production, and departure from optimum.
- As far as practical importance, micro-economics helps in formulation of economic policies to promote efficiency in production and for the welfare of masses.

Thus, the role of micro-economics is both positive as well as normative. It not only tells us how the economy operates but also how it should be operated to promote general welfare. It is also applicable to various other branches of economics such as public finance, international trade etc.

LIMITATIONS: Micro-economic analysis suffer from the following limitations:-

1. It cannot give us an idea of the functioning of the economy as a whole. An individual industry or firm may be flourishing, where as the economy as a whole may be languishing (drooping).
2. It assumes the situation of full employment which is a rare phenomenon at any rate in the capitalist world. It is therefore, an unrealistic assumption.

MACRO-ECONOMICS

In macroeconomics we study the problems of economy as a whole. It is also called as theory of Income and Employment. It is concern with aggregates and averages of entire economy, such as national income, aggregate output, total employment, total consumption, savings & investment, aggregate demand, aggregate supply, general level of prices etc.

NATURE AND SCOPE

- It deals with how an economy grows. In other words, it analyses the chief determinants of economic development and various stages and processes of economic growth.
- It is helpful in understanding the functioning of a complicated economic system.
- For the formulation of useful economic policies for the nation, macro analysis is of at most significance.
- It also occupies an important place in economic theory towards solution of urgent economic problems. These problems relate to aggregate output, employment and national income.

LIMITATIONS: Macro-economic analysis suffer from the following limitations:-

1. In macro-analysis an individual is ignored altogether. It is individual's welfare which is the main aim of economics. Increasing national saving at expense of individual welfare is not a wise policy.
2. The macro-analysis overlooks individual differences.

METHODS OF ECONOMICS INVESTIGATION:

There are two methods of economic investigation that are used in economic theory i.e., 1) Deductive method and 2) Inductive Method

1. **Deductive Method:** This method involves reasoning or inference from the general to the particular or from the universal to the individuals. It is also known as the abstract, analytical, hypothetical or apriori method.

Deduction involves four steps:

(1) Selecting the problems

(2) Formulating the assumptions

(3) Formulating the hypothesis through the process of logical reasoning whereby inferences are drawn and

(4) Verifying the hypothesis.

2. **Inductive Method:** This method is also known as Concrete method, historical method or realistic method. It involves reasoning from particulars to the general or from the individual to the universal. This method derives economic generalisations on the basis of experiments and observations. In this method detailed data are collected on certain economic phenomenon and effort is then made to arrive at certain generalizations which follow from the observations collected.

IS ECONOMICS A SCIENCE OR AN ART

Science is a systematized body of knowledge in which the facts are so arranged that they speak for themselves. Judged by this standard, economics is certainly a science.

Economics is also an art because it lays down precepts or formulas to guide people to reach their goals. Economics therefore is a science as well as an art.

Economics – A Social Science: Economics deal with the activities of people living in an organized community or society, in such activities which relate to the earning and use of wealth or with the problems of scarcity, choice and exchange. Hence it called a social science.

Positive Economics and Normative Economics:

1. Positive economics is concerned with "what is" whereas Normative economics is concerned with "what ought to be".
2. Positive economics describe economic behaviours without any value judgment while normative economics evaluate them with moral judgment.
3. Positive economics is objective while normative economics is subjective.
4. The statement, "Price rise as demand increase" is related to positive economics, whereas the statement, "Rising prices is a social evil" is related to normative economics.

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Chapter 03
AGRICULTURAL ECONIMICS: MEANING & DEFINIATION

AGRICULTURAL ECONOMICS: Agricultural economics is an applied field of economics in which principles of choice are applied in the use of resource such as land, labour, capital & management in farming & allied activities.

It has also been designed as an applied social science dealing with how human choose to use technical knowledge and the scarce productive resource such as land, labour, capital & management to produce food & fibre and distribute it for consumption to various members of society overtime.

The agricultural economics is made up of two words agriculture& economics. The word agriculture comes from Latin word agro, referring to the soil and culture, it is cultivation. Agriculture in widest sense can be defined as the cultivation and production of crop plants or livestock products.

While the economics is the science that studies as to how people choose to use scarce productive resource to produce various goods and to distribute these goods to various members of society for their consumption.

IMPORTANCE: The field of agricultural economics finds to seek relevance between cause & effect using the most advanced methods, viz. production function & programming models. It uses theoretical concepts of economics to provide and answers to the problems of agriculture &agri- business.

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Chapter 04

BASIC CONCEPTS: GOODS & SERVICES, UTILITY, VALUE, PRICE, WEALTH, WELFARE

GOODS: Anything that satisfies a human want is called good. Goods are tangible and material outcome of production e.g. food grains, pulses, oilseeds, machinery, implements, seeds, fertilizers, cloth etc.

SERVICES: A service is any act or performance that one party can offer to another, i.e. essentially intangible and does not result in ownership. These are intangible, non-material, inseparable, variable and perishable. The services rendered by doctors, teachers, lawyers, engines, labourer etc are the examples.

UTILITY: In the process of economic activity, consumers exhibit their desire to process a good and or service. The desires for a good arise in view of the utility the consumer derive from purchase of that particular good. It is the capacity of a good that satisfies a human want. In other words wants satisfying power of a commodity is called utility. The utilities are classified into different kinds, which are

1. Form Utility
2. Place Utility
3. Time Utility
4. Knowledge Utility
5. Service Utility
6. Possession Utility

Form utility: It is created by changing form of a good, e.g. rice from paddy, flour from wheat, bread from flour, furniture from wood etc.

Place utility: The utility created by the removal of an article from one place to another, is known as place utility. Generally, the articles are produced in specific areas from where they are transported and reach at the place to which it is consumed. For example, Kashmir apples have greater utility in other places than Kashmir, timber has greater utility in pulp factory or in a carpenter's workshop than in a forest etc. Spatial movement of the goods, i.e. moving a good from one place or market to another place or market increase its utility.

Time utility: The utility which is created through the preservation or storage of a commodity for some time is known as time utility. There are some commodities which acquire greater utility with the passage of time, e.g. old wine for instance is considered to be far more tasteful than fresh wine. Old rice possesses more utility than fresh rice. Processes of preservation and storage are, therefore, productive processes.

Knowledge utility: The utility which is created through the knowledge about a good or service. A good example is an informative advertisement.

Service utility: The utility created by rendering of some service is known as service utility. All the personal services, which are rendered directly to the consumer, create service utility. Similarly all the public services, which benefit citizens through the agency of state, create utility. The teacher who teaches the students, the doctor who cures the patients, creates service utility.

Possession utility: Possession utility is utility which is created by transferring the possession of an article. The commodities in transaction process change the hands from one person to another

person. It is created because transferee derives greater utility from the possession and use of the article than the transferor. For instance, books and stationary kept in the shelves of a shopkeeper do not have as much utility to him as they have to their purchasers, rice miller has less utility of rice as compared to consumers located at distant places etc.

VALUE: It is the capacity of a good to command other thing is exchange. It is rate of exchangeability. In reality value can be used as value in use as well as value in exchange. Free goods have value is use and not value in exchange. Economic goods possess both value in use and value in exchange. But in economics always the term, value means value in exchange.

ATTRIBUTES OF VALUE:

1. Goods must possess utility
2. Goods must be scarce and
3. Goods must be transferable/ marketable.

PRICE: When the value of a good is expressed in terms of money, it is called price. The price expresses value in terms of money.

WEALTH: In ordinary language, "Wealth" conveys an idea of prosperity and abundance. A man of wealth understood as a rich person. But in Economics Wealth is synonymous with economic goods. In short, Wealth means anything which has value.

It consists of all potentially exchangeable means of satisfying human wants (J.M. Keynes).

CHARACTERISTICS OF WEALTH:

1. It should possess utility
2. It must be scarce
3. It must be transferable
4. It must be external to person

Relation between Money and Wealth: Money is a form of wealth. All money is wealth but all wealth is not money

Relation between Income and Wealth: Income is different from wealth. Wealth yields income. Therefore, Wealth is a fund whereas income is a flow of that fund.

TYPES OF WEALTH:

1. **Individual Wealth:** It consists of all tangible and intangible possessions of the individuals besides loans due to them. Example: Land, bonds, deposits are tangible possessions while, intangible possessions are copyrights, patents etc.,

2. **Social Wealth:** It is the wealth, which is collectively used by all the people in a nation. Example: Railways, Public Parks, Government colleges etc.,

3. **Representative Wealth:** It is that form of wealth in the form of title deeds

4. **National Wealth:** It is an aggregate of all individual's wealth and social wealth of the country inclusive of loans due to people and to the nation debts have to be deducted. Example: Rivers, mountains.

5. **Cosmopolitan Wealth:** It is wealth of the whole word. It is a sum total wealth of all nationals.

6. **Negative Wealth:** It refers to the exclusive debts owed by the individuals and the nation.

WELFARE: It is the well-being of individual or community. It refers to the condition of mind. Any good whether it is free or economic is counted as long as it causes well being of an individual or community. Both economic & free goods lead to welfare. Welfare is one, which is never associated with any unacceptable things. It is subjective as it differs from individual to individual.

Wealth	Welfare
1. It is the means to an end	1. It is the end itself
2. It is objective in nature	2. It is subjective in nature
3. It includes harmful goods also	3. It does not include harmful goods
4. It does not include free goods	4. Free and economic goods lead to welfare

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Chapter 05
WANT: MEANING, CHARACTERISTICS, CLASSIFICATION & IMPORTANCE

WANT: In ordinary language want & desire are used in same sense but there is clear distinction between them. Desire is conscious longing of a thing whereas want is that desire which is backed by the ability and willingness to satisfy it. There are three essentials of a want: -

1. Desire of an article,
2. Ability satisfies it,
3. Willingness to use the means for purchase of that article.

CHARACTERISTIES: The followings are the important characteristics of wants: -

1. They are unlimited
2. They recur
3. A given want can be satisfied
4. They are complementary
5. They are competitive
6. They have alternative means

USE OF WEALTH FOR THE SATISFACTION

Human beings feel numerous wants which press for satisfaction with varying intensity. Some wants are primary and therefore, very urgent, like the want for food, clothes and shelter. While other wants are not so urgent, for example want for joyrides and costly dresses. Whatever the nature of wants, they come up for satisfaction sooner or later. Human beings satisfy these wants by the use of wealth. When they are hungry, they appease their hunger by taking food, when thirsty they quench their thirst by drinking water. Thus, the application of wealth for satisfaction of wants is known as consumption.

EFFECTIVE DESIRES & INEFFECTIVE DESIRES

Effective desires are the desires which prove effective i.e. which are satisfied. In other words, the person concerned possesses the means of satisfying them and he/she also uses them for securing satisfaction. Such a desire is called WANT. It is also known as DEMAND.

Ineffective desires are the desires which do not prove effective, i.e. which cannot be not satisfied. This happens when the person concerned either lacks the means of satisfying them or the willingness to use them for securing satisfaction or both. Ineffective desire is not called want.

TYPES OF WANT: The wants vary in intensity or urgency. All wants are not of the same intensity. Some wants are more intense, other less. Wants which are most urgent are known as **necessaries**, those which are least insistent are known as **luxuries**, while those of medium intensity are known as **comforts**. The order of urgency of wants and the order in which they are normally satisfied are as follows:

Necessaries ⟶ Comforts ⟶ Luxuries

Necessaries: By necessaries we mean those wants which are of vary primary & elementary natureso much so that if they are left unsatisfied acute pain is caused.

Their satisfaction is necessary for preservation of life, efficiency or social prestige. These are of three categories:

1. Necessaries for existence,
2. Necessaries for efficiency
3. Conventional necessaries – are those which have to be satisfied in order to maintain social prestige.

Type of want	Specifications	Mode of satisfying them
Necessaries	for sustaining life, for mere subsistence, the minimum	i.e. a reasonable amount of plain wholesome food, decent clothing and healthy home surroundings.
Comforts	for fuller life, for wholesome existence and decent standard of living.	i.e. better food, clothes & housing with some provision for recreation & amusement and for the satisfaction of intellectual needs.
Luxuries	for refinement of life, for expensive habits and amusement, amore elaborate mode of living.	i.e. costly motors, arrangements, table delicacies etc. together with the indulgence of expensive fates is art, literature & travel

CRITERIA OF CLASSIFICATION OF WANTS:

Type of want	Effect on efficiency		Effect on pain & pleasure	
	When consumed	When not consumed	When consumed	When not consumed
Necessaries	Preserved	Great decrease	Slight pleasure	Acute pain
Comforts	Slight increase	No decrease in acute efficiency (but loss of possible increase)	Sufficient pleasure	Slight pain
Luxuries	No increase	No decrease	Very great pleasure	No pain (unless used)
Extravagances (expensive, excessive,wasteful)	Decrease	Preservation of possible decrease	Monetary pleasure	Much pain if one gets addicted.

Chapter 06
THEORY OF CONSUMPTION: LAW OF DIMINISHING MARGINAL UTILITY, LAW OF EQUI-MARGINAL UTILITY, MEANING, DEFINITION, ASSUMPTION, LIMITATION AND IMPORTANCE.

CONSUMPTION

Meaning: Use of weather for satisfaction of wants. Human being feels numerous wants which press for satisfaction with varying intensity. Some wants are primary and therefore are very urgent, like want for food, clothes and shelter. While other wants are not so urgent, for example, want for joy ride, costly dress etc. Whatever the nature of wants, they come-up for satisfaction sooner or later. Human being satisfies these wants for by use of wealth, when they are hungry, they appease their hunger by taking food, when thirsty they quench their thirst by drinking water. Thus, application of wealth for satisfaction of wants is known as Consumption,

Direct and indirect use of wealth: Wealth may be applied for satisfaction of want directly or indirectly. If one is thirsty, drinks a glass of water or if one is hungry, takes few biscuits, he satisfies his wants directly but when sows seeds in the field or burns coal in a factory, wealth is used for satisfaction of wants indirectly, immediately it is applied for production of agriculture stuff and manufactured articles. In such cases, the commodities used lead to satisfaction of wants only indirectly. Such indirect use of wealth for satisfaction of wants is known as production, not consumption. Thus, consumption may also be defined as the application of wealth for direct satisfaction of wants is known as consumption.

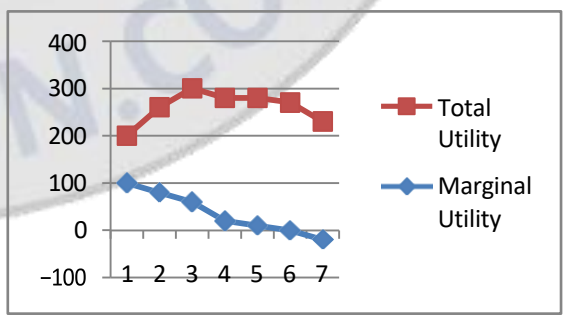
Marshall regards consumption as negative production. Just as nothing more than a re-agreement of matter this gives it new utilities. So, the consumption of them is nothing more than dis- arrangements of matter, which lessens or destroys the utilities.

MARGINAL & TOTAL UTILITY

Marginal Utility: The last unit of a commodity consumed at any particular time is known as marginal of final unit, and utility of the marginal or final unit is said to be the marginal or final utility of the article.

Total Utility: The sum total of all utilities of all the units of a commodity consumed at a particular time is known as total utility.

No. of apples	Marginal Utility	Total Utility
1	100	100
2	80	180
3	60	240
4	20	260
5	10	270
6	00	270
7	-20	250



MARGINAL UTILITY (MU) ANALYSIS Theory of demand seeks to establish relationship between the quantity demanded of a commodity and its price. It also offers an explanation for variation in demand. There are different approaches known to the economists to the theory of demand. The oldest among them is the marginal utility approach. The marginal utility analysis explains consumers demand for a commodity and derives a law of demand which shows an inverse relationship between the

quantity demanded and the price the commodity. That is, it states that as price falls, demand is extended, and vice-versa. The modern economists have pointed out several flaws in the utility analysis of demand and have offered new theories.

Why the demand of a commodity increases with fall in price other thing being equal.

According to Professor Benham, every consumer, having a limited amount of money wants to get maximum satisfaction there from. Knowing his own scale of preference, he will according to the law of substitution and law of equi-marginal returns, so arrange his expenditure that he gets equal marginal utility from the last unit of his money that he spends in different ways. He will keep to this arrangement if the prices remain the same.

But if the price of such commodity included in his assortment of goods and services, fall, then he must make a corresponding alternation in his scheme of expenditure. By the fall in price, divergence will be created between the marginal utility and price and this must be rectified. This can be done by buying more of the more of the commodity when its price falls thus bringing its marginal utility to the level of the price. That is why, people buy more when the prices fall.

Assumptions:

1. Cardinal measurement of utility.
2. Utilities are independent.
3. Constant marginal utility of money.
4. Introspection

CARDINAL UTILITY: It is assumed that utility is a quantifiable entity. That means a person can express satisfaction derived from the consumption of a commodity in a qualitative term. For instance, he/ she can say that the first unit of commodity gives satisfaction to the level of 10 units, the second unit of 8 & so on. In this way it is possible for a consumer to compare the utilities of different goods. This means that a person can express the satisfaction derived from the consumption of a commodity in quantitative terms. It means that utility is usually measured in imaginary units.

UTILITIES ARE INDEPENDENT: Marginal utility analysis assumes that utilities of different commodities are independent of one another. That is the utility of a commodity does not affect that of another in any way. In other words, it depends on the quantity consumed of one good and not of another. On this assumption, the total utility of all goods consumed by a consumer is simply the sum total of separate utilities of all goods consumed by a consumer. Thus according to this assumption, the utilities of various goods are additive, i.e. separate utilities of various goods can be added to obtain the sum total of utilities of all goods consumed.

CONSTANT MARGINAL UTILITY OF MONEY: Another important assumption of the M.U. analysis is that the M.U. of money remains constant even though the quantity of money with the consumer is diminished by successive purchases made by him. It is assumed that while the M.U. of a commodity varies with the quantity commodity purchased, the M.U. of money remains throughout the same as quantity of good purchases varies. This assumption becomes necessary because the M.U. of a commodity is measured in term of money. It is considered desirable that the measure itself should not keep changing. **INTROSPECTION**:_The M.U. analysis assumes that from one's own experience (judging what happens in one's mind), i.e., it is possible to draw inference about another person. This is self- observation applied to another person. It is assumed that the mind of men works identically in

similar situations. This is how a system of taxation is built on the assumption that the same income means the same thing to all persons irrespective of dissimilar circumstances.

LAW OF DIMINISHING MARGINAL UTILITY

The law of diminishing marginal utility is a generalization drawn from the characteristics of human wants. H.H. Gossen was the first to formulate this law in 1854.

Marshall has stated the law of diminishing marginal utility as follows "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".

In other words, the law simply states that other things being equal; the marginal utility derived from successive units of a given commodity goes on decreasing. Hence the more we have of a thing; the less we want of it, because every successive unit gives less and less satisfaction.

