UNIT-I
INTRODUCTION TO MANAGERIAL ECONOMICS

Introduction to Economics

Economics is a study of human activity both at individual and national level. Every one of us in involved in efforts aimed at earning money and spending this money to satisfy our wants such as food, Clothing, shelter, and others. Such activities of earning and spending money are called "Economic activities".

It was only during the eighteenth century that Adam Smith, the Father of Economics, defined '*economics as the study of nature and uses of national wealth*'.

Dr. Alfred Marshall, one of the greatest economists of the nineteenth century, writes "Economics is a study of man's actions in the ordinary business of life: it enquires how he gets his income and how he uses it". Thus, it is one side, a study of wealth; and on the other, and more important side; it is the study of man.

Prof. Lionel Robbins defined Economics as "the science, which studies human behaviour as a relationship between ends and scarce means which have alternative uses". With this, the focus of economics shifted from 'wealth' to human behaviour'.

Microeconomics : The study of an individual consumer or a firm is called microeconomics (also called the *Theory of Firm*). Micro means 'one millionth'. Microeconomics deals with behavior and problems of single individual and of micro organization. It is concerned with the application of the concepts such as price theory, Law of Demand and theories of market structure and so on.

Macroeconomics : The study of 'aggregate' or total level of economics activity in a country is called *macroeconomics*. It studies the flow of economics resources or factors of production (such as land, labour, capital, organisation and technology). It deals with total aggregates, for instance, total national income total employment, output and total investment. It discusses aggregate consumption, aggregate investment, price level, and payment, theories of employment, and so on.

Management : Management is the science and art of getting things done through people in formally organized groups. It is necessary that every organisation be well managed to enable it to achieve its desired goals. Management includes a number of functions: *Planning, organizing, staffing, directing, and controlling*.

Managerial Economics

Introduction : Managerial Economics refers to the firm's decision making process. It could be also interpreted as "Economics of Management" or "Economics of Management". Managerial Economics is also called as "Industrial Economics" or "Business Economics".

Meaning & Definition:

M. H. Spencer and Louis Siegelman explain the "Managerial Economics is the integration of economic theory with business practice for the purpose of facilitating decision making and forward planning by management".

In the words of E. F. Brigham and J. L. Pappas Managerial Economics is "the applications of economics theory and methodology to business administration practice".

Managerial Economics bridges the gap between traditional economics theory and real business practices in two days. First it provides a number of tools and techniques to enable the manager to become more competent to take decisions in real and practical situations. Secondly it serves as an integrating course to show the interaction between various areas in which the firm operates. Managerial Economics, therefore, focuses on those tools and techniques, which are useful in decision-making.

Importance /Significance of Managerial Economics:

In the modern era, the business decision is increasing. So, the Role And Importance Of Managerial Economics also increase. Because it is helpful and helpful for many types of business decisions. And the salient features and significance of managerial economics are also good.

1. Useful in Business Organization: In any institution or firm. How should any production be done, and for whom should be produced? The answer to all these questions remains only with the managerial economy. Because he plays the most important role in these tasks. So we can say that managerial economics plays a very big role and significance in the important decisions of the business. So this is a very good Role And Importance Of Managerial Economics In Choosing Right Decisions of any business.

2. Helpful in Chalking Out Business Policies: The art is only in business economics to maximize the profit of any institution and minimize cost. And whatever policies are made from this. It is very useful for any business or firm so that every firm and business can get the maximum benefit. Then we can say that there is a huge contribution of managerial economics to profit maximization and determining policies. It also helps in doing it.

3. Help in Business Planning : Business economics is very useful in planning a complete prospect among the successful operation and production of any business or firm. Which acts as a balance bridge between the production tools and operating systems and where to go. So this is the biggest and important role of business economics in any business or firm.

4. Helpful in Cost Control : Managerial economics decides the business is going towards profit or loss. managerial economics decides which way is good for the business. And it is only possible when managerial economics plays a very big and important role in cost control decisions.

5. Useful in Coordination of Business Activities : The managerial economics is useful in coordinating the various activities of a business.

6. Useful In Demand for Casting : The managerial economics provides useful tools for economics managers in demand forecasts and is useful in demanding production planning. The managerial economy deals with future losses easily. So that any business can be protected against future losses.

7. Helpful in Profit Planning and Control : Managerial economics helps managers to decide on the planning and control of the benefits.Managerial Economics is synchronized between the planning and control of any institution or firm and hence its importance increases.

8. Helpful for Business Prediction : It is not known to anyone about what is going on in business. therefore, business economics tells us that the business can see what is troubling in the future.So Then the managerial economics gives its solutions. So that they can be avoided and the benefits can be increased.

9. Helpful in Price Determination : Managerial Economics provides the necessary guidance in managing the pricing of its business. This proves this in order to raise the required data in pricing and get the maximum benefit.

10. Helpful in Solutions of Business Taxation Problems : Managerial Economics provides useful guidance in solving problems caused by various types of tax done in business. And contracting of business helps reduce problems. To maximize profit at low cost and minimize business costs.

11. Useful in Understanding the Mechanism of Economic System : Managerial Economics/Business economics is useful in understanding the complex cause of the entire economy. From which business decisions get help.

12. Helpful in Analysis of Effects of Government Policies : Business economics/Managerial Economics helps in analyzing the effect of the various policies of the Government in the operation of the business sector. reducing their bad influence and giving benefit to the good effect.

13. Attempt to put out the friendly business : Managerial Economics guides managers to adjust to suit the external conditions of the business. It may be the type of external environment. such as government policies or business cycles, and many other conditions which affect the business. and give security business economics.

14. Supporting the Manufacture and use of Models : Managerial Economics creates an economic model for managers to inspire their use in business. In order to maximize production and maximum profit, at least cost can be paved.

15. Useful in showing the path of Economic well-being : Managerial Economics inspires managers to operate the business in such a way that the path of maximum economic welfare is paved.

16. Gives the Right Direction : Inside the business, managerial economics has a very big role because it handles that business. Shows the right path to every member of the business, and also gives the right direction of what his duty and job.

17. Maintains of Costs : It is the job of managerial economics to say how much to spend in business and how to spend those expenses so that it can get more profit at lower costs and increase business growth. 19 Factors Influencing Entrepreneurship Development.

18. Distribute Profit : Inside any business, managerial economics tells us how to distribute the profits and invest in where to make the business more profitable in the coming time and more growth in the business field.

19. Measurement of the Efficiency of the Firm : Managerial Economics provides useful tools for managers in measuring the efficiency of the business firm. Managerial Economics plays big salient features and significance of managerial economics In Choosing Right Decisions in helping business in many ways.

Role /Functions of managerial economics:

1. **Studies Business Environment:** Managerial economics properly analyze the external environment within which the business operates. These factors influence the working of the business and therefore should be considered while taking any decisions and framing policies. Managerial economic studies all factors like economic scenario, government policies, price trends, national income growth, etc.
2. **Production Scheduling**: Managerial economics manages and prepare schedules for all production activities of business. It estimates all future demands using various quantitative tools which helps in making production plans.
3. **Control Cost:** Controlling the cost is vital for achieving the desired profitability and growth. Managerial economics estimates the cost of all business activities and identify all those factors that cause variations in cost from time to time. It aims at minimizing the cost through optimum utilization of all resources.
4. **Set Prices**: Setting the right price is a very challenging task for every business organization. Managerial economics helps management in fixing the correct price by supplying all information regarding competitors pricing methods.
5. **Bring Coordination**: Managerial economics brings coordination and flexibility in all operations of the business. It supports effective decision making by providing all relevant data using economic theories and tools.
6. **Investment Analysis**: Managerial economics ensures that all business funds are allocated to profitable means. It properly analyzes the profitability of all investment avenues before investing any amount into it.

Benefits of Managerial economics:

Economics Managerial economic implementation by managers can produce the following:

1. **Evaluate past managerial policies** as to whether they are appropriate or need improvement. The policies that have been taken and executed in the company's operations are sometimes irrelevant to

changing market conditions. Therefore evaluation of the policy is necessary for a new remedy or decision-making to be adapted to the current problem.

2. **Help managers recognize and identify the economic strengths** and weaknesses that can affect the company
3. **Establish a decision policy** that is in line with the company's operational standards. Each company has different operational standards from one to another. Policies and regulations are different, tailored to the field or type of company, vision and mission of the company, the actors in this case are managers,
4. **Identify costs** to be as efficient as possible
5. **Sets the selling price** of the appropriate product to achieve maximum net profit
6. **Helps in the face of fluctuations** in market conditions that affect demand for goods, prices, and profits

Nature of Managerial Economics

Managerial Economics is, perhaps, the youngest of all the social sciences. Since it originates from Economics, it has the basic features of Economics, such as assuming that other things remaining the same. The other features of managerial economics are explained as below:

(a) ***Close to microeconomics***: Managerial economics is concerned with finding the solutions for different managerial problems of a particular firm. Thus, it is more close to microeconomics.

(b) ***Operates against the backdrop of macroeconomics***: The managerial economist has to be aware of the limits set by the macroeconomics conditions such as government industrial policy, inflation and so on.

(c) ***Normative statements***: A normative statement usually includes or implies the words 'ought' or 'should'. They reflect people's moral attitudes and are expressions of what a team of people ought to do. For instance, it deals with statements such as 'Government of India should open up the economy. Such statement are based on value judgments and express views of what is 'good' or 'bad', 'right' or ' wrong'.

(d) ***Prescriptive actions***: Prescriptive action is goal oriented. Given a problem and the objectives of the firm, it suggests the course of action from the available alternatives for optimal solution. If does not merely mention the concept, it also explains whether the concept can be applied in a given context on not.

(e) ***Applied in nature***: 'Models' are built to reflect the real life complex business situations and these models are of immense help to managers for decision-making. In managerial economics, we also employ case study methods to conceptualize the problem, identify that alternative and determine the best course of action.

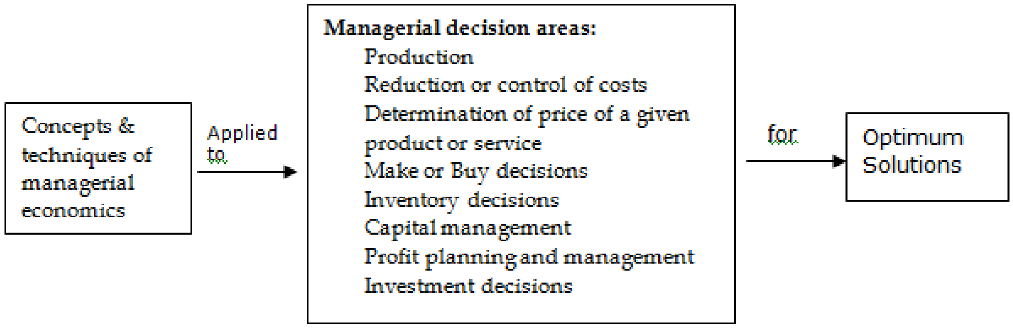
(f) ***Offers scope to evaluate each alternative***: Managerial economics provides an opportunity to evaluate each alternative in terms of its costs and revenue. The managerial economist can decide the better alternative to maximize the profits of the firm.

(g) ***Interdisciplinary***: The contents, tools and techniques of managerial economics are drawn from different subjects such as economics, management, mathematics, statistics, accountancy, psychology, organizational behavior, sociology and etc.

(h) ***Assumptions and limitations***: Every concept and theory of managerial economics is based on certain assumption and as such their validity is not universal. Where there is change in assumptions, the theory may not hold good at all.

Scope of Managerial Economics:

The main focus in managerial economics is to find an optimal solutions to a given managerial problems. The managerial economist makes use of the concepts, tools and techniques of economics and other related disciplines to find an optimal solution to a given managerial problem.



The main areas of managerial economics :

The main areas of applications in managerial economics are discussed below:

a) **Demand Decision:**The analysis and forecasting of demand for a given product and service is the first task of the managerial economist. The behavioural implications such as the needs of the customers, responses to a given change in the price or supply are analysed in a scientific manner. The impact of changes in prices, income levels and prices of alternative product/services are assessed and accordingly the decisions are taken to maximize the profits.

b) **Input-Output Decision:** Here, the costs of inputs in relation to output are studied to optimize the profits. The entire focus of this decision is to optimize (maximize) the output at minimum cost.

c) **Price-Output decisions:** Here, the production is ready and the task is to determine price these in different market situations such as perfect market and imperfect markets ranging from monopoly, monopolistic competition, duopoly and oligopoly.

d) **Profit-related decisions:** Here, we employ the techniques such as break even analysis, cost reduction and cost control and ratio analysis to ascertain the level of profits. In break-even analysis (BEP), we are concerned with profit planning and control.

e) **Investment Decisions:** Hence, it is to be utilized in such a way as to maximize the return on the capital invested. It is necessary to study the cost of capital, choice of capital structure and investment projects before the funds are committed.

f) **Economic forecasting and forward planning:** Economic forecasting leads to forward planning. The external factors include major forces such as government policy, competition, employment, labour, and price and income levels and so on. The internal factors include its policies and procedures relating to finance, people, market and products. This will minimize the risk and uncertainty about the future.

Contemporary Importance of Managerial Economics:

The following points indicate the significance of the study of this subject in its right perspective.

- It gives guidance for identification of key variables in decision-making process.
- It helps the business executives to understand the various intricacies of business and managerial problems and to take right decision at the right time.
- It provides the necessary conceptual, technical skills, toolbox of analysis and techniques of thinking and other such most modern tools and instruments like elasticity of demand and supply, cost and revenue, income and expenditure, profit and volume of production etc to solve various business problems.
- It is both a science and an art. In the context of globalization, privatization, liberalization and marketization and a highly competitive dynamic economy, it helps in identifying various business and managerial problems, their causes and consequence, and suggests various policies and programs to overcome them.
- It helps the business executives to become much more responsive, realistic and competent to face the ever changing challenges in the modern business world.
- It helps in the optimum use of scarce resources of a firm to maximize its profits.

- It also helps in achieving other objectives a firm like attaining industry leadership, market share expansion and social responsibilities etc.
- It helps a firm in forecasting the most important economic variables like demand, supply, cost, revenue, price, sales and profit etc. and formulate sound business polices
- It also helps in understanding the various external factors and forces which affect the decision-making of a firm.

  Thus, it has become a highly useful and practical discipline in recent years to analyze and find solutions to various kinds of problems in a systematic and rational manner.

Managerial Economist is a specialist and an expert in analyzing and finding answers to business and managerial problems. A Managerial Economist has to perform several functions in an organization. Among them, decision-making and forward planning are described as the two major functions and all other functions are derived from these two basic functions.

1. Decision-making : The word 'decision' suggests a deliberate choice made out of several possible alternative courses of action after carefully considering them. Decision-making is essentially a process of selecting the best out of many alternative opportunities or courses of action that are open to a management.

2. Forward planning : The term 'planning' implies a consciously directed activity with certain predetermined goals and means to carry them out. **It is a deliberate activity. It is** a programmed action. Basically planning is concerned with tackling future situations in a systematic manner. Forward planning implies planning in advance for the future**.** It is associated with deciding the future course of action of a firm. It is prepared on the basis of past and current experience of a firm.

<u>Managerial economics relationship with other disciplines:</u>

Many new subjects have evolved in recent years due to the interaction among basic disciplines. While there are many such new subjects in natural and social sciences, managerial economics can be taken as the best example of such a phenomenon among social sciences. Hence it is necessary to trace its roots and relation ship with other disciplines.

(a) ***Relationship with economics:*** The relationship between managerial economics and economics theory may be viewed form the point of view of the two approaches to the subject Viz. Micro Economics and Marco Economics. Microeconomics is the study of the economic behavior of individuals, firms and other such micro organizations. Managerial economics is rooted in Micro Economic theory. Managerial Economics makes use to several Micro Economic concepts such as marginal cost, marginal revenue, elasticity of demand as well as price theory and theories of market structure to name only a few. Macro theory on the other hand is the study of the economy as a whole. It deals with the analysis of national income, the level of employment, general price level, consumption and investment in the economy and even matters related to international trade, Money, public finance, etc.