ASSUMPTIONS:

1. There should be a single commodity with homogeneous units wanted by an individual consumer
2. There should not be any change in the taste, habit, custom, fashion and income of the consumer
3. There should be continuity in the consumption of the commodity
4. Units of the commodity should be of a suitable size
5. Pries of the different units of the commodity and of the substitutes of the commodity should remain the same
6. The commodity should be divisible
7. The consumer should be an economic man who acts rationally
8. Goods should be normal goods.

Schedule showing marginal utility and total utility

Units of apples consumed	Total utility in utils	Marginal utility in utils	
1	7	7	
2	11	4	(11 - 7)
3	13	2	(13 - 11)
4	14	1	(14 - 13)
5	14	0	(14 - 14)
6	13	-1	(13 - 14)

The above table shows that when a person consumes no apples, he gets no satisfaction. His total utility is zero. In case he consumes one apple, he gains seven units of satisfaction. His total utility is 7 and his marginal utility is also 7. In case he consumes second apple, he gains extra 4 utils (MU). Thus given him a total utility of 11 utils from two apples. His marginal utility has gone down from 7 utils to 4 utils because he has a less

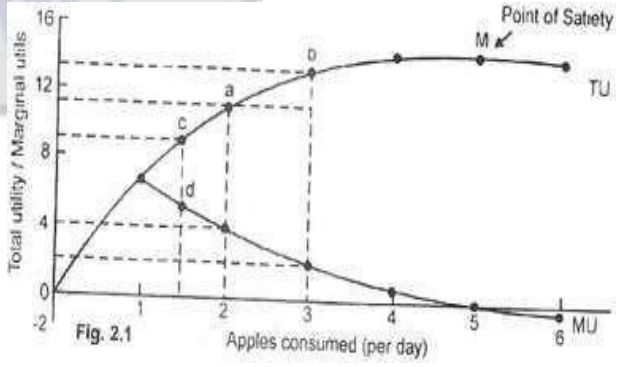


Fig. 2.1

craving for the second apple. Same is the case with the consumption of third apple. The marginal utility has now fallen to 2 utils while the total utility of three apples has increased to 13 utils (7 + 4+ 2). In case the consumer takes fifth apple, his marginal utility falls to zero utils and if he consumes sixth apple also, the total utility starts declining and marginal utility becomes negative. Total utility and marginal utility from the successive utits of the commodity are plotted in the figure.

i. The total utility curves start at the origin as zero consumption of apples yield zero utility.
ii. The TU curve reaches at its maximum or a peak at M when MU is zero.
iii. The MU curve falls throughout the graph. A special point occurs when the consumer consumes fifth apple. He gains no marginal utility from it. After this point, marginal utility becomes negative.

$$\mathbf{MUa = TU_a - TU_{(a-1)}}$$

Why does the M.U. fall when the quantity of a commodity with the consumer increases?

- Even though the human wants in aggregate are unlimited, yet a particular want can be almost fully satisfied. Hence, when a consumer consumes more and more of a commodity, his/her want is satisfied and he/she does not desire further increases of a commodity. Thus M.U. decreases as consumption of that commodity increases. A stage comes where when further consumption brings the M.U. down to zero.
- Another reason of the diminishing M.U. is that goods are imperfect substitutes for one another. Different commodities satisfy different wants. When a consumer goes on consuming a commodity the M.U falls as his/her want is satisfied. But if the commodity could be substituted for other commodities, it would have satisfied other wants. Hence, its M.U. would not have decreased even though its quantity increases.

IMPORTANCE

1. The law of diminishing marginal utility is the basic law of consumption. The law of demand, the law of equi-marginal utility and the concept of consumers surplus are based on it.
2. The law helps in bringing variety in consumption and production.
3. The law helps to explain the phenomenon in the value theory that the price of a commodity falls when its supply increases. It is because with the increase in the stock of a commodity its marginal utility diminishes.
4. The famous diamond –water paradox of Smith can be explained with the help of this law. Diamonds are scarce and hence possess high marginal utility and hence higher price. On the other hand, water is relatively abundant because of which it possesses low marginal utility and low price even though its total utility is high
5. The principle of progressive taxation is based on this law. As a person „s income increases, the rate of tax rises because the marginal utility of money to him falls with the rise in his income. The law underlines the socialist plea for an equitable distribution of wealth.

EXCEPTIONS TO LDMU:

1. Hobbies: In case of certain hobbies like stamp collection or old coins, every additional unit gives more pleasure. MU goes on increasing with the acquisition of every unit.
2. Drunkards: It is believed that every dose of liquor Increases the utility of a drunkard.

3. Miser: In the case of miser, greed increases with the acquisition of every additional unit of money.
4. Reading: The habit of reading of more books gives more knowledge and in turn greater satisfactions.

LAW OF EQUI MARGINAL UTILITY

The principle of equal marginal utility occupies an important place in the cardinal utility analysis. According to this, a consumer is in equilibrium when he distributes his given money income among various goods in such a way that marginal utility derived from the last rupee spent on each good is the same. The Marshallian approach to consumer's equilibrium is based on the following assumptions.

ASSUMPTIONS:

1. Independent utilities: The marginal utilities of different commodities are independent of each other and diminish with more and more purchases.
2. Constant marginal utility of money. The marginal utility of money remains constant to the consumer as he spends more and more of it on the purchases of goods.
3. Utility is cardinally measurable.
4. Every consumer is rational in the purchase of goods.
5. Limited money income. A consumer has limited amount of money income to spend.

DEFINITION AND EXPLANATION OF THE LAW:

The law of equi-marginal utility is simply an extension of the law of diminishing marginal utility to two or more than two commodities. The law of equi-marginal, is known, by various names. It is named as the Law of Substitution, the Law of Maximum Satisfaction, the Law of Indifference, the Proportionate Rule and the Gossen“s Second Law.

In cardinal utility analysis, this law is stated by Lipsey. “The household maximizing the utility will so allocate the expenditure between commodities that the utiliIity of the last penny spent on each item is equal”. As we know, every consumer has unlimited wants. However, the income at his disposal at any time is limited. The consumer is therefore, faced with a choice among many commodities that he can and would like to pay. He therefore, consciously or unconsciously compares the satisfaction which he obtains from the purchase of the commodity and the price which he pays for it. If he thinks the utility of the commodity is greater than the utility of money, he buys that commodity. As he buys more and more of that commodity, the utility of the successive units begins to diminish. He stops further purchase of the commodity at a point where the marginal utility of the commodity and its price are just equal. If he pushes the purchase further from his point of equilibrium, then the marginal utility of the commodity will be less than that of price and the household will be a loser.

A prudent consumer in order to get the maximum satisfaction from his limited means compares not only the utility of a particular commodity and the price but also the utility of the other commodities which he can buy with his scarce resources. If he finds that a particular expenditure in one use is yielding less utility than that of other, he will try to transfer a unit of expenditure from the commodity yielding less marginal utility to commodity yielding higher marginal utility. The consumer will reach his equilibrium position when it will not be possible for him to increase the total utility by transferring expenditure from less advantageous uses to more

advantageous uses. The consumer will maximize total utility from his given income when the utility from the last rupee spent on each good is the same. Algebraically, this is

$$\frac{MU_a}{P_a} = \frac{MU_b}{P_b} = \frac{MU_c}{P_c} = \dots \frac{MU_n}{P_n}$$

Here (a), (b), (c), ... n are large number goods consumed.

It may here be noted that when a consumer is in equilibrium there is no way to increase utility by reallocating his given money income.

The doctrine of equi-marginal utility can be explained by taking an example. Suppose a person has Rs.5 with him whom he wishes to spend on two commodities, Pencil and Erasers. The marginal utility derived from both these commodities is as under:

Units of Money	MU of Pencils	MU of Erasers
1	10	12
2	8	10
3	6	8
4	4	6
5	2	3
Rs.5	Total Utility = 30	Total Utility = 39

A rational consumer would like to get maximum satisfaction from Rs. 5.00. He can spend this money in three ways.

1. Rs. 5.00 may be spent on Pencils only
2. Rs. 5.00 may be utilized for the purchase of Erasers only.
3. Some rupees may be spent on the purchase of Pencils and some on the purchase of Erasers.

If the prudent consumer spends Rs. 5.00 on the purchase of Pencils, he gets 30 utilities. If he spends Rs. 5.00 on the purchase of Erasers, the total utility derived is 39 which is higher than Pencils. In order to make the best of the limited resources, he adjusts his expenditure.

1. By spending Rs. 4.00 on Pencils and Rs. 1.00 on Erasers, he gets 40 utilities (10+8+6+4+12=40).
2. By spending Rs. 3.00 on Pencils and Rs. 2.00 on Erasers, he derives 46 Utility (10+8+6+12+10=46).
3. By spending Rs. 2.00 on Pencils and RPs. 3.00 on Erasers, he gets 48 utilities (10+8+12+10+8=48).
4. By spending Rs. 1.00 on Pencils and Rs. 4.00 on Erasers, he gets 46 utilities (10+12+10+8+6=46).

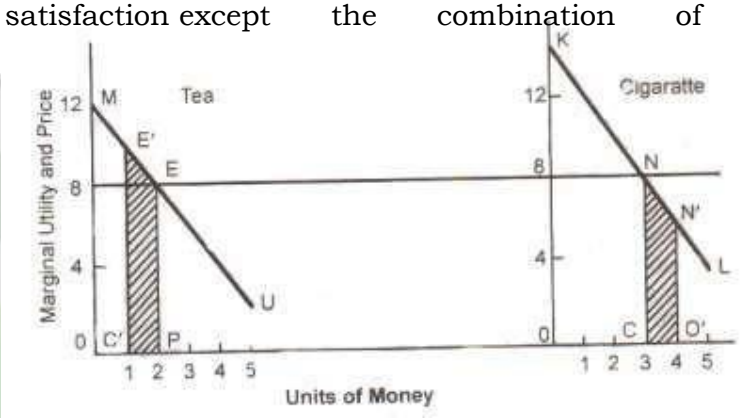
The sensible consumer will spend Rs. 2.00 on Pencils and Rs. 3.00 on Erasers and will get the maximum satisfaction. When he spends Rs. 2.00 on Pencils and Rs. 3.00 on Erasers, the marginal utility derived from both these commodities is equal to 8. When the marginal utilities of the two commodities are equalized, the total utility is then maximum i.e., 48 as is clear from the schedule given above.

The law of equi-marginal utility can be explained with the help the diagrams

In the diagram, MU is the marginal utility curve for Pencils and KL of Erasers. When a consumer spends OP amount (Rs.2) on Pencils and OC (Rs.3) on Erasers, the marginal utility

derived from the consumption of both the items (Pencils and Erasers) is equal to 8 units (EP=NC). The consumer gets the maximum utility when he spends Rs. 2.00 on Pencils and Rs. 3.00 on Erasers and by no other alteration in the expenditure.

We now assume that the consumer spends Rs. 1.00 on Pencils (OC“amount) and Rs. 4.00 (OQ “) on erasers. If CQ“more amount is spent on erasers, the added utility is equal to the area CQ“ N“N. On the other hand, the expenditure on Pencils falls from OP amount (Rs.2) to OC“ amount (Rs. 1.00). There is a loss of utility equal to the area C“PEE“. The loss in utility (Pencils) is greater than that of its gain in erasers. The consumer is not deriving maximum satisfaction except the combination of expenditure of Rs. 2.00 on Pencils and Rs. 3.00 on erasers.



This law is known as the Law of Maximum Satisfaction because a consumer tries to get the maximum satisfaction from his limited resources by so planning his expenditure that the marginal utility of a rupee spent in one use is the same as the marginal utility of a rupee spent on another use. It is known as the Law of Substitution because consumer continues substituting one good for another till he gets the maximum satisfaction. It is called the Law of Indifference because the maximum satisfaction has been achieved by equating the marginal utility in all the uses. The consumer then becomes indifferent to read just his expenditure unless some change fakes place in his income or the prices of the commodities, etc.

LIMITATIONS OF THE LEMU:

1. **Effect of fashions and customs:** The law of equi-marginal utility may become inoperative if people forced by fashions and customs spend money on the purchase of those commodities which they clearly know yield less utility but they cannot transfer the unit of money from the less advantageous uses to the more advantageous uses because they are forced by the customs of the country.
2. **Ignorance or Carelessness:** Sometimes people due to their ignorance of price or carelessness to weigh the utility of the purchased commodity do not obtain the maximum advantage by equating the marginal utility in all the uses.
3. **Indivisible Units:** If the unit of expenditure is not divisible, then again, the law may become inoperative.
4. **Freedom to Choose:** If there is no perfect freedom between various alternatives, the operation of law may be impeded;

PRACTICAL IMPORTANCE OF LAW OF LEMU:

1. **Consumption**: A wise consumer acts on this law while arranging his expenditure and obtains maximum satisfaction.
2. **Production:** To obtain maximum net profit, he must substitute one factor of producing to another so as to have most economical combination.
3. **Exchange:** Exchange implies substitution of one thing to another and hence this law is important.
4. **Distribution**: It is on the principle of the marginal productivity that the share of each factor of production is determined.

5. *Public finance:* The Government is also guided by this law in public expenditure by allocation of revenue (money) in such a way that it will secure maximum welfare of the people.

ORDINAL UTILITY: In view of the shortcomings of cardinal utility analysis, modern economists like J.R. Hicks and R.J.D. Allen came out with an alternative approach which is called as ordinal utility approach. They proposed that utility cannot be measured but the consumer can rank it by expressing their preferences over other goods and services. The approach is also known as the indifference curve technique.

Indifference Schedule: A tabular representation of list of various combinations of two goods that gives same level of satisfaction.

Indifference Curve: It is the locus of the combinations of two commodities to which the consumer is indifferent while consumption. An indifferent curve represents satisfaction of a consumer from two commodities. It is drawn on the assumption that for all possible points on an indifference curve the total satisfaction (or utility) remains the same.

Indifference Map: A graphical representation of several indifference curve on a plain.

The indifference curve technique assumes the measurement of utility is ordinal. Which means that the consumer need not to assign exact numbers that represents the amount of utility attributable to the various units of the commodity, but is capable of judging whether one level of satisfaction is equal to, lower than or higher than the other. That is, he can compare different level of satisfaction. In an indifference map, one indifference curve represents a higher or lower level of satisfaction than another, but one cannot say exactly by how much a satisfaction is higher or lower. For this reason, indifference curves are generally given ordinal number to put them in lower. For this reason, indifference curves are generally given ordinal number to put them in higher order U1, U2, U3 etc. and no attempt is made to label them in terms of units of satisfaction, since there are no such units. For an explanation of consumer's behaviour, it is sufficient to assume that he is able to rank his preferences consistently.

PROPERTIES OF INDIFFERENCE CURVES:

1. **Convex to origin:** The absolute slope of an indifference curve declines from left downwards to right due to diminishing marginal rate of substitution between two goods.
2. **Negatively slope:** If the quantity of one good increases, then the quantity of other good must be decreased.
3. **Non-intersecting:** If two indifference curve intersects then the point of intersection would represent two different level of satisfaction.
4. Indifference curve away from the origin represents higher level of satisfaction.

BUDGET LINE: It shows all the possible combinations of two goods that can be purchased with given level of income.

CONSUMER'S EQUILIBRIUM: At the point of tangency, the slopes of indifference curve and budget line are equal, i.e.

$$\delta Y/\delta X = Px/Py$$

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Chapter 07
CONSUMER'S SURPLUS: MEANING, DEFINITION AND IMPORTANCE.

The concept of Consumer's Surplus is based on the theory of demand. It was introduced by marshal in 1895 in his publication "principles of economics". It is measured in monetary units and is equal to the difference between the amount of money that a consumer actually pays for buying certain quantity of commodity and the amount he/she would be willing to pay for the same quantity rather than go without it.

When a consumer is prepared to buy a commodity, he/she always calculates the utility be is going to derive from its consumption. Every rational consumer compares the utility he/she derives from the consumption of a commodity against the price he/she has to pay. If the utility is more than the price paid, he/she prefers it and it is vice- versa, he/she does not buy the same good.

Thus, the surplus of utility derived is known as consumer's surplus. In nutshell, consumer's surplus is the difference between what a consumer is willing to pay and what the actually page.

ASSUMPTIONS:

1. M.U. of money is constant
2. No substitute of commodity
3. No change in income, taste, preference or fashion.
4. Each commodity independent of each other.

DIFFICULTIES IN MEASURING CONSUMER'S SURPLUS:

1. The cardinal measurement of utility is difficult because it is close to impossible for a consumer to say that the first unit of commodity gave him 10 units of satisfaction and the second unit of commodity gave him 5 units of satisfaction.
2. Marginal utility for the same commodity id different to different consumers. Marginal utility for a particular commodity varies from person to person depending upon their income, tastes and preferences.
3. Existences of substitutes: In the real world a number of substitutes for a commodity exist, thus making the work of measuring consumer's surplus a complicated task.
4. Marginal utility of money is not constant: Marshall based his concept of consumer's surplus on the simplifying assumption that the marginal utility of money is constant. As the consumer buys more and more units of a commodity x, the amount of money with him diminished, in this case, the marginal utility of money is bound to increases rather than remain constant.
5. Lack of awareness of different price: It is not possible for a consumer to be aware of the entire demand schedule.

IMPORTANCE OF CONSUMER'S SURPLUS:

1. **Conjunctural Importance:** When the people enjoy larger consumer's surplus, it does not indicate that they are better off. Thus, it serves as an index of economic betterment.
2. **Useful to Monopolist:** The monopolist can freely raise the prices of goods if they bring in higher consumer's surplus.
3. **Helps in public finance and taxation:** More taxes can be imposed by the Government to get more revenue, on those goods for which consumer's surplus

are high.

4. **Helps to measure benefits from international trade:** In the International trade, those commodities which are cheaper in the foreign markets are imported. Before their imports the consumers were paying higher prices. With the availability of imported goods which are cheaper, the consumers get surplus of satisfaction. Greater surplus indicated larger benefits from international trade.

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Chapter 08
DEMAND: MEANING, DEFINITION, TYPES OF DEMAND, DEMAND SCHEDULE, DEMAND CURVE, LAW OF DEMAND, EXTENSION AND CONTRACTION, INCREASE AND DECREASE IN Demand

DEMAND: Demand is different from desire or need. A sick person needs 'medicines', a poor may need colour TV /Fridge etc. But such needs /desire do not constitute demand. When, however, the person desiring is willing and is able to pay for what he/she desires, that desire is changed into demand.

Definition: - The demand is the quantities of a given commodity or service which consumers would buy in one market in a given period of time at various prices, or at various incomes, or at various prices of related goods" (Bobber).

There are thus three main characteristics of demand in economics, i.e.

1 Willingness and ability to pay. Demand is the amount of a commodity for which a consumer has the willingness and also the ability to buy.
2 Demand is always at a price. If we talk of demand without reference to price, it will be meaningless. The consumer must know both the price and the commodity. He will then be able to tell the quantity demanded by him.
3 Demand is always per unit of time. The time may be a day, a week, a month, or a year.