    The relationship between managerial economics and economics theory is like that of engineering science to physics or of medicine to biology. Managerial economics has an applied bias and its wider scope lies in applying economic theory to solve real life problems of enterprises. Both managerial economics and economics deal with problems of scarcity and resource allocation.

(b) ***Management theory and accounting:***Managerial economics has been influenced by the developments in management theory and accounting techniques. Accounting refers to the recording of pecuniary transactions of the firm in certain books. A proper knowledge of accounting techniques is very essential for the success of the firm because profit maximization is the major objective of the firm.

    Managerial Economics requires a proper knowledge of cost and revenue information and their classification. A student of managerial economics should be familiar with the generation, interpretation and use of accounting data. The focus of accounting within the firm is fast changing from the concepts of store keeping to that if managerial decision making, this has resulted in a new specialized area of study called “Managerial Accounting”.

(a) ***Managerial Economics and mathematics:*** The use of mathematics is significant for managerial economics in view of its profit maximization goal long with optional use of resources. The major problem of the firm is how to minimize cost, hoe to maximize profit or how to optimize sales. Mathematical concepts and techniques are widely used in economic logic to solve these problems. Also mathematical methods help to estimate and predict the economic factors for decision making and forward planning.

Mathematical symbols are more convenient to handle and understand various concepts like incremental cost, elasticity of demand etc., Geometry, Algebra and calculus are the major branches of mathematics which are of use in managerial economics. The main concepts of mathematics like logarithms, and exponentials, vectors and determinants, input-output models etc., are widely used. Besides these usual tools, more advanced techniques designed in the recent years viz. linear programming, inventory models and game theory fine wide application in managerial economics.

(b) ***Managerial Economics and Statistics:*** Managerial Economics needs the tools of statistics in more than one way. A successful businessman must correctly estimate the demand for his product. He should be able to analyses the impact of variations in tastes. Fashion and changes in income on demand only then he can adjust his output. Statistical methods provide and sure base for decision-making. Thus statistical tools are used in collecting data and analyzing them to help in the decision making process.

Statistical tools like the theory of probability and forecasting techniques help the firm to predict the future course of events. Managerial Economics also make use of correlation and multiple regressions in related variables like price and demand to estimate the extent of dependence of one variable on the other. The theory of probability is very useful in problems involving uncertainty.

(c)***Managerial Economics and Operations Research:*** Taking effectives decisions is the major concern of both managerial economics and operations research. The development of techniques and concepts such as linear programming, inventory models and game theory is due to the development of this new subject of operations research in the postwar years. Operations research is concerned with the complex problems arising out of the management of men, machines, materials and money.

Operation research provides a scientific model of the system and it helps managerial economists in the field of product development, material management, and inventory control, quality control, marketing and demand analysis. The varied tools of operations Research are helpful to managerial economists in decision-making.

(d) ***Managerial Economics and the theory of Decision- making:*** The Theory of decision-making is a new field of knowledge grown in the second half of this century. Most of the economic theories explain a single goal for the consumer i.e., Profit maximization for the firm. But the theory of decision-making is developed to explain multiplicity of goals and lot of uncertainty.

As such this new branch of knowledge is useful to business firms, which have to take quick decision in the case of multiple goals. Viewed this way the theory of decision making is more practical and application oriented than the economic theories.

(e)***Managerial Economics and Computer Science:*** Computers have changes the way of the world functions and economic or business activity is no exception. Computers are used in data and accounts maintenance, inventory and stock controls and supply and demand predictions. What used to take days and months is done in a few minutes or hours by the computers. In fact computerization of business activities on a large scale has reduced the workload of managerial personnel. In most countries a basic knowledge of computer science, is a compulsory programme for managerial trainees.

To conclude, managerial economics, which is an offshoot traditional economics, has gained strength to be a separate branch of knowledge. It strength lies in its ability to integrate ideas from various specialized subjects to gain a proper perspective for decision-making.

A successful managerial economist must be a mathematician, a statistician and an economist. He must be also able to combine philosophic methods with historical methods to get the right perspective only then; he will be good at predictions. In short managerial practices with the help of other allied sciences.

DEMAND ANALYSIS

Introduction:

Every want supported by the willingness and ability to but constitutes demand for a particular product or services. In other words, if I want a car and I cannot pay for it, there is no demand for the car from my side.

In the words of **"Benham"** "The demand for anything at a given price is the amount of it which will be bought per unit of time at that Price".

A product or services is said to have demand when three conditions are satisfied:

- Desire on the part of the buyer
- Willingness to pay for it
- Ability to pay the specified price for it.

Nature and Types of Demand :

The use and characteristics of different products affect their demand.

- **Consumer Goods Vs Producer Goods: Consumer goods** are those which are available for ultimate consumption. These give direct and immediate satisfaction. **Examples** are bread, apple, and rice and so on.

  Producer goods are those which are used for further processing or production of goods/services to earn income. **Examples** are Machinery or a tractor. These goods yield satisfaction indirectly.
- **Autonomous Demand Vs Derived Demand: Autonomous demand** refers to the demand for products and services directly. The demand for services of a super specialty hospital can be considered as autonomous whereas demand for the hotels around that hospital is called a **derived demand**.
- **Durable Vs Perishable goods: Durable goods** are those goods which give service relatively for a long period. **Examples of Durable goods** like fish, and such Rice, wheat, sugar e.t.c., The life of **the perishable** goods is very less, may be in hours or days. **Example of perishable** goods are milk, vegetables.
- **Firm Demand Vs Industry Demand :** The **firm is** a single business unit whereas industry refers to the group of firms carrying on similar activity. The quantity of goods demanded by a single firm is called firm demand and the quantity demanded by the **industry** as a whole is called industry demand.
- **Short-run Demand Vs Long-run Demand : Short-run demand** as 'the demand with its immediate reaction to price changes, income fluctuations and so on. **Long-run demand** is that demand which will ultimately exist as a result of the changes in pricing, promotion or product improvement.
- **New Demand Vs Replacement Demand : New demand** refers to the demand for the new products and it is the addition to the existing stock. In **replacement demand**, the item is purchased to maintain the asset in good condition.
- **Total Market Demand Vs Segment Market Demand :** The **total demand** for the product in the region is the total market demand. The demand for the product from the specific industry from this region is the **segment market demand.**

Factors Affecting Demand:

There are factors on which the demand for a commodity depends. These factors are economic, social as well as political factors. The effect of all the factors on the amount demanded for the commodity is called Demand Function.

These factors are as follows:

a) ***Price of the Commodity(P):*** The most important factor-affecting amount demanded is the price of the commodity. The amount of a commodity demanded at a particular price is more properly called price demand. The relation between price and demand is called the Law of Demand.

b) ***Income of the Consumer(I):*** The second most important factor influencing demand is consumer income. The demand for a normal commodity goes up when income rises and falls down when income falls. But in case of Giffen goods the relationship is the opposite.

c) ***Prices of related goods(Pr)***: The demand for a commodity is also affected by the changes in prices of the related goods also. Related goods can be of two types:

   i) **Substitutes** which can replace each other in use; **for example**, tea and coffee are substitutes. The change in price of a substitute has effect on a commodity's demand in the same direction in which price changes. The rise in price of coffee shall raise the demand for tea;

   ii) **Complementary** foods are those which are jointly demanded, such as pen and ink. In such cases complementary goods have opposite relationship between price of one commodity and the amount demanded for the other. If the price of pens goes up, their demand is less as a result of which the demand for ink is also less. The price and demand go in opposite direction. The effect of changes in price of a commodity on amounts demanded of related commodities is called **Cross Demand**.

d) ***Tastes of the Consumers(T):*** The amount demanded also depends on consumer's taste. Tastes include fashion, habit, customs, etc. A consumer's taste is also affected by advertisement. If the taste for a commodity goes up, its amount demanded is more even at the same price. This is called increase in demand. The opposite is called decrease in demand.

e) ***Wealth(W):***The amount demanded of commodity is also affected by the amount of wealth as well as its distribution. The wealthier are the people; higher is the demand for normal commodities. If wealth is more equally distributed, the demand for necessaries and comforts is more. On the other hand, if some people are rich, while the majorities are poor, the demand for luxuries is generally higher.

f) ***Size of Population(Sp):***Increase in population increases demand for necessaries of life. The composition of population also affects demand. Composition of population means the proportion of young and old and children as well as the ratio of men to women. A change in composition of population has an effect on the nature of demand for different commodities.

g) ***Government Policy (G):***Government policy affects the demands for commodities through taxation. Taxing a commodity increases its price and the demand goes down. Similarly, financial help from the government increases the demand for a commodity while lowering its price.

h) ***Expectations about the prices in future(Ep):***If consumers expect changes in price of commodity in future, they will change the demand at present even when the present price remains the same.

i) ***Expectations about the incomes in future(Ei):***Similarly, if consumers expect their incomes to rise in the near future they may increase the demand for a commodity just now.

j) ***Advertising Efforts (A):***The demand for the product goes up if the advertisement telecasted for the products, which will enhance the awareness about the product.

Demand Function:

Demand function is a function which describes a relationship between one variable and its determinants.

$$Qd=f(P, I, T, Pr, Ep, Ei, Sp, A)$$

Qd – Quantity demand of the product
F - function of demand
P - Price of the product
I - Income of the Consumer
T - Tastes and Preferences of the Consumers
Pr - Prices of related goods
Ep - Expectations about the prices in future
Ei - Expectations about the incomes in future
Sp - Size of Population
A - Advertising Efforts

LAW of Demand

Introduction: Law of demand shows the relation between price and quantity demanded of a commodity in the market. In the words of Marshall, "the amount demand increases with a fall in price and diminishes with a rise in price".

A rise in the price of a commodity is followed by a reduction in demand and a fall in price is followed by an increase in demand, if a condition of demand remains constant.

DEFINITIONS OF LAW OF DEMAND

1. ALFRED MARSHALL stated that Law of Demand as

1."a rise in the price of commodity or service is followed by a reduction in demand and fall in price is followed by an increase in demand, if the conditions of 2.demand remain constant."

Marshall stated that the Law of Demand basing on the law of Diminishing Marginal utility

2. In the words of SAMUELSON

1. The Law of Demand may be stated as
2. "Other things being equal, the quantity demanded increases with a fall in price and decreases with a rise in price."

The law of demand may be explained with the help of the following demand schedule.

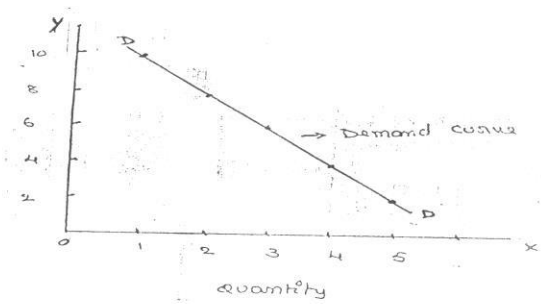
Demand Schedule.

Price of Apple (In. Rs.)	Quantity Demanded
10	*1*
8	*2*
6	*3*
4	*4*
2	*5*

When the price falls from Rs. 10 to 8 quantity demand increases from 1 to 2. In the same way as price falls, quantity demand increases on the basis of the demand schedule we can draw the demand curve.

In the below diagram, demand is shown on OX –axis and price is shown on OY-axis. DD is the demand curve. The demand curve DD shows the inverse relation between price and quantity demand of Apples. The demand curve slopes downward from left to right.

Price



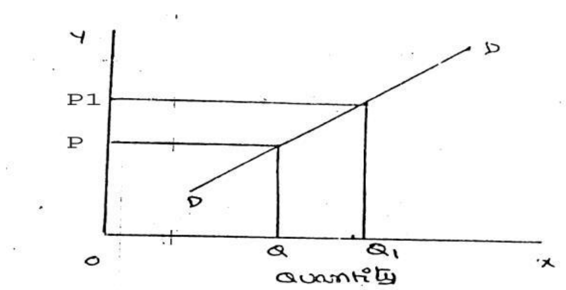
ASSUMPTIONS OF LAW OF DEMAND:

Law is demand is based on certain assumptions:

- This is no change in consumers taste and preferences.
- Income should remain constant.
- Prices of other goods should not change.
- There should be no substitute for the commodity.
- The commodity should not confer at any distinction.
- The demand for the commodity should be continuous.
- People should not expect any change in the price of the commodity.

EXCEPTIONS TO THE LAW OF DEMAND

Some times in case of some commodities demand curve slopes upwards from left to right.It shows that when price rises demand also rises and when price falls demand also falls.In this case the demand curve has a positive slope.We can draw the Exceptional Demand Curve as follows.



Price

In the above Diagram, demand is shown on OX –axis and price is shown on OY-axis.DD is the demand curve.When price increases from OP to OP1 quantity demand also increases from OQ to OQ1 and the price falls down from OP1 to OP quantity demand also falls down from OQ1 to OQ.Hence the exceptional demand curve slopes upwards from left to right in this diagram.

The following are the important exceptions to the Law of Demand.

1. Giffen Paradox 2. Prestige goods 3. Speculation
4. Trade Cycles 5. Changes in Expectations.

1. GIFFEN PARADOX :

- In the early part of the 19th Century, Sir Robbert Giffen, a British Economist observed that the Low paid British workers were purchasing more bread, when its price increased.

- This is some thing contrary to the law of demand.
- He observed that the people spend a major portion of their incomes on bread only a small part on meat.
- Meat is more costly but less essential that bread.
- When the price of the bread increased, they reduced the expenditure on meat.
- With the money thus saved they purchased more bread to compensate for the loss of meat.
- Thus where the price of bread is increases, its demand is also increased. This is the against law of demand.
- This paradox was stated by Sir Robbert Giffen. Therefore, it is called Giffen Paradox.
- Marshall could not explain this. It appeared to be a paradox to him.
- The Demand Curve for Giffen goods(Inferior goods) goes upward from left to right as shown in the above diagram.

2. PRESTIGE GOODS:

- This exception is explained by Veblen. Costly goods like Diamonds, cars etc., are called prestige goods or as Veblen goods.
- Generally rich people purchase those goods for the sake of prestige. The use of such articles increases the prestige of owners.
- So rich people may buy more of such goods when their prices rise.
- Thus the amount demanded rises instead of falling; when the prices fall they do not purchase them because their value is reduced.
- Therefore the demand decreases when the price falls. This is against to the Law of Demand.
- Since this exception is stated by Veblen, it is called Veblen effect.

3. SPECULATION:

- When the price of a commodity rises and people expect that it will rise still further. Hence they buy more of that commodity.
- Similarly, if they expect that there is going to be a further fall in the price, demand may not expand.
- This is contrary to the Law of Demand.

4. TRADE CYCLES:

- During the periods of economic prosperity, people buy more even when the prices rise. This happens because the incomes of the people have gone up.
- During times of depression, people buy less and less even when prices fall.

5. CHANGES IN EXPECTATIONS:

- When people expect a further rise in prices, people buy more when rices rise. They want avoid paying more in future.
- Similarly, when people expect the prices to fall in further, they buy less and less as prices fall. They may be expecting a further in prices.

ELASTICITY OF DEMAND

ELASTICITY OF DEMAND:

Elasticity of demand explains the relationship between a change in price and consequent change in amount demanded. “Marshall” introduced the concept of elasticity of demand. Elasticity of demand shows the extent of change in quantity demanded to a change in price.

In other words, it explains the extent of change in quantity demanded because of a given change in the other determining factors, may be price or other factors. “Marshall” introduced the concept of elasticity of demand. Elasticity of demand shows the extent of change in quantity demanded to a change in price.