Individual's Demand for a commodity:

The individual's demand for a commodity is the amount of a commodity which the consumer is willing to purchase at any given price over a specified period of time, ceteris paribus.

The Market Demand for a Commodity:

The market demand for a commodity is obtained by adding up the total quantity demanded at various prices by all the individuals over a specified period of time in the market. It is described as the horizontal summation of the individuals "demand for a commodity at various possible prices in market.

KINDS OF DEMAND: There are three types of demand:

1. Price Demand
2. Income Demand
3. Cross Demand

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

$$Q_d = f(P|Po, I, taste, pref, habit, season.....)$$

Income Demand: Income demand refers to the various quantities of a good or service which would be purchased by a consumer at various level of income. Hence it is assumed that the price of the good or service as well as price of inter-related goods, taste & desire of consumer do not change.

$$Q_d = f(I|\ P, Po, taste, pref, habit, season.....)$$

Cross Demand: The cross demand refers to the quantities of a good or service which would be purchased with reference to change is price not of that good but of the inter-related goods. The goods are either substitute or complementary goods.

$$Q_d = f(Po|\ P, I, taste, pref, habit, season.....)$$

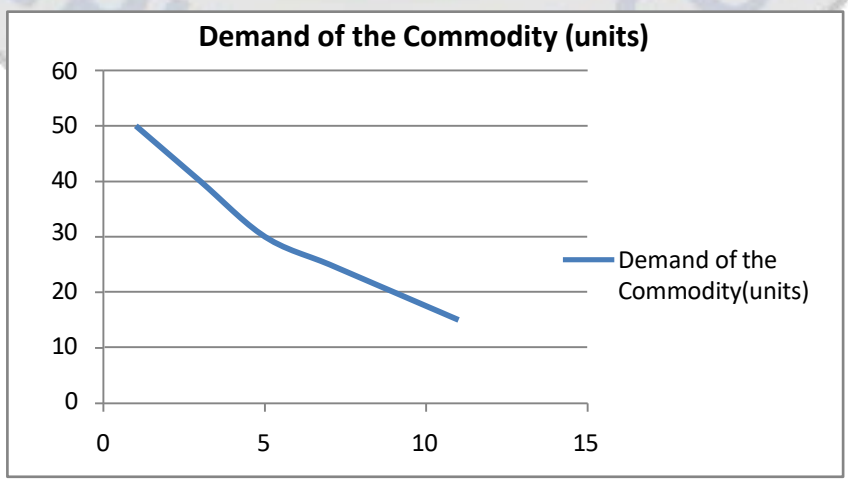
Demand Schedule and Demand Curve

A demand schedule may be defined as a list showing the relationship between different qualities of a commodity and their respective demand prices at a particular place and time. An individual's demand schedule refers to the demand of an individual and a market demand schedule refers to collective demand of the entire individual constituting the market.

The following is a hypothetical demand schedule of a commodity at Bhagalpur on 31.03.2015 at
10.00 AM: -

Price of Commodity	Demand of the Commodity(units)
1	50
3	40
5	30
7	25
9	20
11	15

The graphical representation of a demand schedule is called demand curve. It represents the number of units that would be brought at different prices. The units of commodity are measured along X-axis while prices of commodity along Y-axis. The corresponding point plotted are joined by dotted lines and by joining these points, we get the demand curve.



Slope of Demand Curve

The demand curve slopes down ward. This is in accordance with the law of diminishing marginal utility. When the prices of the commodities fall, new purchasers enter the market and old

purchaser will probably purchase more, the purchases of most of us are governed by this law. If the law of diminishing marginal utility is true and it is generally true, the curve must slope downward for only then the phenomenon of increasing demand with falling prices can be represented.

LAW OF DEMAND

"A rise in the price of a commodity or service is followed by a reduction in demand and a fall in price is followed by an increase in demand, if conditions of demand remain constant". In other words, "demand varies inversely with price."

In words of Prof. Marshall, "greater the amount to be 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 a rise in price". Obviously, the law of demand is based on the law of diminishing marginal utility. In other words, it is the law of diminishing marginal utility which explains the law of demand.

Thus, demand is a function of price, i.e. it varies with price and mathematically,

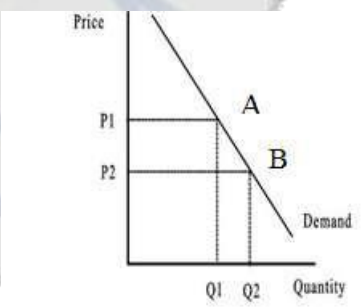
expressed as- D = f(P), where D is demand and P is price.

The law of demand withholds the consumer's taste, income price of other commodities, possibility of substitute etc. If these conditions change the law will not be true. The following expectations of the law of demand may be indicated: -

1. Change in taste or fashion
2. Change in income
3. Discovery of substitute
4. Change in price of other goods.

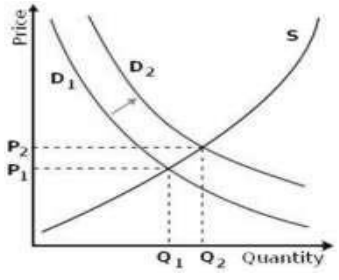
EXTENSION & CONTRACTION OF DEMAND

The change in the quantity demanded due to change in price of the commodity demanded. Extension of demand means buying more quantity of commodity at lower price, which contraction of demand indicates buying less at a higher price. Downward movement from A to B is extension of demand, whereas the upward movement from B to A is contraction of demand. These represent the change is quantity demanded due to change in price of the commodity, ceteris Paribas.



INCREASE & DECREASE IN DEMAND

It refers to the change in demand not due to change in price but due to change in the values of other variables influencing demand. It can increase or decrease in demand as against extension & contraction of demand results in the shifting of demand curve. The demand curve will shift due to change in any variable other than price of that commodity. Thus, the variable such as income, taste, preferences, price of substitutes etc. are called as demand shifters. Each of these factors tends the demand curve to shift downwards to the left or



upwards to the right. While downward shift signifies decrease in demand, an upward shift of the demand curve shows an increase in the demand. As shown in the figure the demand curve will shift to D2 from D1 and accordingly the price and quantity demanded will change.

DETERMINANTS OF DEMAND

Various factors affect the quantity demanded by a consumer of a good or service.

The key determinants of demand are as follows:

1 Price of the good
2 Price of related goods: Substitutes & Complements
3 Income
4 Individual tastes and preferences
5 Expectations about future prices & income

Exceptions to the law of demand

- **Giffen goods:** These are those inferior goods whose quantity demanded decreases with decrease in price of the good. This can be explained using the concept of income effect and substitution effect
- **Commodities which are regarded as status symbols:** Expensive commodities like jewellery, AC cars, etc., are used to define status and to display one's wealth. These goods don't follow the law of demand and quantity demanded increases with price rise as more expensive these goods become; more will be their worth as a status symbol.
- **Expectation of change in the price of the goods in future:** if a consumer expects the price of a good to increase in future, it may start accumulating greater amount of the goods for future consumption even at the presently increased price. The same holds true vice versa

Superior Goods & Inferior Goods

Superior goods or higher price goods are those who command brisk sale when income increases. On the other hand, inferior goods command large sells when incomes are at lower level.

- Increase in demand means more demand at the same price or same demand at higher prices.
- On the other hand, decrease in demand means less demand at the same price of same demand at lower price. Increase & decrease do not change in demand.

Derived demand: Derived demand refers to demand for goods which are needed for further production. It is the demand for producer's goods like industrial raw material, machine tools and equipments.

Autonomous demand: Autonomous demand is independent of the other product or main product. It's not linked or tie-up with the other goods or commodity.eg: food articles, clothes.

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Chapter 09

ELASTICITY OF DEMAND: TYPES OF ELASTICITY OF DEMAND, DEGREE OF DEMAND, PRICE ELASTICITY OF DEMAND, METHODS OF MEASURING ELASTICITY, FACTORS INFLUENCING ELASTICITY OF DEMAND

ELASTICITY OF DEMAND

Definition: The term elasticity expresses the degree of correlation between demand and price. It is the rate at which the quantity demanded varies with a change in price.

It is measure of responsiveness of demand to changing prices. It can be defined as a measure of relative change in amount purchased in response to relative change in price on a given demand curve.

TYPES OF ELASTICITY: There are three types of elasticity of demand

1. Price Elasticity of Demand
2. Income Elasticity of Demand
3. Cross Elasticity of Demand

PRICE ELASTICITY OF DEMAND: Price elasticity measures responsiveness of potential buyers to change in price. It is the ratio of percentage change in quantity demanded in response to a percentage change in price. The formula for the coefficient of price elasticity of demand for a good is

$$\text{Price Elasticity} = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change change in price}}$$

$$= \Delta q / q \dagger \Delta P / P$$

INCOME ELASTICITY OF DEMAND: Income elasticity measures responsiveness of potential buyers to change in income. It is the ratio of percentage change in quantity demanded in response to a percentage change in consumer's income, price of commodity remaining the same.

$$E_y = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in income}}$$

$$= \Delta q / \Delta y \times y / q$$

CROSS ELASTICITY OF DEMAND: It is a change in the demand of one good due to change in price of another. This type of elasticity arises in case of inter-related goods such as substitutes and complementary.

Cross elasticity of demand (Exy) = $\frac{\text{Proportionate Change in quantity demanded of Y}}{\text{Proportionate Change in price of}}$

commodity X Two commodities will be complementary, if a fall in the price of

Y commodity increases the demand for X commodity. Likewise, if reduction in price of one commodity (say tea) increases the demand of other commodity (say coffee), they are said to be substitutes. The cross elasticity of complementary goods is positive and negative of the substitute goods.

DEGREE OF PRICE ELASTICITY OF DEMAND

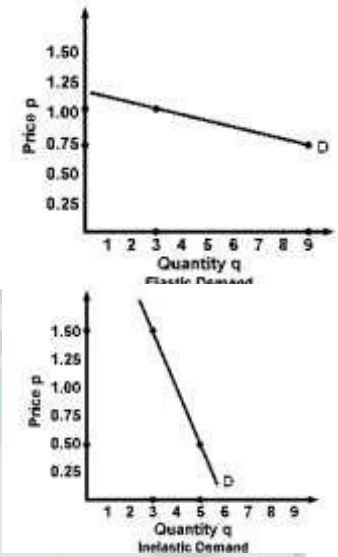
Perfectly inelastic demand: When the quantity demanded of a good does not change at all to whatever change in price, the demand is said to be perfectly inelastic or the elasticity of demand is zero (Ep = 0).

Perfectly elastic demand: A perfectly elastic demand curve DD/ is a horizontal line which indicates that the quantity demanded is extremely (infinitely) responsive to price. Even a slight rise in price drops the quantity demanded of a good to zero. The curve DD/ is infinitely elastic. This elasticity of demand as such is equal to infinity (Ep = ∞).

Unitary elastic demand: When the quantity demanded of good changes by exactly the same percentage as price, the demand is said to be unitary elastic (Ep = 1).

Relatively elastic demand: If a given proportionate change in price causes relatively a greater proportionate change in quantity demanded of a good, the demand is said to be relatively elastic. Alternatively, we can say that the elasticity of demand is greater than 1 (1<Ep <∞).

Relatively Inelastic demand: When a given proportionate change in price causes a relatively less proportionate change in quantity demand, demand is said to be inelastic. The elasticity of a good here is less than 1 or less than unity (0<Ep <1).



FACTORS INFLUENCING ELASTICITY OF DEMAND

Necessaries and conventional necessaries: We buy fixed quantities of such commodities whatever the price. In a poor country like India, even the demand for things like salt is somewhat elastic. In India in 1923, the doubling of salt duty reduced the consumption of salt. The change in price of wheat may be immaterial for upper classes, but its consumption will certainly increase among poor when the prices fall.

Demand for luxuries is elastic: It stands to reason that lowering of price of things like Colour TV, Refrigerator etc will lead to more being brought, i.e., their demand is elastic. But the demand for such articles on the part of rich people is not elastic. For them these things are conventional necessaries. They must buy them and having purchased one, they will not buy another, whatever the price. Therefore, the demand for rich people would be inelastic while elastic for poor people.

Proportion of Total Expenditure: If a consumption good absorbs only a small proportion of total expenditure, e.g., salt, the demand will not be much affected by change in price. Hence it will be inelastic. Conversely,if it absorbs the bulk of total expenditure, the demand will be elastic. Thereis three reasons why people buy more when price falls:

1. Income effect
2. Substitute effect
3. More or less urgency of the commodity

The income effect and substitute effect combine to increase the ability and willingness of the consumer to buy more of the commodity whose price has fallen.

METHODS OF MEASURING ELASTICITY OF DEMAND

There are three methods of measurement of elasticity of demand: -

a. Total Outlay Method

b. Proportional Method, & c. Geometrical Method.

TOTAL OUTLAY METHOD: According to this method, we compare the total outlay of the purchaser (or the total revenue of the seller) before and after variation in price. Elasticity of demand is expressed in following three ways: -

i. Unity (unitary elasticity)
ii. Greater than unity and
iii. Less than unity

Unity: It is unity when even the price has changed; the total amount spent remains the same. The rise in price is exactly balanced by reduction in purchases and vice-versa. A rectangular hyperbola represents unit elasticity.

Greater than unity: Elasticity is said to be greater than unity (i.e., demand is elastic) between prices when with fall in price total amount spent increases or the total amount spent decreases as price rises.

Less than unity: Elasticity between two prices is considered t be less than unity (i.e. demand is inelastic or less elastic) when the total amount spent increases with rise in price or the total amount spent decreases as price falls.

Example:

Price of banana per dozen (Rs)	Quantity demanded (dozens)	Total amount to be spent (Rs)	Nature of elasticity of demand
1	**2**	**3=1*2**	**4**
16.0	3	48.0	Greater than unity
14.0	4	56.0	
12.0	5	60.0	Unity
10.0	6	60.0	
8.0	7	56.0	Less than unity
6.0	8	48.0	

PROPORTIONAL METHOD

In this method we compare the percentage change in price with the percentage change in demand. The elasticity is the ratio of percentage change in quantity demanded to the percentage change in price charged. For example, if the price of a particular brand of TV set falls from Rs 35000/- to Rs 31500/- each, i.e. 10 percent. As a result of this fall in price, suppose the demand for TV set goes up from 200 to 400; i.e. 100 percent. Then the elasticity of demand would be 100/10 or 10 percent.

GEOMETRICAL METHOD

This method tells us how to measure elasticity of demand at any point on demand curve. The demand curve, DD' in the figure is straight line. The elasticity is represented by fraction; i.e., distance from point D to a point on demand curve divided by the distance from other end D' to that point. Thus, elasticity of demand on point P_1, P_2 and P_3 would be, $D'P_1/DP_1$, $D'P_2/DP_2$ and $D'P_3/DP_3$ respectively. Since P_2 is in the middle of the curve, $D'P_2/DP_2 = 1$, i.e., elasticity is unity. Thus, the elasticity at lower point on the curve is less than unity and more than unity at higher points.

PRACTICAL APPLICATION OF ELASTICITY OF DEMAND

The concept of elasticity of demand is of great practical importance in the sphere of government finance as in trade and commerce.

Taxation: - The Minister of Finance can be more sure of his revenues if he taxes those commodities for which the demand is inelastic. The tax will no doubt raise the price but the demand being inelastic, people must continue to buy the same quantity of the commodity. Thus, the demand will not decrease. But on humanitarian grounds, such taxes are generally avoided, since such commodities are necessaries of life, their taxation is bound to effect public welfare.

Monopoly Price: - In the same manner, the businessman, especially if he is a monopolist will have to consider the nature of demand while fixing his price. In cases it is in inelastic it will pay him to change a higher price and sell a smaller quantity. If on the other hand, the demand is elastic, he will lower the price, stimulate demand and thus maximise his monopoly net revenue. In a competitive industry, however demand for necessaries produced by a particular firm is elastic. No firm is in a position to dictate any price. Knowing the nature of demand of various groups of consumers, the monopolist can practice price discrimination.

Joint Products: - The concept of elasticity of demand finds application in the case of joint products also. In such cases, separate costs are not ascertainable. The producer will be guided mostly by demand and its nature while fixing his price. The transport authorities fix their rates according to this principle when we say that they change what the traffic will bear.

Increasing Return: - When an industry is subject to increasing returns, the manufacturer lowers the price to develop the market so that he may be able to produce more and take full advantage of the economics of large-scale production.

Output: - Elasticity of demand affects industrial output. But in this connection, we have to distinguish between elasticity of demand of an individual consumer and of the market as a whole. No amount of reduction is the price will induce an individual to buy another copy of this some newspaper or magazine. The individual demand is inelastic but not the market demand, and it is the latter which a matter the producer. Reduction in price will certainly increase the sale in the market as a whole.

Wages: - Elasticity of demand also exerts its influence on wages. If demand for a particular type of labour is relatively inelastic it is easy to raise wages, but not otherwise.

Effect on Economy: - The working of the economy in general is affected by the nature of consumer demand. It affects the total volume of goods and services produced in the country. It also affects producers demand for different factors of production, their allocation and remuneration.

Economic Policies: - Modern government regulate output and prices. In this, they are guided by nature of consumer demand. They have also to control business cycle and inflationary pressures again; the nature to demand will have to be taken into considerations. The government can create public utilities where demand is inelastic and monopoly element is present.

International Trade: The nature of demand for the internationally traded goods is helpful in determining the quantum of gain accusing to the respective countries. This is how it determines the terms of trade.

Rate of foreign exchange: While fixing the rate of exchange, the government has to consider the elasticity or otherwise of its imports & exports.

Thus, it can easily seen that the concept of elasticity of demand is of immense importance in business world, because the degree of responsiveness of demand to changes in price affects the total revenue of the businessman. When the demand is elastic, a fall in price of the commodity will lead to more than proportional increase in the quantity sold. This means the total revenue will go up. Because the increase in the quantity sold will be more than compensate for the fall in price. On the other

hand, if the demand is relatively inelastic, the increase in the quantity sold will be less than proportionate to a fall in price. As a consequence, the total revenue will fall. It follows therefore, that it pays a businessman to lower the price of his product when the elasticity of demand for his product is greater than unity.

However, the total revenue will not be affected, if the elasticity of demand is unity, because income in the quantity sold will just compensate for the fall in price.

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Chapter 10
SUPPLY: MEANING, DEFINITION, STOCK V/S SUPPLY, LAW OF SUPPLY, SUPPLY SCHEDULE, SUPPLY CURVE, DETERMINANTS OF SUPPLY, ELASTICITY OF SUPPLY

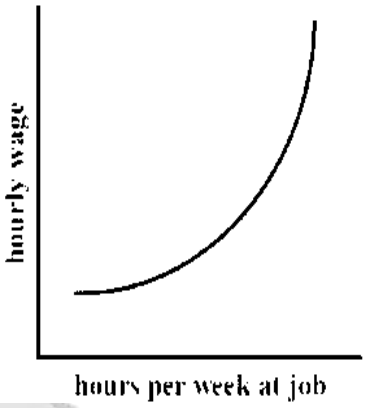
MEANING OF SUPPLY: It is the amount of a commodity that sellers are able and willing to offer for sale at different prices per unit of time.

DEFINITION: In the words of Meyer "Supply is a schedule of the amount of a good that would be offered for sale at all possible prices at any period of time; e.g., a day, a week, and so on".

DIFFERENCE/DISTINCTION BETWEEN SUPPLY AND STOCK:

Supply refers to that quantity of the commodity which is actually brought into the market for sale at a given price per unit of time. While Stock is meant the total quantity of a commodity this exists in a market and can be offered for sale at a short notice. The supply and stock of a commodity in the market may or may not be equal if the commodity is perishable, like vegetables, fruits, fish, etc; then the supply and stock are generally the same. But in case if a producer finds that the price of his product is low as compared to its cost of production, he tries to withhold the entire or a part of a stock. In case of a favourable price, the producer may dispose off large quantities or the entire stock of his commodity; it will all depend upon his own valuation of the commodity at that particular time.

LAW OF SUPPLY: The law of supply states that the quantity of a good offered or willing to offer by the producer/owners for sale increase with the increase in the market price of the good and falls if the market price decreases, all other things remaining unchanged An increase in price will increase the incentive to supply which means that supply curves will slope upwards from left to right. The supply curve shows the hours per week at job by the labour on the X axis and hourly wages on the Y axis. As we can see that as the hourly wages increase the hours spent on job also increases. Thus the supply curve is a left to right upward sloping curve .



DETERMINANTS OF SUPPLY: Quantity supplied of a good/ service is affected by various factors. Several key factors affecting supply are discussed as below:

Price of the product: Since the producer always aims for maximising his returns/profit, so the quantity supplied changes with increase or decrease in the price of the good.

Technological changes: Advanced technology can yield more quantity and at lesser costs. This may result in the producer to be willing to supply more quantity of the goods

Resource supplies and production costs: Changes in production costs like wage costs, raw material cost and energy costs might impact the producers"production and eventually the supply. An increase in such cost might result in lesser quantities produced and thus lesser quantities supplied and vice versa

Tax or subsidy: Since the producer aims to minimise costs and expand profit, an increase in tax will increase the total cost, thereby decreasing the supply. Similarly a subsidy might incentivize the producer to supply more of that goods in order to maximise his profits. Tax and subsidy are two important tools used by central government to control supplies of certain goods. For example an increase in tax can be used to reduce the supply of cigarettes, while increase in subsidy can be used to increase the supply of fertilizers

Expectations of prices in future: An expectation that the prices of goods will fall in future might lead to lessen the production by the producer and thereby decrease the supply and vice-versa.

Price of other goods: A producer might have several options to produce. Since the money to invest is limited with the producer he would decide to produce the good which offers him the maximum profit. Thus if the producer is currently producing good A and the price of good B increases than he might switch to producing good B as this would result in better returns for him.

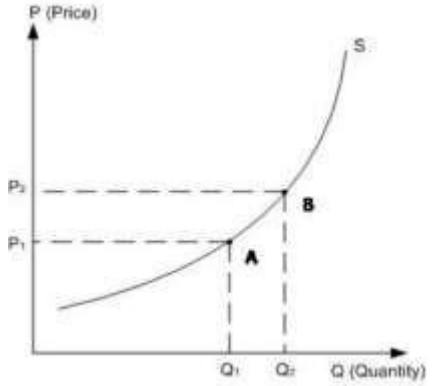
Number of producers in the market: This is a very important factor or determinant of supply. If there are large number of producers or sellers in the market willing to sell goods then the supply of good will increase and vice versa.

SUPPLY FUNCTION: Supply function expresses the relationship between supply and the factors (the determinants of supply, as discussed above) affecting the producer/supplier to offer goods for sale. For instance take the supply function as Qs = f(P, Po, S).

SUPPLY CURVE: It is the graphical representation of the supply schedule i.e. the different quantity of goods that the seller is offering in a market at various prices.

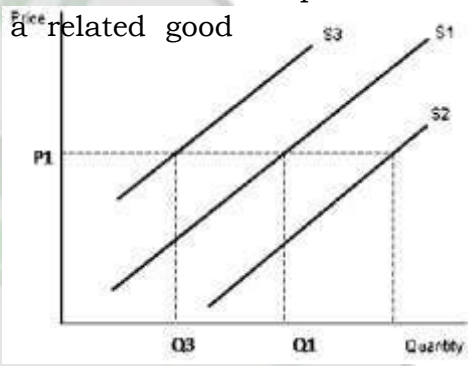
MOVEMENT ALONG THE SUPPLY CURVE (EXTENSION AND CONTRACTION)

Movement along the supply curve happens due to change in the price of the good and resulting change in the quantity supplied at that price. For instance, an increase in the price of the good from P1 to P2 in the figure below results in an increase of quantity supplied of the good from Q1 to Q2. This movement from point A to point B on the supply curve S due to change in price of the good all other factors of supply remaining unchanged is called movement along the supply curve.



SHIFTS IN THE SUPPLY CURVE (INCREASE AND DECREASE IN SUPPLY)

Shift in the supply curve is also sometimes referred as a change in supply. This happens due to changes in factors of supply other than that of price of the good For example, if the price of a factor or of a related good increases the supply curve shifts. Similarly changes in technology and government tools like tax and subsidy tends to shift supply curve. The supply curve can shift to the right or left as shown in the figure. A shift towards the right i.e. from S1 to S2 curve denotes an increase in supply of the good. Similarly, a shift in the supply curve from S1 to S3 denotes a decrease in supply of the good. As seen in the figure above a rightward shift in the supply curve from S1 to S2 increases supply from Q1 to Q2 while the price of the good remains same at P1. Similarly, a leftward shift from S1 to S3 decreases supply from Q1 to Q3 whilst the price remaining unchanged at P1.



ELASTICITY OF SUPPLY: It is defined as the responsiveness or sensitiveness of supply to the changes in the price of the good.

There are five degrees of elasticity of supply

1 Perfectly elastic supply (Es = ∞)
2 Perfect inelastic supply (Es = 0)
3 Unitary elastic supply (Es = 1)
4 Relatively elastic supply (1<Es<∞)
5 Relatively inelastic supply (0<Es<1)

DETERMINANTS OF PRICE ELASTICITY OF SUPPLY

(i) **Time period:** Time is the most significant factor which affects the elasticity of supply. If the price of a commodity rises and the producers have enough time to make adjustment in the level of output, the elasticity of supply will be more elastic. If the time period is short and the supply cannot be expanded after a price increase, the supply is relatively inelastic.

(ii) **Ability to store output:** The goods which can be safely stored have relatively elastic supply over the goods which are perishable and do not have storage facilities.

(iii) **Factor mobility:** If the factors of production can be easily moved from one use to another, it will affect elasticity of supply. The higher the mobility of factors, the greater is the elasticity of supply of the good and vice versa.

(iv) **Changes in marginal cost of production:** If with the expansion of output, marginal cost increases and marginal return declines, the price elasticity of supply will be less elastic to that extent.

(v) **Excess supply**: When there is excess capacity and the producer can increase output easily to take advantage of the rising prices, the supply is more elastic. In case the production is already up to the maximum from the existing resources, the rising prices will not affect supply in the short period. The supply will be more inelastic.

(vi) **Availability of infrastructure facilities:** If infrastructure facilities are available for expanding output of a particular good in response to the rise in prices, the elasticity of supply will be relatively more elastic.

(vii) **Agricultural or industrial products:** In agriculture, time is required to increase output in response to rise in prices of goods. The supply of agricultural goods is fairly inelastic. As regards the supply of manufactured consumer goods, it is comparatively easy to increase production in a short period. Therefore, the supply of consumer goods is fairly more elastic; In case of supply of aero planes or any other heavy machinery, the supply is relatively inelastic as it takes time to manufacture heavy machinery.

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Chapter 11
COST: COST CONCEPTS, SHORT RUN AND LONG RUN COST CURVES

When commodities and services are produced, various expenses have to be incurred, e.g., purchase of raw materials, payment to labour, landlord, capitalist, etc. The sum total of the expenses incurred plus the normal profit expected by the producer is called the cost of production. The cost concepts which are relevant to business operations and decisions can be studied on the basis of their purpose, under two overlapping categories:

A. CONCEPTS USED FOR ACCOUNTING PURPOSES, AND
B. CONCEPTS USED IN ECONOMIC ANALYSIS OF THE BUSINESS ACTIVITIES

A. Some Accounting Cost Concepts:

1. *Nominal Costs and Real Cost:-* Nominal cost is the cost incurred per unit of output produced by a firm under given technology, expressed in money terms at current prices.

   The real costs of production are the costs of inputs, input services, pain and sacrifices of labour involved in the process of production, expressed at constant prices. It takes out the effect of inflation. It is also known as deflated costs.

2. *Explicit costs and implicit costs:-* Explicit costs are the accounting costs or contractual cash payments which the firm makes to other factor owners for purchasing or hiring the various factors. They are also called paid out costs or cash costs.

   Implicit costs are the costs of self-owned factors which are employed by the entrepreneur in his own business. These implicit costs are the opportunity costs of the self- owned and self-employed factors of the entrepreneur, that is, the money incomes which these self-owned factors would have earned in their next best alternative uses.

3. *Accounting Costs and Economic Cost:* Accounting costs are the actual or explicit costs which are paid by the entrepreneurs to the owners of hired factors and services.

   On the other hand, economic costs not only include the explicit costs but also the implicit costs of the self-owned factors or resources which are used by the entrepreneur in his own business.

4. *Opportunity Cost:* The opportunity cost (or transfer earnings) of any good is the expected value of return forgone or sacrificed from the next best alternative good use o f the good. For example, if a farmer who is producing wheat can also produce potatoes with the same factors. Then, the opportunity cost of a quintal of wheat is the amount of output of potatoes given up.

5. *Business Cost and Full Cost:* Business costs include all the expenses which are incurred in carrying out a business. The concept of business cost is similar to the accounting or actual cost. The concept of Full cost includes two other costs: the opportunity cost and normal profit. Normal profit is a necessary minimum earning which a firm must get to remain in its present occupation.

6. *Private costs and Social Costs:* Private costs are the economic costs which are actually incurred or provided for by an individual or a firm. It includes both explicit and implicit costs.

   Social cost, on the other hand, implies the cost which a society bears as a result of production of a commodity. Social cost includes both private cost and the external cost. External cost includes (a) the cost of free goods or resources for which the firm is not required to pay for its used, e.g., atmosphere, rivers, lakes etc. (b) the cost in the form of 'disutility' caused by air, water, and noise pollution, etc.

7. *Short-run and Long-run Cost:* Short-run costs are the costs which vary with the change in output, the size of the firm remaining the same. Short-run costs are the same as variable costs.

   On the other hand, long-run costs are incurred on the fixed assets, like plant, building, machinery, land etc. Long-run cost are the same as fixed-costs. However, in the long-run even the fixed costs become variable costs as the size of the firm or scale or production is increased.

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9. *Historical and Replacement Costs:-* Historical costs are those costs of an asset acquired in the past. The costs involved in the purchase of durable assets like land, building, machinery, equipment, etc are considered as historical costs. Historical cost of assets is used for accounting purposes, in the assessment of net worth of the firm.

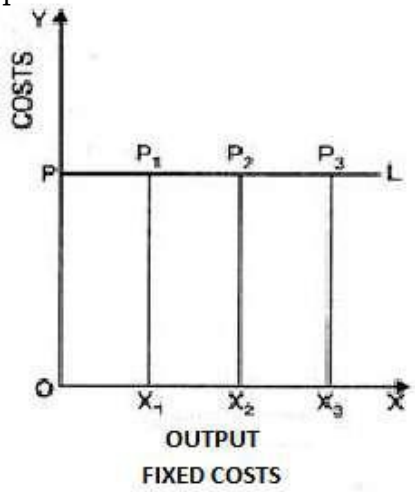
   Replacement cost refers to the outlay which has to be made for replacing an old asset. It is the difference between purchase price of the asset and current price of the same asset. The replacement cost figures in the business decision regarding the renovation of the firm.

   These concepts own their significance to unstable nature of price behaviour. Stable prices over time, other things given, keep historical and replacement costs on par with each other. Instability in asset prices makes the two costs differ from each other.

10. *Establishment costs:-* Construction of plant in any business activity entails some cost. These costs are known as establishment cost or first phase cost.

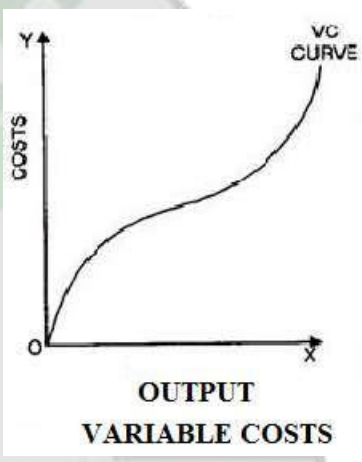
CONCEPTS USED IN ECONOMIC ANALYSIS OF THE BUSINESS ACTIVITIES

1. *Fixed Costs or Supplementary Costs:-* The cost that remains fixed at any level of output is known as the fixed cost. These costs must be paid whether there is production or not. These costs include taxes, depreciation, insurance, cess allowance, interest on fixed capital, license fee, salaries to permanent staff etc.



Fixed costs are costs which do not change with change in the quantity of output. These costs are also known as the overhead costs or sunk costs or indirect costs because a firm has to incur these costs even if it shuts down temporarily. Thus, fixed costs are unavoidable which occur even at the zero level of output.

2. *Variable Costs or Prime Costs:-* The costs which changes with the change in the volume of output. These costs are unavoidable or contractual costs. Marshall called these costs as "Prime Costs", "Direct Costs" or "Special Costs". Variable costs include expenditure on transport, wages of labour, electricity charges, price of raw material etc.



Variable costs are one which varies as the level of output varies. Variable cost curve starts from zero. It means when output is zero, variable costs are also zero. But as the output increases variable costs also increases. Examples are cost of raw materials, Direct labour, electricity charges, fuel charges etc.

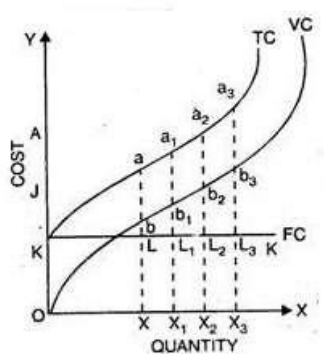
3. *Total Cost (TC):-* The amount of money spent on the production of different levels of a good is called total cost.

Total cost of production is the sum of all expenditure incurred in producing a given volume of output. In long run there is no fixed cost and in short run total cost is the summation of the Total Fixed Cost (TFC) and Total Variable Cost (TVC) i.e.

$$TC = TFC + TVC$$

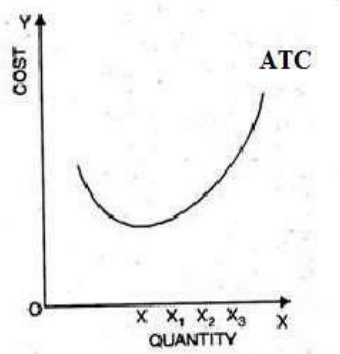
RELATION BETWEEN TOTAL COSTS, FIXED COSTS AND VARIABLE COSTS

In order to determine the total costs of a firm, we aggregate fixed as well as variable costs at different levels of output. When output is zero, variable costs are also zero but there are some fixed costs. As the output increases the total costs go up. It means as the output increases fixed costs remain the same, but variable costs increase at a diminishing rate then at constant rate and ultimately at an increasing rate. The relationship has been shown in diagram where quantity is measured on horizontal axis while costs on vertical axis. KK is fixed cost curve which is parallel to horizontal axis which

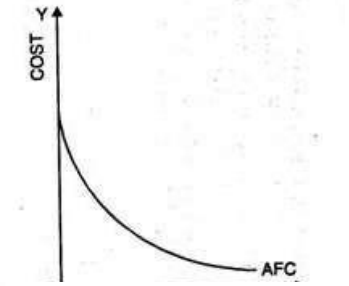


signifies the fact that at all levels of output, fixed costs remain the same. VC is the variable cost curve.

It is of the shape of reverse S. It means as the output is zero variable costs are also zero. But as the output increases, variable costs also start increasing, initially at diminishing rate, constant rate and then at an increasing rate.

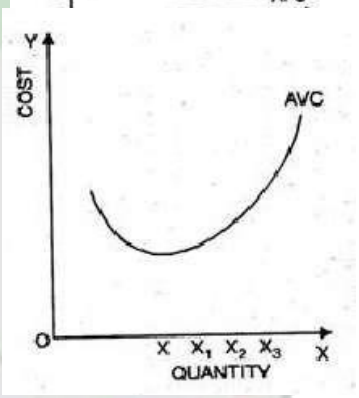


4. *Average Total Cost (ATC):-* The average cost of production is the total cost of production divided by the total number of units produced. The average cost of production is the total cost per unit of output. It can be represented as ATC= TC/Q.

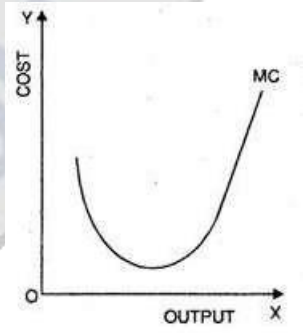


5. *Average Fixed Cost (AFC):-* Since, the total fixed cost is a constant quantity, average fixed cost will steadily fall as output increases, thus, the average fixed cost curve slopes downward throughout the length. The AFC is asymptotic to X axis. It can be represented as AFC= TFC/Q.

6. *Average Variable Cost (AVC):-* Average variable cost is the cost variable cost incurred per unit of output. AVC is obtained by dividing the total variable cost by the number of units of output produced. . It can be represented as AVC= TVC/Q. Generally, the AVC falls as output increases from zero to the normal capacity output due to the law of increasing returns. But beyond the normal capacity output, the AVC will rise steeply because of the operation of the law of diminishing returns. The average variable cost curve assumes the U- shape. Initially, the AVC curve falls, after having the minimum point the curve starts rising.



7. *Marginal Cost (MC):-* The concept of marginal cost of production is recently developed by Austrian School of Economics. Marginal cost is an addition to the total cost caused by producing one more unit of output. According to Ferguson, "Marginal cost is the addition to total cost due to addition of one unit of output". Samuelson defined "Marginal cost at any level of output is the extra cost for producing one extra unit more or less."



The U-shape of MC curve signifies the fact that as output increased initially MC curve falls. The MC curve reaches the minimum point after that it starts rising in upward direction.