Elastic demand: A small change in price may lead to a great change in quantity demanded. In this case, demand is elastic.
In-elastic demand: If a big change in price is followed by a small change in demanded then the demand in "inelastic".
Types of Elasticity of Demand:
There are four types of elasticity of demand:

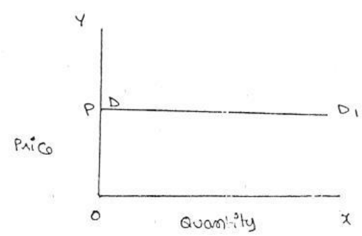
1. Price elasticity of demand
2. Income elasticity of demand
3. Cross elasticity of demand
4. Advertisement elasticity of demand

1. **Price elasticity of demand:** Marshall was the first economist to define price elasticity of demand. Price elasticity of demand measures changes in quantity demand to a change in Price. It is the ratio of percentage change in quantity demanded to a percentage change in price.

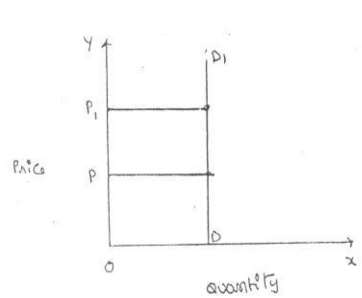
$$\textbf{Price elasticity} = \frac{\text{Proportionate change in the quantity demand of commodity}}{\text{Proportionate change in the price of commodity}}$$

There are five cases of price elasticity of demand

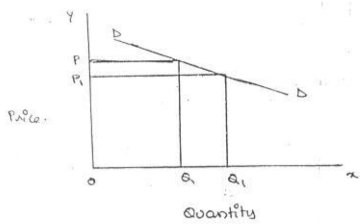
a) **Perfectly elastic demand:** When any quantity can be sold at a given price, and when there is no need to reduce price, the demand is said to be perfectly elastic. In this case E=∞ The demand curve DD1 is horizontal straight line. It shows the at "OP" price any amount is demand and if price increases, the consumer will not purchase the commodity.



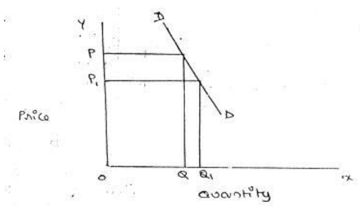
b) **Perfectly Inelastic Demand :** In this case, even a large change in price fails to bring about a change in quantity demanded. When price increases from 'OP' to 'OP', the quantity demanded remains the same. In other words the response of demand to a change in Price is nil. In this case 'E'=0.



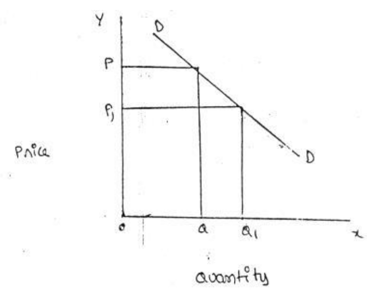
c) **Relatively elastic demand :** Demand changes more than proportionately to a change in price i.e. a small change in price loads to a very big change in the quantity demanded. In this case E>1. This demand curve will be flatter. When price falls from 'OP' to 'OP', amount demanded increase from "OQ' to "OQ1' which is larger than the change in price.



d) **Relatively in-elastic demand :** Quantity demanded changes less than proportional to a change in price. A large change in price leads to small change in amount demanded. Here E < 1. Demanded carve will be steeper. When price falls from "OP' to 'OP1 amount demanded increases from OQ to OQ1, which is smaller than the change in price.



e) **Unit elasticity of demand:** The change in demand is exactly equal to the change in price. When both are equal E=1 and elasticity if said to be unitary. When price falls from 'OP' to 'OP1' quantity demanded increases from 'OP' to 'OP1', quantity demanded increases from 'OQ' to 'OQ1'. Thus a change in price has resulted in an equal change in quantity demanded so price elasticity of demand is equal to unity.



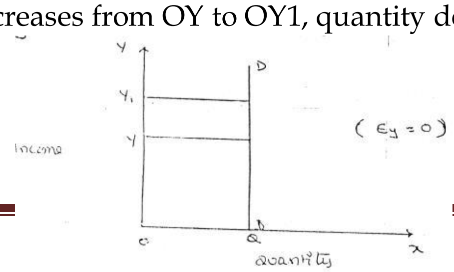
2. Income elasticity of demand:

Income elasticity of demand shows the change in quantity demanded as a result of a change in income. Income elasticity of demand may be slated in the form of a formula.

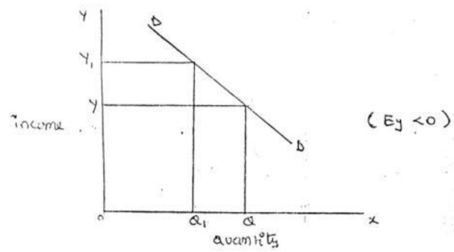
$$\text{Income Elasticity} = \frac{\text{Proportionate change in the quantity demand of commodity}}{\text{Proportionate change in the income of the people}}$$

Income elasticity of demand can be classified in to five types.

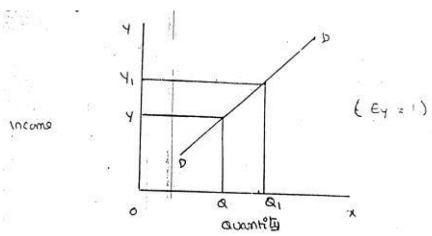
a) **Zero income elasticity:** Quantity demanded remains the same, even though money income increases. Symbolically, it can be expressed as Ey=0. It can be depicted in the following way: As income increases from OY to OY1, quantity demanded never changes.



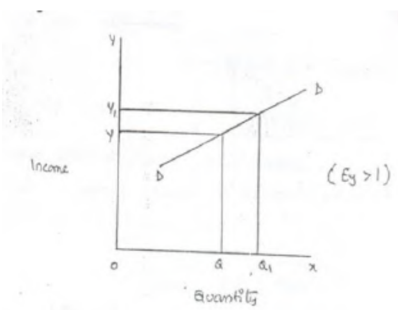
b) **Negative Income elasticity:** When income increases, quantity demanded falls. In this case, income elasticity of demand is negative. i.e., E< 0. When income increases from OY to OY1, demand falls from OQ to OQ1.



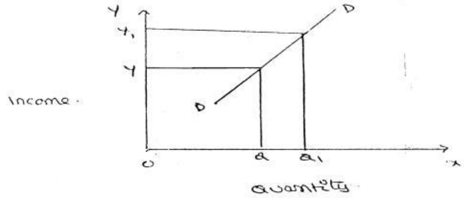
c) **Unit income elasticity:** When an increase in income brings about a proportionate increase in quantity demanded, and then income elasticity of demand is equal to one. Ey = 1 When income increases from OY to OY1, Quantity demanded also increases from OQ to OQ1.



d) **Income elasticity greater than unity:** In this case, an increase in come brings about a more than proportionate increase in quantity demanded. Symbolically it can be written as Ey> 1. It shows high-income elasticity of demand. When income increases from OYto OY1, Quantity demanded increases from OQ to OQ1.



e) **Income elasticity leas than unity:** When income increases quantity demanded also increases but less than proportionately. In this case E < 1. An increase in income from OY to OY, brings what an increase in quantity demanded from OQ to OQ1, But the increase in quantity demanded is smaller than the increase in income. Hence, income elasticity of demand is less than one.



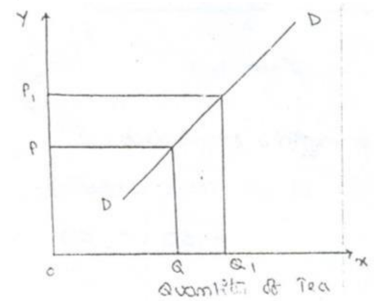
3. Cross elasticity of Demand:

A change in the price of one commodity leads to a change in the quantity demanded of another commodity, which may be substitute or complement. This is called a cross elasticity of demand. The formula for cross elasticity of demand is:

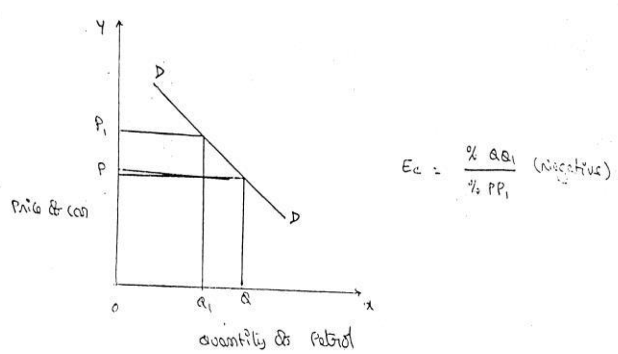
$$\textbf{Cross elasticity} = \frac{\text{Proportionate change in the quantity demand of commodity "}\mathbf{X}\text{"}}{\text{Proportionate change in the price of commodity "}\mathbf{Y}\text{"}}$$

a) **In case of substitutes**, cross elasticity of demand is positive. Eg: Coffee and Tea When the price of coffee increases, Quantity demanded of tea increases. Both are substitutes.