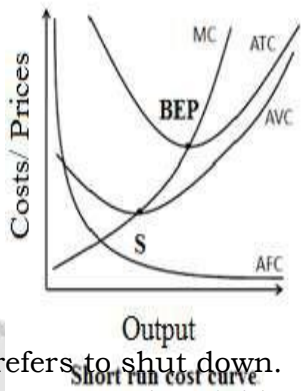
RELATIONSHIP BETWEEN MARGINAL COST(MC) AND AVERAGE COST(AC)

1. When MC falls, AC also falls but at lower rate than that of MC. So long as MC curve lies below the AC curve, the AC curve is falling.
2. When MC rises, AC also rises but at lower rate than that of MC. That is, when MC curve lies above AC curve, the AC curve is rising.
3. MC intersects AC at its minimum. That is, MC = AC at its minimum.

DISTINCTION BETWEEN FIXED AND VARIABLE COSTS

The distinction fixed and variable costs are important in price theory. Every firm has the object to maximize profits or minimize losses, if losses are unavoidable. At times the price of the product may not cover average total cost. Then the firm will have to decide

whether to shut down or produce some output. The decisions are as follows:

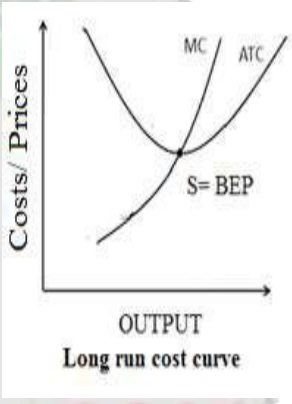


Short run cost curve

Decision to Shut Down the Firm:- The producer may not cover the total costs, if the price of the product is less than the short-run average cost. Then the distinction between fixed cost and variable costs must be kept in mind. Fixed costs are incurred even at zero output. They are unavoidable costs. Variable costs are incurred only when some output is produced.

If the price does not cover average variable costs, the firm prefers to shut down. In other words if the total revenue (total sale proceeds) does not cover total variable costs, the firm must shut down. Otherwise, its total loss will be greater than the fixed costs.

It will produce something only when the price covers average variable cost and part of the average fixed costs. The output at which marginal cost is equal to marginal revenue keeps losses minimum.



Long run cost curve

Break-Even Point:- At times the firm may not make any profit. It just pays to produce a given output. Total revenue is just equal to total cost. The firm has crossed the losses zone and is about to enter the zero profit zone. The output at which total revenue becomes equal to total cost represents break-even point.

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Chapter 12
MARKET STRUCTURE: MEANING AND TYPES OF MARKET, BASIC FEATURES OF PERFECTLY COMPETITIVE AND IMPERFECT MARKETS. PRICE DETERMINATION UNDER PERFECT COMPETITION; SHORT RUN AND LONG RUN EQUILIBRIUM OF FIRM AND INDUSTRY, SHUT DOWN AND BREAK-EVEN POINTS.

MARKET

The word market has been derived from the Latin word "*marcatus*" which means merchandise or trade.

DEFINITIONS:

- A market is any place where the sellers of a particular good or service can meet with the buyers of that goods and service where there is a potential for a transaction to take place. The buyers must have something they can offer in exchange for there to be a potential transaction.
- A market is the sphere within which price determining forces operate.
- A market is the area within which the forces of demand and supply converge to establish a single price.
- Economists understand by the market not any particular market place in which things are bought and sold but the whole of any region in which buyers and sellers are in such free contact with one another that the prices of the same goods tend to equality easily and quickly.

ESSENTIALS OF A MARKET: They may also be termed as the components of a market.

1. The existence of a good or commodity for transactions.
2. The existence of buyers and sellers
3. Business relationship or intercourse between buyers and sellers
4. Demarcation of area such as place, region, country or the whole world.

CLASSIFICATION OF MARKET: Markets are classified based on the degree of competition as perfect and imperfect market

PERFECT MARKET: A market is said to be perfect when all the potential sellers and buyers are promptly aware of the prices at which transaction take place and all the offers made by other sellers, and buyers, and when any buyer can purchase from any seller and conversely. Under such a condition, the price of a commodity will tend to be the same (after allowing far cost of transport including import duties) all over the market.

IMPERFECT MARKET: A market is said to be imperfect when some buyers or sellers or both are not aware of the offers being made by others. Different prices prevail for the same commodity at the same time.

MARKET STRUCTURE: It refers to the size and design of the market. It relates to those organizational characteristics of a market which influence the nature of competition and pricing and affect the conduct of business firms.

COMPARATIVE CHARACTERISTICS OF MARKETS

Particulars	Perfect Competition	Monopolistic Competition	Oligopoly	Monopoly
Number of Sellers	Large (small)	Many (Small to medium)	Few (large)	One
Nature of Sellers	Independent	Independent	Inter-dependent	----
Price	No control	Some control	Considerable control	Absolute control
Nature of product	Homogeneous	Differentiated	Homogeneous/ Differentiated	No close substitute
Barriers to entry	None	Low	Considerable	Blocked
Profit potential	Normal Profits in Long Run	Some profits in SR & LR	Considerable profits in SR & LR	Large profits in SR & LR
Product promotion & Advertising	None or minimal	Considerable	Heavy	Some but not directed to competition, but to increase sales
Part of economy where prevalent	Farm commodities	Retail trade	Steel, chemical , Automobiles etc.	Railways, posts, defence goods etc.

PERFECT COMPETITIVE MARKET

Perfect competition is the world of price-takers. A perfectly competitive firm sells a homogeneous product [one identical to the product sold by others in the industry]. It is so small relative to its market that it cannot affect the market price; it simply takes the price as given. Perfect competition market is a market under which no buyer or seller can affect unilaterally *Characteristics of Perfect Competition:* - The main characteristics of perfect competition market are as follows:

1.Large Number of Buyers and sellers: - One condition of perfect competition is that a large number of buyers and sellers should be operating in the market. If that is so, no single seller or purchaser will be able to influence the market price, because the output of any single firm is only a small proportion of the total output and of the total demand.

2. Homogeneous Product: - The commodity produced by all firms should be standardized or identical.

3. Free Entry or Exit:- There should be no restrictions, legal or otherwise, on the firms to enter and exit from the industry. In this situation, all the firms will be making just normal profit. If the profit is more than normal, new firms will enter and extra profit will be competed away; and if, on the other hand, profit is less than normal, some firms will quit, raising the profits for the remaining firms. But if there are restrictions on the entry of new firms, the existing firms may continue to enjoy supernormal profit. Only when there are no restrictions on entry or exit, the firms will earn normal profit.

4. Perfect Knowledge:- Another assumption of perfect competition is that the purchasers and sellers should be fully aware of the prices that are being offered and accepted. In case there is ignorance among the dealers, the same price cannot rule in the market for the same commodity. When the producers and the customers have full

knowledge of the prevailing price, nobody will offer more and none will accept less, and the same price will rule throughout the market. The producers can sell at that price as much as they like and the buyers also can buy as much as they like

5.Absence of Transport Costs:- If the same price is to rule in a market, it is necessary that no cost of transport has to be incurred. If the cost of transport is there, the prices must differ to that extent in different sectors of the market.

6. *Demand curve looks horizontal to a perfect competitor*:- The industry demand curve has inelastic demand at the market equilibrium. However, the demand curve for the perfectly competitive firm is horizontal (i.e. completely elastic).

7. No Government Regulation (Laissez-faire):- Government does not intervene in the marketing functions.

Pure competition differs from perfect competition in the sense that it excludes the features of Perfect mobility of resources and Perfect knowledge.

PRICE DETERMINATION UNDER PERFECT COMPETITION

Having studied the demand and supply, we know that market demand curve is the horizontal summation of the individual demand curves, and similarly the horizontal summation of the individual supply curves become market supply curve.

The intersection of market demand curve and the market supply curve indicates the equality of quantity demanded by the consumers and that supplied by the producers. This equality of quantity demanded and quantity supplied is called equilibrium quantity and the price that occurs at this balancing point is called equilibrium price. When such condition prevails in the market, the market is said to be in equilibrium, because there are neither shortages nor surpluses of commodity.

DETERMINATION OF MARKET PRICE

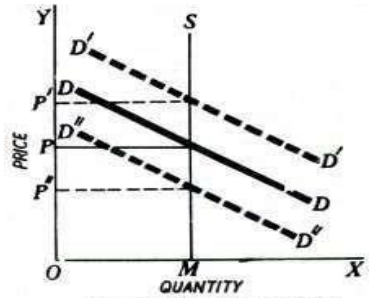
Market price is determined by the equilibrium between demand and supply in market period or very short run. This market period may be an hour, a day or a few days or even a few weeks depending upon the nature of the product. The period being short, stock is limited and cannot be produced to meet the increase in demand. Therefore, the sellers have to confine to the

produce available with them. The nature of supply curve in a market period under the two situations of perishable and non-perishable goods are discussed below

MARKET PRICE OF A PERISHABLE COMMODITY

The graphical representation for the market price of Perishable Commodity like fish is presented in Figure . The supply is limited by the available quantity on that day, and it cannot be kept back for the next period and therefore, the whole of it must be sold away on the same day at prevailing prices. The supply curve of fish is a vertical straightline MS, when OM is the quantity of fish available on that day. DD is the market demand curve. With perfect competition between buyers and sellers, an equilibrium price OP will be determined at which the quantity demanded is equal to the available supply. That is, equilibrium price will be established at the point where downward slopping demand curve DD intersects the vertical supply curve MS.

Now suppose that there is a sudden increase in demand from DD to D“D“ with the supply of fish remaining unchanged,the larger demand will raise the market price sharply from OP to OP“. On the contrary, if there is a decrease in demand from DD to D““ D““ the price will fall and the quantity sold will remain the same.

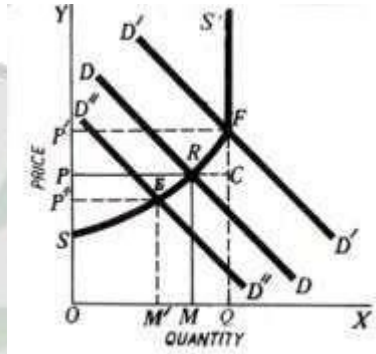


Market Price of a Perishable Commodity

MARKET PRICE OF NON-PERISHABLE AND REPRODUCIBLE GOODS

In case of non-perishable but reproducible goods, supply curve cannot be a vertical straight line and the seller rough out its length, because some of the goods can be preserved or kept back from the market and carried over to the next market period. There will then be two critical price levels. The first, if price is very high the seller will be prepared to sell the whole stock. The second level is set by a low price at which the seller would not sell any amount in the present market period, but will hold back the whole stock of some better time. The price below which the seller will refuse to sell is called the Reserve Price.

Given the two price levels, one at which the seller is prepared to sell the whole stock and the other at which he will refuse to sell at all, the amount which he will offer for sale will vary with price. Given his anticipations of future price and intensity of his need for cash, etc., he will be prepared to supply more at a higher price than at a lower one. The supply curve of a seller will, therefore, slope upward to the right. Beyond a price at which he is prepared to sell the whole stock, the supply curve will be a vertical straight line whatever the price.



Market Price of a Durable Commodity

SRFS“ is the supply curve of the durable goods while OQ is the total amount of the stock of the goods. Up to price OP“, the quantity Supplied varies with price so that at a higher price more is supplied that at a lower one. At the price OS, nothing is sold, the whole stock being held back. Therefore, SF portion of the supply curve slopes upwards from left to right. At price OP“ the whole of the stock is offered for sale, and beyond the price OP“ the quantity supplied remains the same whatever the price. Therefore, beyond the price OP“, the market supply curve will be vertical straight line (FS“). DD is the demand curve which slope downwards from left to right. Market price comes to settle at OP, because at this price the quantity demanded is equal to the quantity supplied. At this equilibrium price OP, OM amount from the stock is sold, while the rest of the stock i.e., MQ (=RC) is held back from the market.

Suppose now the demand increases from DD to D“ D“, the price will rise to OP“, and the whole stock OQ will be sold. If now the demand, further increase from D“ D“ to some higher level, the quantity supplied or sold will remain the some, i.e., equal to OQ, and only the price will rise so that, at the new equilibrium level, the quantity demanded is equal to the available supply. If the demand decreases from DD to D“ D“, the price will be fall to OP““, and the amount sold will decrease to OM“.

Since, in a perfectly competitive market, the product is homogeneous and no buyer has any preference for a particular seller, therefore, a single uniform market price will be established in the market. Once the market price is determined, an individual seller in the market will take the price as given and constant. Thus, the demand curve which is downward slopping for all sellers is for a single seller a horizontal straight line, i.e., perfectly elastic at the level of the ruling market price.

One important conclusion that follows from the above analysis of price determination in the market period is that costs of production do not enter into the calculation of the seller, and therefore, have little influence on the market price.

CHARACTERISTICS OF MONOPOLISTIC COMPETITION: Put forth by Edward Chamberlin

1 ***Large Number of firms:*** The number of firms operating under monopolistic competition is sufficiently large. Moreover, there is freedom of entry. There are no quantitative restrictions or differences in market conditions. However, each firm differs from its rivals in some qualitative respect.

2 ***Close Substitutes:*** Under monopolistic competition firms produce very close substitutes. Chocolates of one company may serve a similar purpose as that of some other firm. The only difference may be of some variation in the quality of the product.

3 ***Group:*** Firms under monopolistic competition together form a group. They cannot be called an industry. This is because their products are somewhat dissimilar and not homogenous as under competitive industry.

4 ***Product Differentiation:*** Under monopolistic competition products are differentiated. This is the outstanding feature of this form of market. Otherwise, monopolistic competition closely resembles perfect competition. The fundamental difference between the two is that products are no more homogenous. Goods produced are deliberately differentiated by trade name or brand name or salesmanship or quality etc.

5 ***Selling (Advertising) Cost:*** Selling Cost i.e., advertisement expenditure and Product Differentiation together enable the producer to maintain some control over market conditions and influence the shape of the demand curve. Whenever a *product* is *differentiated* it is necessary to inform buyers; and advertisement is the only medium through which buyers can be told about superiority of that product.

CHARACTERISTICS OF MONOPOLY:

Monopoly is another traditional form of market. It is an extreme form, opposed to a competitive market structure. As against this, a competitive market is one with a large number of firms or producers.

1. Monopoly is a case where there is only a single seller in the market. This, however, is a theoretical concept.
2. Absence of substitutes: for the goods produced and sold by the monopolists. Buyers have no other option except to purchase goods from the monopolist at whatever price he charges. This results in a situation in which the monopolist has complete control over market conditions. He can decide his own price and earn profits without any fear of competition from his rivals. The Cross Elasticity of Demand is negligible or very low. Yet a monopolist has certain constraints arising out of demand and technical conditions.
3. There is no distinction between the firm and industry in monopoly market situation.
4. There is complete negation of competition.

CHARACTERISTICS OF OLIGOPOLY:

The word OLIGOPOLY is derived from the Greek words "olig" means a few and "poly" means sellers. Oligopolistic Market refers to a market characterized by the presence of a small number of producers who often act together to control the supply of a particular good and its market price. It is dominated by a few large suppliers who are interdependent on each other, before making any pricing and investment decisions. It is also explained as a market condition in which sellers are so few that an action of any one of them will materially affect price and have a measurable impact on competitors; in other words; since there are few participants in this type of market, each Oligopolist is aware of the actions of the other. OPEC is an example of Oligopoly since few countries control the production of oil, the steel and the automobile industry in United States of America is another example.

1 It is a market dominated by a small number of participants who are able to collectively exert control over supply and market prices.
2 Few firms sell branded products which are close substitutes of each other.
3 Entry barriers for the other firms are high; the barriers can be due to patents, copyrights, government rules / regulations or ownership of scare resources.
4 Firms are interdependent for decision making.
5 Products can be homogenous (standardized) or heterogeneous (differentiated).
6 The sellers are the price makers and not price takers, since the few sellers mutually dominate the pricing decisions.
7 The sellers can achieve supernormal profits in the long run.
8 The sellers can achieve economies of scale; since for the large producers as the level of production rises, the cost per unit of products decreases; thus ensuring higher profits.
9 There is high degree of market concentration, since the four-firm concentration ratio is often used, where the market shares of four largest firms are measured (as a percentage) since they form the major portion of the market share.
10 An Oligopolist faces a downward sloping demand curve; however; the price elasticity depends on the rival's reaction to change its price, investment and output.

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Chapter13
PRODUCTION: PROCESS, CREATION OF UTILITY, FACTORS OF PRODUCTION, INPUT OUTPUT RELATIONSHIP.

PRODUCTION: Production means creation of value in goods. It is any activity that creates present or future utility. Another definition for production is a process that transforms inputs into outputs. The output which comes out of production has greater utility over the inputs combined in the production process.

According to Bates and Parkinson, "production is the organised activity of transforming resources into finished products in the form of goods and services; the objective of production is to satisfy the demand for such transformed resources".

TYPES OF PRODUCTION

1. Primary Production:- Primary production is carried out by 'extractive' industries like agriculture, forestry, fishing, mining and oil extraction.

2. Secondary Production:- This includes production in manufacturing industry, viz., turning out semi-finished and finished goods from raw materials and intermediate goods— conversion of flour into bread or iron ore into finished steel. They are generally described as manufacturing and construction industries, such as the manufacture of cars, furnishing, clothing and chemicals, as also engineering and building.

3. Tertiary Production:- Industries in the tertiary sector produce all those services which enable the finished goods to be put in the hands of consumers. In fact, these services are supplied to the firms in all types of industry and directly to consumers. Examples cover distributive traders, banking, insurance, transport and communications. Government services, such as law, administration, education, health and defence, are also included.

FACTORS OF PRODUCTION

Production of a commodity or service requires the use of certain resources or factors of production. The resources are combined in various ways, by firms or enterprises, to produce an annual flow of goods and services.

(I) LAND:- It refers to all natural resources which are free gifts of nature. Land, therefore, includes all gifts of nature available to mankind—both on the surface and under the surface, e.g., soil, rivers, waters, forests, mountains, mines, deserts, seas, climate, rains, air, sun, etc.

As the Penguin Dictionary of Economics has put it: "Land in economics is taken to mean not simply that part of the earth's surface not covered by water, but also all the free gifts of nature's such as minerals, soil fertility, as also the resources of sea. Land provides both space and specific resources"**.**

CHARACTERISTICS OF LAND

1. *Fixed supply:-* The total land area of earth (in the sense of the surface area available to men) is fixed. Therefore, the supply of lands is inelastic.

2. *Alternative uses:-* Although the total supply of land is fixed, land has alternative uses. The same plot of land can be used to set up factories or to grow wheat or sugarcane or even to build a stadium. This means that the supply of land to a particular use is fairly (if not completely) elastic. For example, the amount of land used for growing tomato can be increased by growing less of some other crop (e.g., cauliflower). The supply of building land can be increased by reducing the area under

agricultural operation.

3. *No cost of production*:- Since land is a gift of nature, it has no cost of production. Since land is already in existence, no costs are to be incurred in creating it.

4. *Differences in fertility*:- Another important feature of land is that it is not homogeneous. All grades (plots) of land are not equally productive or fertile. Some grades of land are more productive than others.