Price of Coffee



b) **In case of compliments**, cross elasticity is negative. If increase in the price of one commodity leads to a decrease in the quantity demanded of another and vice versa. When price of car goes up from OP to OP1, the quantity demanded of petrol decreases from OQ to OQ1. The cross-demanded curve has negative slope.



c) **In case of unrelated commodities**, cross elasticity of demanded is zero. A change in the price of one commodity will not affect the quantity demanded of another. Quantity demanded of commodity "b" remains unchanged due to a change in the price of 'A', as both are unrelated goods.

4.Advertisement elasticity of demand :

It refers to increase in the sales revenue because of change in the advertising expenditure. In other words, there is a direct relationship between the amount of money spent on advertising and its impact on sales. Advertising elasticity is always positive.

$$\text{Advertising elasticity} = \frac{\text{Proportionate change in the quantity demand of product "}\mathbf{X}\text{"}}{\text{Proportionate change in advertisement costs.}}$$

Factors influencing the elasticity of demand

Elasticity of demand depends on many factors.

a. **Nature of Product:** Elasticity or in-elasticity of demand depends on the nature of the commodity i.e. whether a commodity is a necessity, comfort or luxury, normally; the demand for Necessaries like salt, rice etc. is inelastic. On the other hand, the demand for comforts and luxuries is elastic.

b. **Availability of substitutes:** Elasticity of demand depends on availability or non-availability of substitutes. In case of commodities, which have substitutes, demand is elastic, but in case of commodities, which have no substitutes, demand is in elastic.

c. **Variety of uses:** If a commodity can be used for several purposes, than it will have inelastic demand. i.e. electricity. On the other hand, demanded is elastic for commodities, which can be put to only one use.

d. **Postponement of demand:** If the consumption of a commodity can be postponed, than it will have elastic demand. On the contrary, if the demand for a commodity cannot be postpones, then demand is inelastic. The demand is inelastic for rice or medicine which cannot be postponed, while the demand is elastic for Cycle or umbrella which can be postponed.

e. **Amount of money spent:** Elasticity of demand depends on the amount of money spent on the commodity. If the consumer spends a smaller for example a consumer spends a little amount on salt and matchboxes. Even when price of salt or matchbox goes up, demanded will not fall. Therefore, demand is in case of clothing a consumer spends a large proportion of his income and an increase in price will reduce his demand for clothing. So the demand is elastic.

f. **Time:** Elasticity of demand varies with time. Generally, demand is inelastic during short period and elastic during the long period. Demand is inelastic during short period because the consumers do not have enough time to know about the change is price.

g. **Range of Prices:** Range of prices exerts an important influence on elasticity of demand. At a very high price, demand is inelastic because a slight fall in price will not induce the people buy more. Similarly at a low price also demand is inelastic. This is because at a low price all those who want to buy the commodity would have bought it and a further fall in price will not increase the demand. Therefore, elasticity is low at very high and very low prices.

h. **Durability of the product:** Where the product is durable in case of consumer durables such as TV, the demand is elastic. In the case of perishable goods such as milk, the demand is inelastic.

i. **Government Policy:**Where the government policy is liberal, the product is likely to have elastic demand and vice versa.

Significance of Elasticity of Demand :

The concept of elasticity of demand is of much practical importance. It is a very valuable tool to decide the extent of increase or decrease in price for a desired change in the quantity demand for the products and services in the firm or the company.

- To fix the prices of factors of production
- To fix the prices of goods and services provided rendered
- To formulate or revise government policies
- To forecast demand
- To plan the level of output and price.

a. **Price of factors of production**: The factors of production are land, labour, capital, organizations and technology. These have a cost; we have to pay rent, wages, interest, profits and price for these factors of production.

b. **Price fixation:** The manufacturer can decide the amount of price that can be fixed for his product based on the concept of elasticity, if there is no competition, in other words in the case of a monopoly, the manufacture is free to fix his price as long as it does not attract the attention of the government, when there are close substitutes, the product is such that its consumption can be postponed, it cannot be put to alternative uses and so on, then the price of the product cannot be fixed very highly.

c. **Government policies :**
    - **Tax policies**: government extensively depends on this concept to finalize its polices relating to taxes and revenues. Where the product is such that the people cannot postpone itsconsumptions, the government tends to increase its, price, such as petrol and diesel, cigarettes, and so on.
    - **Raising bank deposits:** if the government wants to mobilize larger deposits from the consumer it proposes to raise the rates of fixed deposits marginally and vice versa.
    - **Public utilities**: government uses the concept of elasticity in fixing charges for the public utilities such as elasticity tariff, water charges, ticket fare in case of road or rail transport .

d. **Forecasting demand:** Income elasticity is used to forecast demand for a particular product or services. The demand for the products can be forecast at a give income level.
   The trader can estimate the quantity of goods to be sold at different income levels to realize the targeted revenue.

e. **Planning the levels of output and price:** The knowledge of price elasticity is very useful to producers. The producer can evaluate whether a change in price will bring in adequate revenue or not. In general, for items whose demand is elastic, it would benefit him to charge relatively low price. On the other hand, if the demand for the product is inelastic, a little higher price may be helpful to him to get huge profits without losing sales.

DEMAND FORECASTING

Introduction:

The information about the future is essential for both new firms and those planning to expand the scale of their production. Demand forecasting refers to an estimate of future demand for the product.It is an ‘objective assessment of the future course of demand”. In recent times, forecasting plays an important role in business decision-making. Demand forecasting has an important influence on production planning. It is essential for a firm to produce the required quantities at the right time.

“Demand forecasting refers to an estimate of future demand for the product”

FACTORS GOVERNING DEMAND FORECASTING

There are several factors which govern the forecasting process.

a) **Functional nature of Demand:** Market demand for a particular product/service is not a single number but it is a function of a number of factors. For instance, higher volumes of sales can be realized with higher levels of advertising or promotion efforts.

b) **Types of demand Forecasting:** Based on the time span and planning requirements of business firms, demand forecasting can be classified in to
    - Short-term demand forecasting and
    - Long-term demand forecasting.

- **Short-term demand forecasting:** Short-term demand forecasting is limited to short periods, usually for one year. It relates to policies regarding sales, purchase, price and finances. It refers to existing production capacity of the firm. Short-term forecasting is essential for formulating is essential for formulating a suitable price policy.

- **Long – term forecasting:** In long-term forecasting, the businessmen should know about the long-term demand for the product. Planning of a new plant or expansion of an existing unit depends on long-term demand.

c) **Forecasting level:** The forecasting may be at the firm level, industry level, and national level or at the global level. Forecasting the firm level means estimating the demand for the products offered by a single firm. The total estimate of different trade associations can also be viewed as industry level forecast. National level forecast is for the whole economy.

d) **Degree of Orientation :** Demand forecasts can be worked out based on total sales or product/service-wise sales for a given time period. There is a General forecast in terms of total sales &specific forecast in terms of segment-wise forecast.

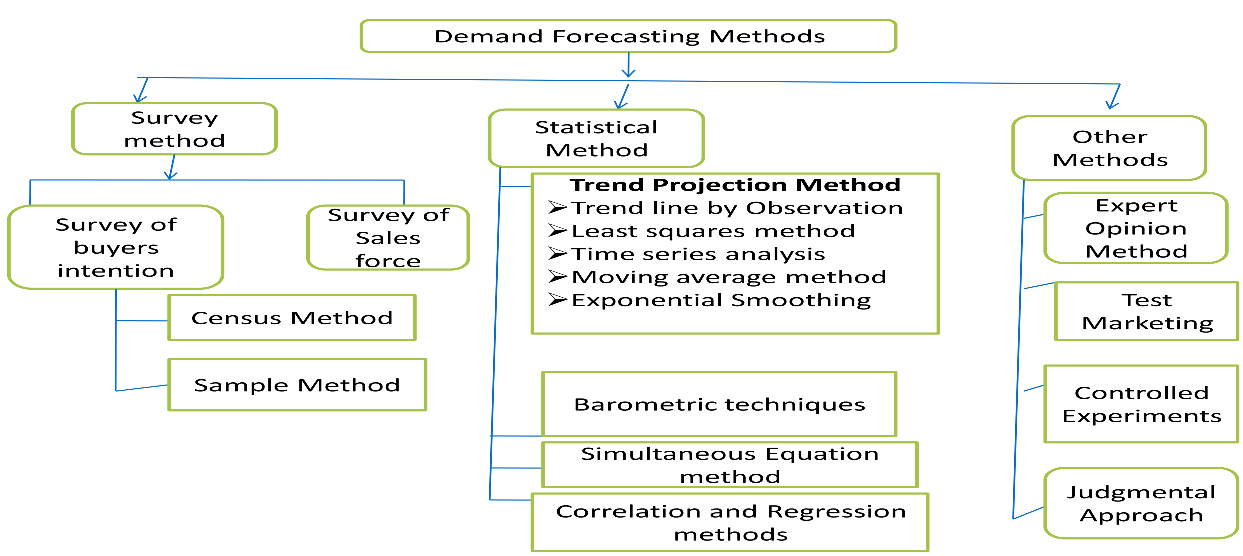
e) **Established or New products:** It is relatively easy to forecast demand for established products or products which are currently in use. Every product, till it is introduced in a given market, is a new product.

f) **Nature of goods :** The goods are classified into producer goods, consumer durables and services. The patterns of forecasting in each of these differ.

g) **Other factors :** Every forecast of demand should clearly list the assumptions made about the demographic, economic, technological, political and cultural environment. In other words there are certain other factors such as political developments, changing fashions and customer preferences, changes in technology etc..

Methods of Demand Forecasting:

Several methods are employed for forecasting demand. All these methods can be grouped under survey method, statistical method & other methods. Survey methods and statistical methods are further subdivided in to different categories. To forecast demand, we need to build a certain base of information.



1) ***Survey Method:*** Under this method, information about the desires of the consumer and opinion of exports are collected by interviewing them. Survey method can be divided into four type's viz., Option survey method; expert opinion; Delphi method and consumers interview methods.

a) **Survey of Buyers' intentions** – This is the most effective method because the buyer is the ultimate decision-maker and we are collecting the information directly from them. The survey of buyers can be conducted either by covering the whole population or selecting a sample group of buyers.
   - **Census Method:** Suppose there are 10,000 buyers for a particular product. If the company wishes to elicit the opinion of all the buyers this is called census method or total enumeration method.
   - **Sample Method:** On the other hand, the firm can select a group of buyers who can represent the whole population. This method is called the sample method.

b) **Sales Force Opinions:**The sales force is capable of assessing the likely reactions of the customers of their territories quickly, given the company's marketing strategy. It is less costly as the survey can be conducted instantaneously through telephone, fax or video-conferencing & so on.

2) ***Statistical Methods*** – For forecasting the demand for goods and services in the long-run, statistical and mathematical methods are used considering the past data.

a) **Trend projection Methods:** These are generally based on analysis of past sales patterns. There are 5 main techniques of mechanical extrapolation.
   i. **Trend Line by Observation:** This method of forecasting trend is elementary, easy and quick as it involves merely the plotting the actual sales data on a chart. The line can be extended towards a future period and corresponding sales forecast.
   ii. **Least Squares Method:** Certain statistical formulae are used here to find the trend line which 'best fits' the available data.
   iii. **Time Series analysis:**Where the surveys or market tests are costly and time-consuming, statistical and mathematical analysis of past sales data offers another method to prepare the forecasts.
   iv. **Moving averages method:** This method considers that the average of past events determines the future events. As the name itself suggests, under this method, the averages keeps on moving depending upon the number of years selected.
   v. **Exponential Smoothing:** This method proves more realistic when the data is consistent all through the year, unaffected by wide seasonal fluctuations.

b) **Barometric Technique** : To forecast demand for a particular product or service, use some other relevant indicator (which is known as a barometer) of future demand.

c) **Simultaneous Equation Method** : In this method, all variable s are simultaneously considered, with the conviction that every variable influences the other variables in an economic environment.

d) **Correlation & Regression Methods** : Correlation and regression methods are statistical techniques. Correlation describes the degree of association between two variables such as sales and advertisement expenditure.

In regression analysis, an equation is estimated which best fits in the sets of observation of dependent variables and independent variables. The best estimate of the true underlying relationship between these variables is thus generated.

3. Other Methods:

a). Expert Opinion Method : Well-informed persons are called experts. Experts constitute yet another source of information. These persons are generally outside experts. An expert is good at forecasting and analyzing the future trends in a given product or service at a given level of technology.

b). Test Marketing : It is likely that opinions given by buyers, salesmen or other experts may be at times, misleading. To forecast the sales of a new product or the likely sales of an established product in a new channel of distribution or territory, it is customary to find test marketing in practice.

c). Controlled Experiments : Controlled experiments refer to such exercises where some of the major determinants of demand are manipulated to suit to the customers with different tastes & preferences, income groups and such others. This method is measure the effect of a change in some demand determinant like price, product design, advertisement, packaging and so on.

d). Judgmental Approach : When none of the above methods are directly related to the given product or service, the management has no alternative other than using its own judgment. Even when the above methods are used, the forecasting process is supplemented with the factor of judgment.

UNIT – II

Theory of Production & Cost Analysis

What is Production?

In economics, **Production** is a process of transforming tangible and intangible inputs into goods or services. Raw materials, land, labour and capital are the tangible inputs, whereas ideas, information and knowledge are the intangible inputs. These inputs are also known as factors of production.

Production Definition

Production in Economics *can be defined as an organised activity of transforming physical inputs (resources) into outputs (finished products), which will satisfy the products' needs of the society.*

James Bates and J.R. Parkinson

Production in Economics *is an activity whether physical or mental, which is directed to the satisfaction of other people's wants through exchange.*

J.R. Hicks

Importance of Production

Production in Economics is considered very important by organisations.

Importance of Production are as follow:

- Helps in creating value by applying labour on land and capital
- Improves welfare as more commodities mean more utility
- Generates employment and income, which develops the economy.
- Helps in understanding the relation between cost and output

Factors of Production

in Economics are the inputs that are used for producing the final output with the main aim of earning an economic profit. Land, labour, capital , organization and technology are the main factors of production.

Advantages of Production:

- **Advantages to consumers**: A well planned production function will lead to good quality products, higher rate of production and lower cost per unit. The consumers will be benefitted from prices of goods and will get good quality products. The availability of goods will also be satisfactory and the consumers will be saved from a lot of botheration which may otherwise be caused by scarcity of products.
- **Advantages to Investors:** An enhancement in productivity will increase profitability of the business. The investors will get higher returns on investment if profitability is better. This will also result in appreciation of assets values and ultimately the prices of shares will go up which will also benefit investors.
- **Advantages to employees:** Higher productivity will benefit employees in the form of better remuneration, stability in employment, good working conditions, etc. Better productivity to a worker will give him job satisfaction and improve his morale.
- **Advantages to suppliers:**Every enterprise depends upon supplies of raw materials, finished goods, spare parts etc. The suppliers will always like to deal with a concern having sound financial position. The company and its suppliers will have an enduring relationship only if both are satisfied with each other's dealings.
- ***Advantages to the community***:The economic and social stability of a- community is linked with growth and development of its industrial structure. An overall improvement in productivity will improve economic welfare of the society.