5. *Operation of the law of diminishing return*:- Production on land is subject to the operation of the law of diminishing return. As Alfred Marshall has put it "while the part which nature plays in production shows a tendency to diminishing return, the part which man plays shows a tendency to increasing return".

This simply means that as more and more workers are employed on the same plot of land, output per worker will gradually fall (because each additional worker will make less and less contribution to total product). The law of diminishing return refers to diminishing marginal product of the variable factor.

(II) *Mobility*:- Land is not geographically mobile but it is occupationally mobile.
LABOUR:- Like land, labour is also a primary factor of production. It refers to human effort of any kind—physical and mental— which is directed to the production of goods and services with the aim of earning income is known as labour. 'Labour' is the collective name given to the productive services embodied in human physical effort, skill, intellectual powers, etc.

CHARACTERISTICS OF LABOUR**:-** In examining labour markets, it is important to recognise that labour has a number of special characteristics which distinguish it from ordinary commodities.

1. *Labour market transactions are particularly significant for*:- Labour market transactions are particularly significant for the individual worker. Much of a person's life style and relations with other people depend on the job he or she does. Furthermore, the employment of labour involves a continuing personal relationship between employers and employees, whereas transactions in market for goods are often brief and impersonal.

2. *Labour is an end and means in itself*:- A commodity is only a means of production and the object of production is its consumption by labour. Labour, therefore, becomes a means to its own end. The supplier of labour—the worker—is also a consumer.

3. *The individual sells his services but not himself*:- The employer, however, must be able to exert some control or authority over the actions of employees. This is not a very simple matter, which can be covered unambiguously by a contract of employment. A great deal of energy has been devoted to planning systems for the direction of employees, and even a brief examination of the state of industrial relations in most countries shows that still much remains to be done.

4. *Labour is inseparable from the labourer*:- In other words, labour and the labourer go together. When the seller sells a commodity he does not necessarily go with the commodity. But the labour can supply his labour only when he has to be goes with it. Moreover, when a seller sells a commodity he parts with it. But when a labourer sells his labour, he retains the quality with him. He may gain the satisfaction of his services, but he cannot be separated from the labour.
5. *Labour services are not transferable*:- Individual must be present when the labour services are used.
6. *Labour services cannot be stored***:-** Labour cannot be 'saved' or stored for future use

(although rest may enhance performance to some extent).

7. *Labour is perishable*:- A commodity, if it is not disposed off today, can be disposed off the next day and it may not lose its value. Labour, however, is perishable in this that if the labourer is not able to sell his services for a day he cannot get the value for that day. It is lost forever; it is because of this that labour has a weak bargaining power.

8. *Labour is affected by surroundings*:- A commodity is usually very much affected by its surrounding; a labourer is very much affected by the surroundings because he is a living being. Therefore, any change in atmosphere has an effect on his health feelings etc.

9. *The supply of labour is independent of its demand*:- In case of most commodities we see that supply usually varies with demand but in case of labour its supply is in no way related to demand. Both are determined by different factors.

10. *Labour services are enhanced by training*:- Skill acquisition is often a lengthy and costly process. However, adjustments in the labour market, such as increasing the supply of a particular skill, often requires a long time. This also means that individuals do not usually train for more than one occupation as they only have a limited working life over which to justify the investment.

11. *Mobility of Labour*:- It may apparently seem that labour is the most mobile of all factors— both occupationally and geographically. Workers can move both freely from one industry to another and from one region to another.

(a) The spatial or geographical mobility of labour, which relates to the rate at which workers move between geographical areas and regions in response to differences in wages and job availability (e.g., a worker from West Bengal moving to Mumbai) and

(b) The occupational mobility of labour which relates to the extent to which workers change occupations or skills in response to differences in wages or job availability (e.g., a jute mill worker joining a tea garden).

(III) CAPITAL: - Capital has been defined as produced means of production. All man-made aids to production, which are not consumed/or their own sake, are termed as capital. In a board sense, any product of labour-and-land which is reserved for use in future production is capital. To put it more clearly, capital is that part of wealth which is not used for the purpose of consumption but is utilised in the process of production. Examples are—machines, tools, buildings, roads, bridges, raw material, trucks, factories, etc. An increase in the capital of an economy means an increase in the productive capacity of the economy. Logically and chronologically, capital is derived from land and labour and has therefore, been named as Stored-Up labour.

Karl Marx indicated "capital as crystallized labour" in his famous book *Das Kapital*.

CHARACTERISTICS OF CAPITAL

1. *Capital is man-made*:- It is not a free gift of nature.

2. *Capital is productive*:- It helps in enhancing the overall productivity of all the resources employed in production process.

3. *Capital supply is elastic*:- The supply of capital can be altered based on need.

4. *Capital formation generates income*:- The accumulation of capital rewards income in future. The increased capital augments the investment which leads to rise in income.

5. *Capital is highly mobile*:- Capital is both geographically and occupationally mobile. However, a certain portion of a nation's capital stock which consists of such things as railway networks, blast furnaces and shipyards are highly specialised equipment and are virtually immobile in the geographical sense.

FIXED AND CIRCULATING CAPITAL**:-** Fixed capital means durable capital like tools, machinery and factory buildings, which can be used for a long time.

(I) Circulating capital refers to funds embodied in stocks and work-in- progress or other current assets as opposed to fixed assets. It is also called working capital. Things like raw materials, seeds and fuel, which can be used only once in production are called circulating capital. **ORGANIZATION (ENTERPRISE):-** Organisation, as a factor of production, refers to the task of bringing land, labour and capital together. It involves the establishment of co-ordination and co-operation among these factors. The person in charge of organisation is known as an organiser or an entrepreneur. So,.

ENTREPRENEUR:- An entrepreneur is a person who organises the other factors and undertakes the risks and uncertainties involved in the production. of production and of framing the necessary policy regarding business He takes the charge of supervising the organisation, hires the other three factors, brings them together, organizes and coordinates them so as to earn maximum profit.

FUNCTIONS OR ROLE OF THE ENTREPRENEUR

1. *Decision making***:-** The primary task of an entrepreneur is to decide the policy of production. An entrepreneur is to determine what to produce, how to produce, where to produce, how much to produce, how to sell and so forth. Moreover, he is to decide the scale of production and the proportion in which he combines the different factors he employs. In brief, he is to make vital business decisions relating to the purchase of productive factors and to the sales of the finished goods or services.

2. *Management Control*:- Management and control of the business are conducted by the entrepreneur himself. So the latter must possess a high degree of management ability to select the right type of persons to work with him. But the importance of this function has declined, as the business nowadays is managed more and more by paid managers.

3. *Division of income***:-** The next major function of the entrepreneur is to make necessary arrangement for the division of total income among the different factors of production employed by him. Even if there is a loss in the business, he is to pay rent, interest; wages and other contractual income out of the realised sale proceed.

4. *Risk-taking and uncertainty-bearing*:- Risk-taking is perhaps the most important function of an entrepreneur. Modern production is very risky as an entrepreneur is required to produce goods or services in anticipation of their future demand.

5. *Innovation*:- Another distinguishing function of the entrepreneur as emphasised by Schumpeter, is to make frequent inventions- invention of new products, of new techniques and discovering new markets—to improve his competitive position, and to increase earnings.

MOBILITY:- Enterprise seems to be the most mobile of all the four factors. There is need to train labour for some specific task to be performed in a particular industry (say, road transport service, hotel business or computer operation). Once labour is trained for some specific task appropriate to some particular industry, it cannot be easily and quickly transferred to some other industry to do a completely different job. But the basic functions of the entrepreneur-organisation, management and risk-taking are the same in all industries.

INPUT-OUTPUT RELATIONSHIP (PRODUCTION FUNCTION)

The production function shows the relation between input changes and output changes. It also shows the maximum amount of output that can be obtained by the

firm from a fixed quantity of resources.

Let, In a production function that employs only two inputs, capital (*K*) and labour (*L*), to produce

Q. the **production function** describes how inputs like capital and labour are transformed into output. The relationship may be expressed like:

$$Q = f(K, L, \text{etc.})$$

The volume of output of the firm's product, per period of time, depends on the quantities of these factors that are used by the firm.

Chapter 14
DISTRIBUTION THEORY: MEANING, FACTOR MARKET AND PRICING OF FACTORS OF PRODUCTION, CONCEPTS OF RENT, WAGE, INTEREST AND PROIT

DISTRIBUTION: In economics, distribution is the way in which the total output, income, or wealth is distributed among individuals or among the factors of production (such as land, labour, capital and organization) employed in production process. In the process of distribution the returns obtained land get rent, labour gets wages, interest is paid to capital and organization is rewarded with profit. An apportionment of returns among different factors of production is called as distribution or factor pricing.

A. RENT:- In simple words, ‘ rent' is used as a part of the produce which is paid to the owner of land for the use of his goods and services. But, in economics, rent has been differently defined from time to time. Rent refers only to make payments for factors of production which are in imperfectly elastic supply. For instance, it is the price paid for the use of land.

All the natural resources existing on the surface and beneath the land like mines, rivers etc., are also treated as land. Rent is almost zero for publicly owned resources because these are meant for welfare and one cannot use it for one's own purpose.

DEFINITION

David Ricardo defined “Rent is that portion of the produce of earth which is paid to landlord for the use of original and indestructible powers of the soil.”

Alfred Marshall defined “Rent is the income derived from the ownership of land and other free gifts of Nature”.

TYPE OF RENT: The main types of rent are as follows:

1. *Economic Rent:-* Economic rent refers to the payment made for the exclusive use of land only. In economics the term rent is used in the sense of economic rent. In the words of Ricardo and other classical economists, economic rent refers to the payment for the use of land alone It is also called Economic Surplus because it emerges without any effort on the part of landlord.
2. *Contract Rent:-* Contract rent refers to that rent which is agreed upon between the landowner and the user of the land. On the basis of some contract, which may be verbal or written, contract rent may be more or less than the economic rent.
3. *Gross Rent:-* Gross rent is the rent which is paid for the services of land and the capital invested on it. For eg. construction of a building consists of
    1. Economic rent. It refers to payment made for the use of land.
    2. Interest on capital invested for improvement of land.
    3. Reward for risk taken by landlord in investing his capital.

4. Scarcity Rent:- Scarcity rent refers to the price paid for the use of the homogeneous land when its supply is limited in relation to demand. If all land is homogeneous but demand for land

exceeds its supply, the entire land will earn economic rent by virtue of its scarcity. In this way, rent will arise when supply of land is inelastic. Prof. Ricardo opined that land was beneficial but it was also scarce.

5. Differential Rent:- Differential rent refers to the rent which arises due to the differences in the fertility of land. In every country, there exists a variety of land. Some lands are more fertile and some are less fertile. When the farmer's are compelled to cultivate less fertile land the owners of more fertile land get relatively more production. This surplus which arises due to difference in fertility of land is called the differential rent. This type of rent arises under extensive cultivation. According to Ricardo, "In order to increase production on same type of land, more units of labour and capital are employed. Productivity of land was indicative of the generosity of nature but its total supply remaining more or less fixed symbolized niggardliness of nature."

6. Quasi Rent:- The basis for evolving this rent is the short run fixity of manmade assets of production like machines, buildings, etc. When the short run demand of these assets increases, the income from these assets also goes up. This surplus income from the increased demand is called as quasi rent. This is a temporary phenomenon and not applicable to land as the supply of land is inelastic.

B. WAGES:- In economics, the price paid to labour for its contribution to the process of production is called wages. Labour is an important factor of production. If there is no labour to work, all other factors, be it land or capital, will remain idle. Thus, Karl Marx termed labour as the "creator of all value". However, labour alone cannot produce as most of the production is the result of joint efforts of different factors of production. Therefore, the share of the produce paid to labour for its production activity is called wage.

DEFINITION

Mc Connell defined "Wage rate is the price paid for the use of labour".

Benham defined "A wage may be defined as the sum of money paid under contract by an employer to worker for services rendered."

CONCEPT OF WAGES: There are two concepts of wages:

1. Money Wages or Nominal Wages:- The total amount of money received by the labourer in the process of production is called the money wages or nominal wages.

2. Real Wages:- Real wages mean translation of money wages into real terms or in terms of commodities and services that money can buy. They refer to the advantages of worker's occupation, i.e. the amount of the necessaries, comforts and luxuries of life which the worker can command in return for his services.

TYPE OF WAGES

1. Piece Wages:- Piece wages are the wages paid according to the work done by the worker. To calculate the piece wages, the number of units produced by the worker is taken into consideration.

2. Time Wages:- If the labourer is paid for his services according to time, it is called as time wages. For example, if the labour is paid Rs. 35 per day, it will be termed as time wage.

3. Cash Wages:- Cash wages refer to the wages paid to the labour in terms of money. The salary paid to a worker is an instance of cash wages.

4. Kind Wages:- When the labourer is paid in terms of goods rather than cash, is called the wage in kind. These types of wages are popular in rural areas.

5. Contract/ Task Wages:- Under this type, the wages are fixed in the beginning for complete work. For instance, if a contractor is told that he will be paid Rs. 25,000 for the construction of building, it will be termed as contract wages.

C. INTEREST:- In simple words, interest means the reward for the use of capital. It is also called the income of the owner of capital for lending it. In other words, it is the price paid by the borrower of money to its lender. We know that people keep their money in banks, in bonds, securities or debentures and in cash. Cash has the advantage that this amount can be used at any time. Therefore, when one person parts with this amount, he gets a price which is known as interest.

DEFINITION

J. M. Keynes defined "Interest is a reward for parting with liquidity for a specified period".

Alfred Marshall defined "Interest is the price paid for the use of capital in any market".

CONCEPT OF INTEREST: There are two concepts of interest as:

1. Gross Interest:- Gross interest refers to the entire payments made by the borrower to the lender on a certain amount of loan received for a period of time. It includes not only the payment for the use of money capital but also for risks, inconvenience and management.

Gross Interest = Net Interest + Risk bearing + Reward for management + reward for inconvenience.

2. Net Interest:- Net interest is the payment purely made for the use of money. Net interest rate is determined by the forces of demand and supply of funds or money. It generally relates to public and is comparatively low to gross interest.

CAUSES OF DIFFERENCE IN RATES OF INTEREST

The loan market is not characterized by the prevalence of one definite rate of interest. Rate of interest differs from place to place and from person to person. A number of factors bring about such a situation.

1. Nature of Security:- Interest rate varies with the type of property pledged behind the security. Loans borrowed against the security of gold carry less interest rate than loans against the security of immovable property like land or house.

2. Credit-Worthiness of the Borrower:- Interest also depends upon the credit standing of the borrowers. It is because of this reason that persons of known integrity and credibility can get loans on easy terms.

3. Liquidity:- Rate of interest also varies with the degree of liquidity of the asset offered as security against the loan. The greater the liquidity of the assets offered as security against the loan the lower will be the rate of interest and vice-versa.

4. Period of Loan:- Rate of interest also depends upon the period of loan. Long-term rate of interest is higher than the short term. In a long term loan, money gets locked up for a longer duration. Naturally, the lender wants to be compensated by a higher rate of interest.

5. Differences in Productivity:- Productivity of capital differs from venture to venture. For highly productive ventures, people will be willing to borrow at a higher rate of interest and vice-versa.

6. Market Imperfections:- Differences in the interest rate also originate from market imperfections that may be found in a loan market. In the words of Professor Bober, "In a given locality the few commercial banks may constitute an oligopoly with a degree of monopoly behaviour, for short term commercial loans, their interest rates are then likely to stand above those which would rule under competition".

CAN INTEREST BE ZERO?

There is a wide spread controversy among the economists whether the interest can be zero or not. Some economists opined that if marginal productivity of capital is zero and there is no saving and investment in the country, interest will be zero. But other economists refuted this version and remarked that in nature every economy is dynamic and marginal productivity of capital cannot be zero. Thus, there is no possibility for the rate of interest to be zero. A borrower has to pay some minimum amount of interest to the lender for the use of money capital. Therefore, rate of interest can never be zero.

C. PROFIT:- Profit is defined as a reward received by an entrepreneur by combining all the factors of production to serve the need of individuals in the economy faced with uncertainties. In accountancy, profit implies excess of revenue over all paid-out costs. Profit in economics is termed as a pure profit or economic profit or just profit. In a layman language, profit refers to an income that flow to investor. Profits are the rewards of purely entrepreneurial functions. It may be positive or negative.

According to Thomas S.E., "pure profit is a payment made exclusively for bearing risk. The essential function of the entrepreneur is considered to be something which only he can perform. This something cannot be the task of management, for managers can be hired, nor can it be any other function which the entrepreneur can delegate. Hence, it is contended that the entrepreneur receives a profit as a reward for assuming final responsibility, a responsibility that cannot be shifted on the shoulders of anyone else."

DEFINITION

Profit is the reward for entrepreneurial function of decision making and uncertainty bearing.

According to Thomas S.E., "pure profit is a payment made exclusively for bearing risk. The essential function of the entrepreneur is considered to be something which only he can

1.Accounting Profit:- Accounting Profit refers to the total earnings of an organization. It is a return that is calculated as a difference between revenue and costs, including both manufacturing and overhead expenses. The costs are generally explicit costs, which refer to cash payments made by the organization to outsiders for its goods and services. In other words, explicit costs can be defined as payments incurred by an organization in return for labour, material, plant, advertisements, and machinery.

Accounting Profit= TR- (W + R + I + M) = TR- Explicit Costs

profit.

2. Economic Profit:- It takes into account both explicit costs and implicit costs or imputed costs or opportunity cost.

ECONOMIC PROFIT = TOTAL REVENUE- (EXPLICIT COSTS + IMPLICIT COSTS)

OR

PURE PROFIT = ACCOUNTING PROFIT- (OPPORTUNITY COST + UNAUTHORIZED PAYMENTS, SUCH AS BRIBES)

Economic profit is not always positive; it can also be negative, which is called economic loss. Economic profit indicates that resources of a business are efficiently utilized, whereas economic loss indicates that business resources can be better employed elsewhere.

ACCOUNTING PROFIT ≥ ECONOMIC PROFIT

HOW PROFIT IS DIFFERENT FROM RETURN?

Profit differs from the return in three respects namely:

1) Profit is a residual income, while return is a total revenue
2) Profits may be negative, whereas returns, such as wages and interest are always positive
3) Profits have greater fluctuations than returns

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Chapter15
POPULATION: IMPORTANCE, MALTHUSIAN AND OPTIMUM POPULATION THEORIES, NATURAL AND SOCIO-ECONOMIC DETERMINANTS, CURRENT POLICIES AND PROGRAMMES ON POPULATION CONTROL.

POPULATION:- In general population means the total number of people inhabiting a specific area. In economics, study of population is important because it is both the 'means' and the 'end' of economic activities. The labour supply is directly linked with the population whereas the production is ultimately consumed by the people. Thus, population growth and economic development are closely related to each other.

Adam Smith wrote, the annual labour of every nation is the fund which originally supplies with all the necessaries and conveniences of life.

IMPORTANCE OF POPULATION:- Population has both a positive and a negative effect on economic growth.

The positive role of population in economic growth:-

- Population growth leads to increase in labour force which is an essential productive resource. It is an important source of supplying cheap labour which in turn helps in producing commodities at low cost.
- It also boosts demand, enlarges the market size and provides much needed inducement to invest and provides sufficient manpower to exploit country's natural resources.
- By increasing a productive resource population growth will help in producing more output.
- The large population also encourages division of labour and large scale production.
- Increase in population leads to the increase in demand for goods. Thus, growing population means the growing market for goods is enlarged, they can be produced on a large scale and thus economies of large-scale production can be reaped.

The negative role of population in economic growth:

- Rising rate of population growth exerts pressure on land. On the one hand, per capita availability of land goes on diminishing and on the other, the problem of sub-division and fragmentation of holdings goes on increasing. It adversely affects the economic development of the country.
- High birth rate and low expectancy of life means large number of dependents in the total population. In India 35 percent of population is composed of persons less than 14 years of age. Most of these people depend on others for subsistence. They are unproductive consumers. The burden of dependents reduces the capacity of the people to save. So the rate of capital formation falls.
- In order to achieve a given rate of increase in per capita income, larger investment is needed.
- Higher population means low per capita income, since per capita income is simply the gross domestic product (GDP) divided by the total population.
- Lower per capita income lowers the quantity of economic resources available per person, and through it the quality of life.
- With a high population the economic and social infrastructure (roads, schools, bridges, dams, highways, hospitals, colleges and training institutions etc.) all get used more and more, and hence they have a high depreciation rate.

- Population explosion leads to environmental degradation. Higher birth rate brings more pollution, more toxic wastes and damage to biosphere.
- Large size of population results in large army of labour force. But due to shortage of capital resources it becomes difficult to provide gainful employment to the entire working population. Disguised unemployment in rural areas and open unemployment in urban areas are the normal features of an under developed country like India.
- Population explosion leads to migration of people from rural areas to the urban areas causing the growth of slum areas. People live in most unhygienic and insanitary conditions.
- Unemployment and poverty lead to frustration and anger among the educated youth. This leads to robbery, beggary, prostitution and murder etc. Overcrowding, traffic congestions, frequent accidents and pollution in big cities are the direct result of over-population.
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MALTHUSIAN THEORY OF POPULATION

Thomas Robert Malthus enunciated his views about population in his famous book, *'Essay on the Principle of Population'* as it affects the Future Improvement of Society, published in 1798. His famous quote, "by nature human food increases in a slow arithmetic ratio, man himself increases in a quick geometric ratio unless want and vice stop him."

OPTIMUM THEORY OF POPULATION

Prof. Sidgwick gave the foundation of optimum theory of population in his book, *'Principles of Political Economy'*. Later it was further developed by Edwin Cannan and Carr Saunders and also known as Modern Theory of Population. The founders of the theory state it as "Given the natural resources, stock of capital and the state of technical knowledge, there will be a definite size of population with the per capita income. The population which has the highest per capita income is known as optimum population."

Optimum Population:- It generally refers to that size of population which provides maximum income per head at a given amount of resource and technology. Carr Saunders considered 'optimum population' as that which produces maximum welfare.

NATIONAL POPULATION POLICY, 2000

OBJECTIVES:

1. *The Immediate Objective*:- The immediate objective is to address the unmet needs for contraception, health care infrastructure and health personnel and to provide integrated service delivery for basic reproductive and child health care.
2. *The Medium Term Objective*:- The medium term objective is to bring the Total Fertility Rate (TFR) to replacement level by 2010 through vigorous implementation in inter-sectorial operational strategies.
3. *The Long Term Objective*:- The long term objective is to achieve a stable population by 2045 at a level consistent with the requirements of sustainable economic growth, social development, and environment protection.

TARGETS:- The following are the targets of National Population Policy

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

NATIONAL SOCIO-DEMOGRAPHIC GOALS FOR 2010: To fulfil these objectives and targets, National Socio-Demographic goals have been formulated which in each case are to be achieved by the year 2010. They are as follows:

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

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Chapter16
NATIONAL INCOME: CONCEPTS AND MEASUREMENT

MEANING: National Income (NI) is composed of goods and services which accrue to a Community/Nation during a period, say a year. However, it should be carefully understood that only those goods and services are included in National Incomewhich are actually sold for money. In other words un-bought goods and services are not included in N.I. even though there may be no difference in the nature of bought and un-bought goods. Therefore, the national income is the value of goods and services which accrue to a community during the course of a year.

Purpose of study of national income

1. Assessment of economy's performance.
2. Projection of country's performance.
3. Providing a basis for policy making issue like unemployment,

growth,poverty etc. Sources of N.I.

1. Agriculture (including allied occupation)
2. Manufacturing Industry (including mining)
3. Commerce (including transport and communication)
4. Other services.

MEASUREMNT ON NATIONAL INCOME

GROSS NATIONAL PRODUCT (GNP):GNP is defined as the total market value of all final goods and services produced in a year, in agriculture, mines, forest, industries etc and of services like transport, communication, banks, lawyers, doctor, teacher etc.Goods and services produced in

an economy are subject to purchase and sale several times. Therefore, to avoid the possibility of double counting GNP includes market value of final goods only, ignoring the transactions involving intermediate goods.

Measures of GNP**:**There are three methods of estimation of GNP;

1. Income Method
2. Expenditure Method
3. Value Added Method

Income Method: According to this method GNP includes wages and salaries, rents, interests, profits of un-incorporated firms, dividend, un-distributed corporate profit, corporate taxes, indirect taxes and depreciation minus transfer payments.

Expenditure Method: Under this method the GNP is the sum total of expenditure incurred on goods and services during a period of year. Thus

GNP=Personal Consumption Expenditure (C)+ Gross Domestic Private Expenditure (I)+ Net Foreign Investment (X-M)+ Government Expenditure on Goods & Services (G)

=C + I + (X-M) + G.

If all the items of GNP are correctly calculated GNP worked out either by income method or by expenditure method, remains the same.

Value Added Method: It is always difficult to distinguish between intermediary products (raw material, fuel etc) and final goods (machinery, equipment etc) as raw

material is an intermediate product for one industry. So to overcome this problem the value of intermediate goods used in a manufacturing industry should be deducted from the value of the final goods. The difference that is arrived at is called value addition.

Example: Value added at different stages of production of a loaf of bread(400gm).

Stages	Stages of Production of Bread	Selling Price	Cost of Material	Value Addition
1	Production of wheat	06.40	00.00	06.40
2	Production of flower	09.60	06.40	03.20
3	Production of loaf of bread	16.00	09.60	06.40
4	Retail market rate	20.00	16.00	04.00
5	Price of final product	-		20.00

Net National Product(NNP): In production of GNP, The capital goods employed are worth-out. The amount of decline in the value of capital goods due to wear and tear is called depreciation. To estimate the NNP, depreciation is deducted from GNP. NNP therefore is the market value of all final goods offer duly accounting for depreciation, NNP is found by using formula.

NNP= GNP – Depreciation.

DIRECT TAX: Which are not shift able to other by the tax payer, e.g. Income Tax, Wealth Tax, Estate Dutyetc.

INDIRECT TAX: Which are imposed on one person but he is able to shift it partially/wholly to another person, e.g. States Tax, Excise Duty, Custom Duty etc.

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Chapter17
MONEY: BARTER SYSTEM OF EXCHANGE AND ITS PROBLEMS, EVOLUTION, MEANING AND FUNCTIONS OF MONEY, CLASSIFICATION OF MONEY, MONEY SUPPLY, GENERAL PRICE INDEX

BARTER EXCHANGE:- Direct exchange of goods against goods without use of money is called barter exchange. Alternatively, economic exchanges without the medium of money are referred to as barter exchanges. An economy based on barter exchange (i.e., exchange of goods for goods) is called C.C. Economy, i.e., commodity for commodity exchange economy. In such an economy, a person gives his surplus good and gets in return the good he needs.

For example, when a weaver gives cloth to the farmer in return for getting wheat from the farmer. Similarly the farmer can get other goods of his requirement like shoes, cow, plough, spade, etc. by giving his surplus wheat (or rice or maize). Thus, the system of barter exchange fulfils to some extent the requirements of both the parties involved in exchange.

PROBLEMS OF BARTER EXCHANGE

1. *Double Coincidence of Wants*:- For exchange of goods persons desiring to exchange goods must specifically want those goods what others offers in exchange. Thus, an individual who wants to have a good he must locate another person who offers to give up the good wanted by him and who is willing to accept in exchange the good offered by him. A good deal of time was spent by a person in searching for a man with whom wants coincided.

2. *Lack of a Standard Unit of Account*:- A barter economy lacked not only a common medium of exchange but also a standard unit of account in which prices could be measured and quoted. In the absence of a common unit of account, the number of exchange ratios (that is, prices of goods ex- pressed in terms of each other) between goods would be very large. For example, two cows for one horse, one cow for two quintals of wheat, one pen for three pencils and so on.

3. *Impossibility of Subdivision of Goods*:- Another problem faced under the barter system for exchange of goods was impossibility of subdivision of goods without loss of their value. For instance, if a person has a cow and wants to have 5 kg of wheat, obviously, it is too costly to give one cow for 5 kg of wheat he requires. Then, to do this transaction cow has to be divided. But cow cannot be divided or cut into pieces because cow will lose much of its value if it is divided.

4. *Lack of Information*:- Another problem found in the barter system was that in it traders required a good deal of information for exchange of goods. For example, if Amit wants to have a saw in exchange of a wooden table which he has made. Not only should Amit be able to assess the value of saw but the maker of a saw should also be able to determine the value of the wooden table which Amit wishes to exchange. All this required a lot of information about goods for which people must spend a good deal of time and resources to obtain such information.

5. *Production of Large and Very Costly Goods not Feasible*:- An individual who has technical skill and equipment to manufacture a car will not have much incentive to manufacture it in the barter economy. This is because he can exchange a car with a person who has enough goods having a value equal to a car so that their exchange with a car can take place. The car maker must obtain food, clothing and several other commodities of day-to-day consumption in exchange for a

car. It will be very difficult, almost impossible to find a prospective buyer who has enough of these goods and services to give in return for a car.

MONEY: Money is anything serving as a medium of exchange. According to Prof. Walker, 'Money is as money does.'

This means that the term money should be used to include anything which performs the functions of money, viz., medium of exchange, measure of value, unit of account, etc. Since general acceptability is the fundamental characteristic of money, therefore, money may be defined as 'anything which is generally acceptable by the people in exchange of goods and services or in repayment of debts.'

EVOLUTION OF MONEY:

a) *Commodity Money*: The earliest form of money consisted of commodities like cattle, grains, leather, skins, utensils, elephant tasks, weapons etc.

b) *Metallic Money*: The need for metallic money was realized due to the limitations of commodity money. It includes money made up of metals, such as copper, brass, silver, gold, alloys, and aluminium. It is supposed that metallic coins were traded in India around 2500 years ago. Initially, the pieces of metals, such as gold, silver, copper, and aluminium, served the purpose of money. However, in later years, these pieces took the form of coins.

c) *Paper Money*: It refers to the form of money printed, authenticated, and issued by the government of a country. Paper money is regarded as the most common form of money and constitutes a large part in the money supply of a country. Paper money was invented as the supply of metallic coins, such as silver and gold, was very less as compared to its demand. In addition, a large amount of metallic money is not easily portable and the value of metallic coins depreciates with time.

d) *Bank Money*: It refers to money that is in the form of current account deposits, saving account deposits, and time deposits. This form of money was invented with the evolution of the banking system. Unlike metallic money and paper money, this form of money cannot be passed hand to hand for purchasing goods and services.

KIND OF MONEY:- The main kinds of money are 1) Metallic money and 2) Paper money. These are further subdivided into standard money and token money.

1. *Standard Money:-* This is also referred to as the principle money or full-bodied money. Standard money has the following characteristics:

i) Standard coin is the principal coin of the country

ii) The Face value of standard money is equal to its intrinsic value

iii) There is free coinage of standard money

iv) Standard money is unlimited legal tender money.

2. *Token money*:- The token money is used for making smaller payments. It serves as a subsidiary for standard money. It is generally made of inferior and light metals, such as, copper, nickel etc, Token money is different from standard money in several respects:

i) There is no free coinage of token money. The government only mines this, the public enjoys no right to take the metals to the mint and get them converted into token coins

ii) The face value of token money is higher than its intrinsic value

iii) Token money is limited legal tender money: Token coins can be used for making payments only to a limited extent. No one can be forced to accept then coins beyond a certain limit

iv) Token money is a subsidiary of standard money: Token coins are generally used for making payments in smaller transactions. As such, they act as subsidiaries of standard coins.

FUNCTIONS OF MONEY:-

1. *Money as the Medium of Exchange*:- Money came into use to remove the inconveniences of barter as money has separated the act of purchase from sale. Medium of exchange is the basic or primary function of money. Money by itself has no utility (except perhaps to the miser). People exchange goods and services through the medium of money. Money acts as a medium of exchange or as a medium of payments.

The use of money facilitates exchange, exchange promotes specialisation Increases productivity and efficiency A good monetary system is, therefore, of immense utility to human society. Money is also called a bearer of options or generalised purchasing power because it provides freedom of choice to buy things he wants most from those who offer best bargain.

2. *Money as a Unit of Account or Measure of Value*:- Money is the measuring rod, i.e., it is the units in terms of which the values of other goods and services are measured in money terms and expressed accordingly Different goods produced in the country are measured in different units like cloth m metres, milk in litres and sugar in kilograms.

Without a common unit, exchange of goods becomes very difficult Values of all goods and services can be expressed easily in a single unit called money Again without a measure of value, there can be no pricing process. Without a pricing process organised marketing and production is not possible. Thus, the use of money as a measure of value is the basis of specialised production.

3. *Money as the Standard of Deferred Payments*:- Deferred payments are payments which are made some time in the future. Debts are usually expressed in terms of the money of account. Loans are taken and repaid in terms of money.

The use of money as the standard of deterred or delayed payments immensely simplifies borrowing and lending operations because money generally maintains a constant value through time. Thus, money facilitates the formation of capital markets and the work of financial intermediaries like Stock Exchange, Investment Trust and Banks. Money is the link which connects the values of today with those of the future.

4. *Money as a Store of Value*:- Wealth can be stored in terms of money for future. It serves as a store value of goods in liquid form. By spending it, we can get any commodity in future. Keynes places great emphasis on this function of money. Holding money is equivalent to keeping a reserve of liquid assets because it can be easily converted into other things.

MONEY SUPPLY:- Supply of money refers to the total amount of money (in any form) that is held by a community in a given period of time. In earlier times, the metallic money was the most common form of money that constituted the major part of money in an economy. In modern times, metallic money has been replaced by currency notes and checkable bank deposits. The money supply is categorized as M_0, M_1, M_2, M_3 and M_4. The credit control policies imposed by the banking system of a country-help in determining the total supply of money.

M_0 refer to base money or high powered money. This is defined as fully liquid claims on the central bank held by the private sector, that is, currency (coins and notes) in circulation plus demand deposits held by the commercial banks in the central bank.

M_1 refers to the money stock that includes coins, currency notes, and demand deposits held by the non-bank public in commercial banks.

M_2 refers to the money stock that includes coins, currency notes, demand deposits, and time deposits.

M_3 refers to the money stock includes coins, currency notes, demand deposits, time deposits, and post office deposits.

M_4 refers to the money stock includes coins, currency notes, demand deposits, time deposits, post office deposits, savings bank, and term deposits.

GENERAL PRICE INDEX:- A general price index is an economic measurement that assesses the change in prices for goods and services. This index often measures the inflation in a market that artificially increases prices for goods and services at both the wholesale and consumer level. Common price indexes include the price deflator, consumer price index and wholesale price index.

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Chapter18
BANKING: ROLE IN MODERN ECONOMY, TYPES OF BANKS, FUNCTIONS OF COMMERCIAL AND CENTRAL BANK, CREDIT CREATION POLICY

BANK:- A bank is a financial institution that licensed to receive deposits from the public and creates credit.

BANKING:- Banking can be defined as the business activity of accepting and safeguarding money owned by other individuals and entities, and then lending out this money in order to earn a profit. However, with the passage of time, the activities covered by banking business have widened and now various other services are also offered by banks. The banking services these days include issuance of debit and credit cards, providing safe custody of valuable items, lockers, ATM services and online transfer of funds across the country / world.

ROLE IN MODERN ECONOMY

Banks are one of the most important part of any country. In this modern time money and its necessity is very important. To attain development there should be a good developed financial system to support not only the economic but also the society. So, a modern bank plays a vital role in the socio economic matters of the country. Some of the important roles of banks are briefly mentioned below:

1. ***Promote saving habits among people*:-** Bank attracts depositors by introducing attractive deposit schemes and providing rewards or return in the form of interest. Banks providing different kinds of deposit schemes to its customers. It creates banking habits or saving habits among people.
2. ***Capital Formation and Promoting of Industries*:-** Capital is the life blood of business. Banks increase capital formation in the country by collecting deposits from depositors and channelizing these deposits in to loans advances to industries.
3. ***Easiness of Trade and Commerce Functions*:-** Modern banks help its customers to sent funds to anywhere and receive funds from anywhere of the world. A well developed banking system provides various attractive services like mobile banking, internet banking, debit cards, credit cards etc. these kinds of services fast and smooth the transactions.
4. ***Generate Employment Opportunities*:-** Since a bank promote industry and investment, there automatically generate employment opportunity. ***Promote Agricultural Development*:-** Modern banks promote agricultural sector by providing loans and advances with low rate of interest compared to other loans and advances schemes.
5. ***Implementation of Monitory Policy*:-** Monetary policy is a important policy of any government to stabilize financial system of the country from the dangerous of inflation, deflation, crisis etc.

***Balanced Development*:-** Modern banks spreading its operations throughout the world. It helps a country to spread banking activities in rural and semi urban areas. With the spreading of banking operations around the country, helps to attain balanced development by promoting rural areas.

TYPE OF BANKS:- There are various types of banks and they can be divided into some of the following categories:

1. **Savings Banks**:- These banks function with the intention to culminate saving habits among people, especially those who belong to low income groups or those who are salaried. The money these people deposit in the banks are invested in securities, bonds etc. These days, many commercial banks perform the dual functions of savings bank. The postal department is also in a way a savings bank.

2. **Commercial Banks**:- These banks function to help the entrepreneurs and businesses. They give financial services to these businessmen like debit cards, banks accounts, short term deposits, etc. with the money people deposit in such banks. They also lend money to businessmen in the form of overdrafts, credit cards, secured loans, unsecured loans and mortgage loans to businessmen. These days, the commercialized banks provide some services given by investment banks to their clients. The commercial banks can be further classifies as: public sector bank, private sector banks, foreign banks and regional banks.

i. *Public Sector Banks*:-The public sector banks are owned and operated by the government, who has a major share in them. The major focus of these banks is to serve the people rather earn profits. Some examples of these banks include State Bank of India, Punjab National Bank, Bank of Maharashtra, etc.

ii. *Private Sector Banks*:- The private sector banks are owned and operated by private institutes. They are free to operate and are controlled by market forces. A greater share is held by private players and not the government. For example, Axis Bank, Kotak Mahindra Bank etc.

iii. *Foreign Banks*:-The foreign banks are those that are based in a foreign country but have several branches in India. Some examples of these banks include; HSBC, Standard Chartered Bank etc.

iv. *Regional Rural Banks*:- The regional rural banks were brought into operation with the objective of providing credit to the rural and agricultural regions and were brought into effect in 1975 by RRB Act. These banks are restricted to operate only in the areas specified by government of India. These banks are owned by State Government and a sponsor bank. This sponsorship was to be done by a nationalized bank and a State Cooperative bank. Prathama Bank is one such example, which is located in Moradabad in U.P.

v. *Cooperative Banks*:- These banks are controlled, owned, managed and operated by cooperative societies and came into existence under the Cooperative Societies Act in 1912. These banks are located in the urban as well in the rural areas. Although these banks have the same functions as the commercial banks, they provide finance to farmers, salaried people, small scale industries, etc.

and their rates of interest of interest are lower as compared to other banks. There are three types of cooperative banks in India, namely:

a) Primary credit societies: These are formed in small locality like a small town or a village. The members using this bank usually know each other and the chances of committing fraud are minimal.

b) Central cooperative banks: These banks have their members who belong to the same district. They function as other commercial banks and provide loans to their members. They act as a link between the state cooperative banks and the primary credit societies.

c) State cooperative banks: These banks have a presence in all the states of the country and have their presence throughout the state.

3. INVESTMENT BANKS:- These are financial institutions that provide financial and advisory assistance to their customers. Their clients can be individuals, businesses, or government organizations. They assist their customers to raise funds when required. These banks act as the underwriters for their customers when they want to raise capital by issuing securities. In some cases, they also help their customers to issue securities.

When there is a merger or an acquisition, they provide their customers with the necessary support like marketing, foreign trading, foreign exchange, sale of equities, fixed income instruments etc. Apart from raising capital, these banks render valuable financial advice to their customers and various kinds of businesses. Some examples of these banks include, Bank of America, Barclays Capital, Citi Bank, Deutsche Bank etc.

4. SPECIALIZED BANKS:- These banks provide unique services to their customers. Some such banks include foreign exchange banks, development banks, industrial banks, export import banks etc. These banks also provide huge financial support to businesses and various kinds projects and traders who have to import or export their goods or services.

5. CENTRAL BANK:- The central bank is also called the banker's bank in any country. In India, the Reserve Bank of India is the central bank. The Federal Reserve in USA and the Bank of England in UK function as the central bank. This bank makes various monetary policies, decides the rates of interest, controlling the other banks in the country, manages the foreign exchange rate and the gold reserves and also issues paper currency in a country. The monetary control is the primary function of a central bank in most countries and so they are considered as the lender of last resort to various commercial banks.

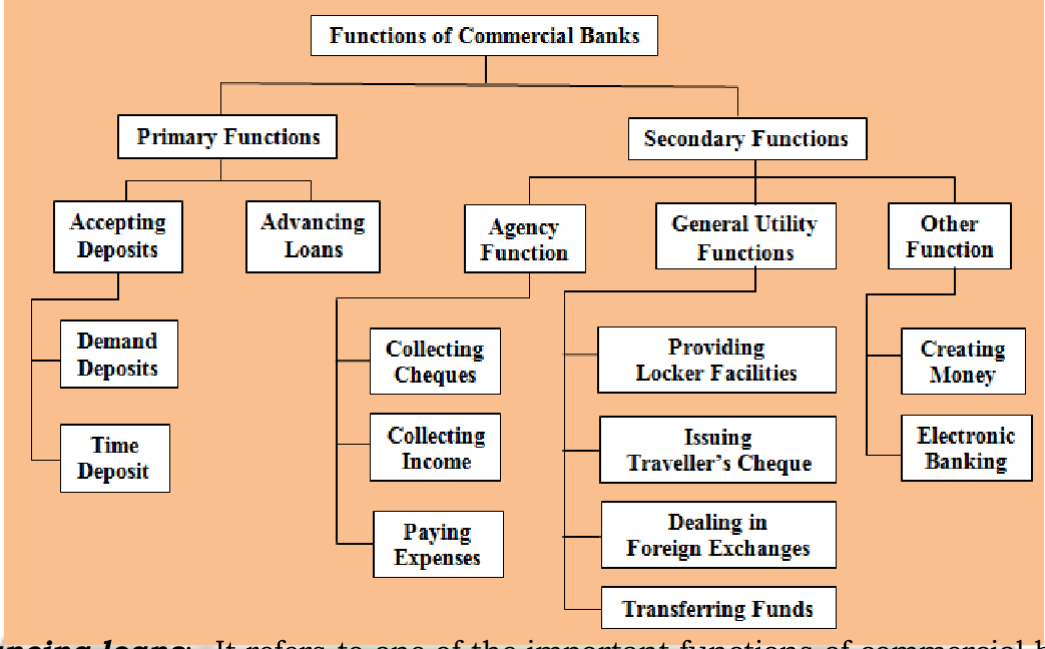
FUNCTIONS OF COMMERCIAL BANKS

(1) Primary Functions:-

a) Accepting Deposits:- Implies that commercial banks are mainly dependent on public deposits. There are two types of deposits, which are discussed as follows:

i) Demand Deposits:- It refers to kind of deposits that can be easily withdrawn by individuals without any prior notice to the bank. In other words, the owners of these deposits are allowed to withdraw money anytime by simply writing a check. These deposits are the part of money supply as they are used as a means for the payment of goods and services as well as debts. Receiving these deposits is the main function of commercial banks.

ii) Time Deposits:- It refers to deposits that are for certain period of time. Banks pay higher interest on time deposits. These deposits can be withdrawn only after a specific time period is completed by providing a written notice to the bank.



b) Advancing loans:- It refers to one of the important functions of commercial banks. The public deposits are used by commercial banks for the purpose of granting loans to individuals and businesses. Commercial banks grant loans in the form of overdraft, cash credit, and discounting bills of exchange.

(1) Secondary Functions:-

The secondary functions can be classified under three heads, namely, agency functions, general utility functions, and other functions.

a) Agency functions:- Implies that commercial banks act as agents of customers by performing various functions, which are as follows:

i) Collecting Checks:- The banks collect checks and bills of exchange on the behalf of their customers through clearing house facilities provided by the central bank.

ii) Collecting Income:- Commercial banks collect dividends, pension, salaries, rents, and interests on investments on behalf of their customers. A credit voucher is sent to customers for information when any income is collected by the bank.

iii) Paying Expenses:- Implies that commercial banks make the payments of various obligations of customers, such as telephone bills, insurance premium, school fees, and rents. Similar to credit voucher, a debit voucher is sent to customers for information when expenses are paid by the bank.

b) General utility functions:-

i) Providing locker facilities:- Commercial banks provide locker facilities to its customers for safe keeping of jewellery, shares, debentures, and other valuable items. This minimizes the risk of loss due to theft at homes. Issuing Traveller's cheques:- Banks issue traveller's cheques to individuals for travelling outside the country. Traveller's cheques are the safe and easy way to protect money while travelling.

ii) Dealing in foreign exchange**:-** Commercial banks help in providing foreign exchange to businessmen dealing in exports and imports. However, commercial banks need to take the permission of the central bank for dealing in foreign exchange.

iii) Transferring funds**:-** Implies transferring of funds from one bank to another. Funds are transferred by means of draft, telephonic transfer, and electronic transfer.

c) Other functions:-

i) Creating Money:- It helps in increasing money supply. For instance, a bank lends Rs. 5 lakh to an individual and opens a demand deposit in the name of that individual. Bank makes a credit entry of Rs. 5 lakh in that account. This leads to creation of demand deposits in that account. The point to be noted here is that there is no payment in cash. Thus, without printing additional money, the supply of money is increased.

ii) Electronic Banking:- Include services, such as debit cards, credit cards, and Internet banking.

CENTRAL BANK:- A central bank plays an important role in monetary and banking system of a country. It is responsible for maintaining financial sovereignty and economic stability of a country, especially in underdeveloped countries. It issues currency, regulates money supply, and controls different interest rates in a country. Apart from this, the central bank controls and regulates the activities of all commercial banks in a country. A Central Bank is the bank in any country to which has been entrusted the duty of regulating the volume of currency and credit in that country.

FUNCTIONS OF CENTRAL BANK

1) Issue of Currency
2) Banker to Government
3) Banker's Bank and Supervisor
4) Controller of Credit and Money Supply
5) Instruments of money policy: Bank rate (Repo and reverse repo rate), CRR, Open market operation
6) Exchange Control
7) Lender of Last Resort
8) Custodian of Foreign Exchange or Balances
9) Clearing House Function
10) Collection and Publication of Data

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Chapter19
PUBLIC FINANCE – MEANING, PRINCIPLES

PUBLIC FINANCE

In every progressive society, some form of Government Organisation exists. Government has certain duties and function to perform. These functions are either necessary or optional. The defence of country against foreign aggressor, maintenance of peace within the country and enforcement of law for punishment of evil doers', issue of currency etc. are necessary functions. The optional functions of a government are those functions which a government is pre-eminently suited to perform by virtue of its position as central body and a large capitalist. The governmentmay provide a good currency and a uniform system of weights and measures, good roads and railways, efficient post and telegraph offices. The more a government plays the role of an educator, the more numerous its optional functions tend to became. All these functions involve expenditure, to meet which government needs money. Therefore, it has to raise revenue. Thus the science which studies wealth getting and wealth spending activities of the state in known as public finance.

Division of Public Finance

1. Public Expenditure
2. Public Revenue
3. Public Debt
4. Financial Administration

FUNCTION OF PUBLIC FINANCE

i. Allocative Function: It refers to the process by which total resource use is divided between private and social goods by which the mix of social goods is chosen. This is done by budgetary policy.

ii. Distributary Function: The budgetary policy also affects the distribution of income in the community. The tax and expenditure measures are adopted to modify the existing distribution with view to reducing economic inequalities. In the way optional income distribution is brought about.

iii. Stabilization Function: The budgetary policy can also be used to maintain a high level of employment, a reasonable degree of price level stability, an appropriate rate of economic growth and stability in balance of payment.

PUBLIC EXPENDITURE

To bring about the desired and balanced growth between backward and developed region in the country, we require huge amount of public expenditure. A brief account is presented below.

1. Development of agriculture and industry – Agriculture provides raw material to industry and industry gives capital goods to agriculture. Hence development of both of the sector is essential for development of country. The government has to incur a lot of expenditure on agriculture sector particularly on irrigation, electricity, farm supply industries etc. Similarly for development of industrial sector, public enterprises viz. steel plants, electrical, heavy engineering machine, tools, equipment etc. should be established.Investment has to be made on agro-processing industries.
2. Provision of public utilities: e.g. water, transport, electricity etc.
3. Technological changes: Investment for new innovations and inventions for enhance productivity.
4. Creation of employment: It should be focused to undertake various public works etc to create employment opportunities.

PRINCIPLES OF PUBLIC EXPENDITURE

Principles of Maximum Social Benefit**:** The public expenditure should be aimed to give rise to maximum social advantage. There should be a functional balance between social benefits and social costs. Every rupee spent by the government should provide maximum welfare to the society as a whole.

Principle of Economy**:** The superfluous or wastage of expenditure should be avoided in spending public money.

Principle of Sanction: Every item of public expenditure should be sanctioned by competent authority with rationality.

Principle of Elasticity:The quantum of public expenditure should very according to need and circumstances. It is necessary that scale of public expenditure should be increased gradually, not abruptly.

Principle of Surplus: It should be kept well within the revenue level of the state so that surplus remains at the end of the year. In other words government should avoid deficit budget in normal times.

PUBLIC REVENUE

Public revenue is the revenue accrued to the government from different sources viz. direct taxes, indirect taxes and non-tax revenue such as prices and other miscellaneous receipt.

Major Sources of Public Revenue:

Taxes: are compulsory contributions levied upon person, corporation etc. They are classified as direct taxes and indirect taxes**.** Direct taxes are directly paid by the persons, e.g. income tax while indirect taxes are commodity taxes. The indirect taxes are paidindirectly by the consumer through dealer,e.g. sales tax.

Prices: Prices of public amenities, e.g. railway fare, electricity, water tax, house tax etc.

Minor Sources of Public Revenue

Fee: licence fee for vehicles, educational fee etc.

Rates: Rates are certain types of taxes levied by local bodies, viz. municipalities,panchayat, corporation, district boards etc.

Fines:penalties imposed on person for breaking of law

etc. Escheat: claim of the state to the deceased's

assets is escheat.

Tributes and indemnities: These are paid for any damage done to the country by way of war of aggression

Grants, gifts and donations: development grants, relief at the time of natural calamities, like earthquake, drought, cyclones etc and funds for specific purpose viz. Construction of educational buildings, hospitals, relief work etc.

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Chapter 20
CLASSIFICATION OF TAXES: CANON OF TAXATION

The father of economics, Adam Smith's statements are considered as Canons of Taxation. These include the following:-

1. Canon of equality: It implies the principle of equity and justice. Here equality implies that every tax payer should pay the same rate of tax but not the same amount. It is a sort of proportional tax.
2. Canon of sacrifice: This implies equality of sacrifice. The amount of tax paid should be in proportion to respective abilities of tax payer. This point to progressive taxation.
3. Canon of certainty: It means taxation limit should be fixed with certainty. Under this time of payment, manner of payment and amount of tax to be paid should be clear and easy to understand. Uncertainty in taxation leads to corruption.
4. Canon of convenience: This mean tax ought to be levied at the time or manner in which it is most likely to be convenient for tax payer. The time and manner of tax payment should be clear, certain and convenient,e.g. land revenue, cash or cheque etc.
5. Canon of economy: The cost of collecting tax should be small and economical. If the incomes of the people were subjected to heavy burden of taxation, then their savings would be affected, which in turn affect capital formation in the country. The development of agriculture, trade and industry is retarded. Then certainly the tax systems become uneconomical.

Harmful drugs and intoxicants affect the health of people; hence heavy burden of taxes on these goods is regarded as economical and justifiable. This would result is less consumption of these commodities by the people and more income to the exchequer/states. But taxes on raw material are considered uneconomical because the price of manufactured goods is increased and competitive power of the industry gets weakened.

Later some economists added some more canons to the taxation. These are as below,

1. Fiscal adequacy: The tax revenue should adequately cover the government expenditure and the Govt. should not run into deficit state.
2. Elasticity: This means the tax revenue should be adequate to the government to meet the expenditure, particularly at the time of stress or strain.
3. Flexibility: The tax system should be flexible. It should quickly adjust to new demand and conditions of the country.
4. Simplicity: It should be clear, fair, simple and easy to understand. If the tax system is completed, taxpayer cannot understand, how much he has to pay and hence be would try to evade the tax.
5. Diversity: A few taxes should be imposed rather than a single largest tax. The varietyof taxes should be in conformity with the availability of tax payers. Hence there should be a wise mixture of direct & Indirect taxes.
6. Social & economic objectives: The revenue generated from tax payers should be used for achieving social & economic objectives of the country.
7. Neutrality: This indicates taxation system should reduce the economic irregularities ii different region. During depression, it should lead to deficit budgeting and during inflation, if should be used as a tool to fight inflation in the country. The taxation system should be used to control threats of economic instability and stagnation. During normal years it should lead to balanced budget.

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Chapter 21

INFLATION: MEANING, DEFINITION, KINDS OF INFLATION

Meaning:-The term inflation generally means a situation of rising prices of goods, which lowers the purchasing power of money. It is the situation in which either the prices or the supply of money are rising, but in reality both will rise together. It is a persistent & appreciable rise in general price level. The rate of inflation is defined as the rate of change of the price level as measured by the consumer price index (CPI).

Rate of inflation in (t^{th} period) =Price level (t^{th}year) (t-1^{th}year)/Price level (t-1^{th}year)

KINDS OF INFLATION

1. Deflation: Opposite of inflation is deflation.It is found when the general level of prices is falling. It is the situation in which supply of money at a particular point of time is less than demand.
2. Reflation: It refers to a moderate degree of controlled inflation.
3. Disinflation: It indicates the decline in the rate of inflation.
4. Stagflation: It is inflation accompanied by stagnation on the development. It is associated with high prices & high unemployment. It is a global phenomenon, as every country whether developed or developing experiences stagflation.

CAUSES OF INFLATION

Factors causing increase demand	Factors causing decrease in supply
• Increase in money supply. • Increase in disposable income. • Increase in communities aggregate spending on consumption & investment goods. • Excessive speculation & tendency to trading & proffering on part of produces & trades. • Increase in exports. • Increase in salaries, wages & DA • Increase in population	• Deficiency of capital equipment. • Scarcity of other complementary factors of production. • Increase in exports. • Decrease in imports. • Hording by traders. • Natural calamities etc.

TYPES OF INFLATION

Suppressed inflation: It is the situation in which Govt. does not tackle the factors causing inflation; it only imposes control to check the price rise.

Creeping inflation: It is the mildest type of inflation. A sustained rise of less than 3% in prices per annum is called creeping inflation. It is not considered serious for economy.

Walking inflation: When the rise in prices falls in the range of 3 to 6 per cent, it is called walking inflation.

Running inflation: when the rise in price is about aloft 10 per cent per annum, it is called running inflation.

Galloping or hyperinflation: This is most dangerous type of inflation. It is experienced when prices rise by 16 per cent or more per annum.

Open inflation: The inflation is said to be open when the market sources are allowed to operate greedy to fix prices. The government does not take any step to check it (price rise).

Suppressed or Repressed inflation: It refers to a situation when Government activity intervenes to check the rise in the price level through the use of price control measures & rationing of scares items in the economy.

Comprehensive inflation: This type of inflation occurs when prices of all the commodities register a rise in the economy.

Sporadic inflation: Under this type of inflation only the prices of few commodities show upward trend.

Demand full inflation**:** It occurs as a result of excessive demand for goods & service which pull price upward.

Demand shift inflation: This occurs when shifts take place in demand for different G&S with total demand remaining unchanged.

Cost-push inflation: Enforcement of wage increase & increase of profits by employer lead to cost- push inflation.

Mixed demand pull &cost push inflation: This situation is termed as hybrid from of inflation. It is a situation in which some elements of demand pull inflation and cost-push inflation are found. In reality excess demand & cost-push forces operate simultaneously and interdependently in an inflationary process.

Mark- up inflation: This prevails when gigantic business organisation adopt a peculiar method of pricing. They work out the production cost & then add a certain mark up to get targeted rate of profit on their capital investment. This mark-up is generally on high side.

Profit induced inflation: Sometimes it happens in the economy that production costs declines as a result price also tend to decline. But the government does not allow the price to fall down by restoring to artificial means. The Government interventions neither allow the price to rise nor allow them to fall down. This action of the Government results is increase in the profits of the producers.

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