- ***Advantages to the nation:*** The advantages of various segments of society improve welfare of a nation. Better production management will result in proper and economical use of natural resources and elimination of wastages. An improved industrial climate will bring all round development and prosperity.

Production Function:

Introduction: The production function expresses a functional relationship between physical inputs and physical outputs of a firm at any particular time period. The output is thus a function of inputs. Mathematically production function can be written as

$$Q=f(L_1, L_2, C, O, T)$$

Where "Q" stands for the quantity of output and L_1, L_2, C, O, T are various input factors such as land, labour, capital, organization& technology. Here output is the function of inputs.

In order to express the quantitative relationship between inputs and output, Production function has been expressed in a precise mathematical equation i.e.

$$Y= a+b (x)$$

Which shows that there is a constant relationship between applications of input (the only factor input 'X' in this case) and the amount of output (y) produced.

<u>Assumptions:</u>

Production function has the following assumptions.

- The production function is related to a particular period of time.
- There is no change in technology.
- The producer is using the best techniques available.
- The factors of production are divisible.
- Production function can be fitted to a short run or to long run.

Importance:

- When inputs are specified in physical units, production function helps to estimate the level of production.
- It becomes is equates when different combinations of inputs yield the same level of output.
- It indicates the manner in which the firm can substitute on input for another without altering the total output.
- When price is taken into consideration, the production function helps to select the least combination of inputs for the desired output.
- It considers two types‟ input-output relationships namely „law of variable proportions‟ and „law of returns to scale‟. **Law of variable propositions** explains the pattern of output in the short-run as the units of variable inputs are increased to increase the output. On the other hand **law of returns to scale** explains the pattern of output in the long run as all the units of inputs are increased.
- The production function explains the maximum quantity of output, which can be produced, from any chosen quantities of various inputs or the minimum quantities of various inputs that are required to produce a given quantity of output.

Production function can be fitted the particular firm or industry or for the economy as whole. Production function will change with an improvement in technology.

Production Function With One Variable Input :

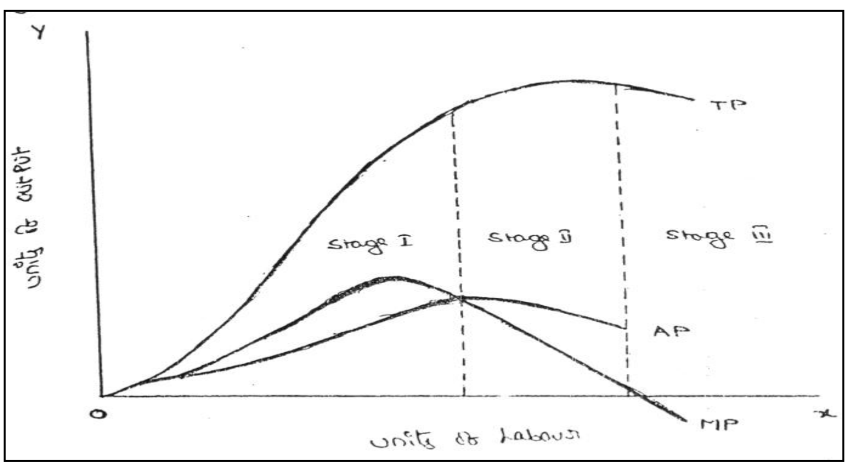
The laws of returns states that when at least one factor of production is fixed or factor input is fixed and when all other factors are varied, the total output in the initial stages will increase at an increasing rate, and after reaching certain level or output the total output will increase at declining rate. If variable factor inputs are added further to the fixed factor input, the total output may decline .This law is proved to be true in agriculture and industry also. The law of returns is also called the law of variable proportions or the law of diminishing returns.

Definition:

According to **G.Stigler -** "If equal increments of one input are added, the inputs of other production services being held constant, beyond a certain point the resulting increments of product will decrease i.e. the marginal product will diminish".

According to **F.Benham -** "As the proportion of one factor in a combination of factors is increased, after a point, first the marginal and then the average product of that factor will diminish".

Units of Labour	Total Production (TP)	Marginal Production (MP)	Average Production (AP)	Stages
0	0	0	0	Stage 1
1	10	10	10	
2	22	12	11	Stage 2
3	33	11	11	
4	40	7	10	Stage 3
5	45	5	9	
6	48	3	8	
7	48	0	6.85	
8	45	-3	5.62	



From the above graph the law of variable proportions operates in three stages. In the first stage, total product increases at an increasing rate. The marginal product in this stage increases at an increasing rate resulting in a greater increase in total product. The average product also increases. This stage continues up to the point where average product is equal to marginal product. The law of increasing returns is in operation at this stage. The law of diminishing returns starts operating from the second stage awards. At the second stage total product increases only at a diminishing rate. The average product also declines. The second stage comes to an end where total product becomes maximum and marginal product becomes zero. The marginal product becomes negative in the third stage. So the total product also declines. The average product continues to decline.

Production Function With Two Variable Inputs And Laws Returns

Production process that requires two inputs, capital© and labour (L) to produce a given output(Q). There could be more than two inputs in a real life situation, but for a simple analysis, we restrict the number of inputs to two only. In other words, the production function based on two inputs can be expressed as

$Q = f(C,L)$ Where c= capital , L = labour,

Normally, both capital and labour are required to produce a product. To some extent, these two inputs can be substituted for each other. Hence the producer may choose any combination of labour and capital that gives him the required number of units of output, for any one combination of labour and capital out of several such combinations. The alternative combinations of labour and capital yielding a given level of output are such that if the use of one factor input is increased , that of another will decrease and vice versa. How ever, the units of an input foregone to get one unit of the other input changes, depends upon the degree of substitutability between the two input factors, based on the techniques or technology used, the degree of substitutability may vary.

ISO – QUANTS :

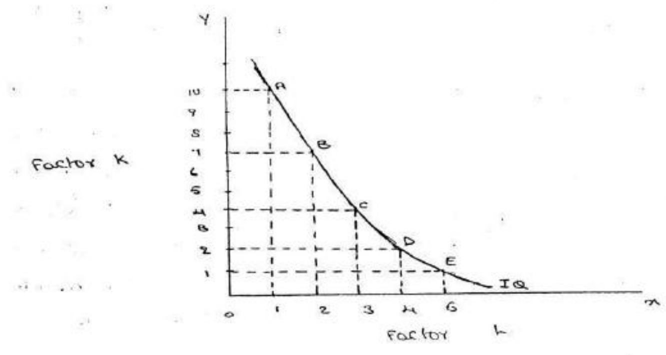
The term Isoquants is derived from the words „iso‟ and „quant‟ – „Iso‟ means equal and „Quent‟ implies quantity. Isoquant therefore, means equal quantity. Isoquant are also called **iso product curves**, an isoquant curve show various combinations of two input factors such as capital and labour, which yield the same level of output.

As an isoquant curve represents all such combinations which yield equal quantity of output, any or every combination is a good combination for the manufacturer. Since he prefers all these combinations equally, an isoquant curve is also called product indifferent curve.

An isoquant may be explained with the help of an arithmetical example.

Combinations	Labour (units)	Capital (Units)	Output (quintals)
A	1	10	50
B	2	7	50
C	3	4	50
D	4	4	50
E	5	1	50

Combination „A‟ represent 1 unit of labour and 10 units of capital and produces „50‟ quintals of a product all other combinations in the table are assumed to yield the same given output of a product say "50‟ quintals by employing any one of the alternative combinations of the two factors labour and capital. If we plot all these combinations on a paper and join them, we will get continues and smooth curvecalled Iso-product curve as shown below.



Labour is on the X-axis and capital is on the Y-axis. IQ is the ISO-Product curve which shows all the alternative combinations A, B, C, D, E which can produce 50 quintals of a product.

Features of isoquant

a) **Downward sloping:** isoquant are downward sloping curves because , if one input increase, the other one reduces. There is no question of increase in both the inputs to yield a given output. A degree ofsubstitution is assumed between the factors of production. In other words, an isoquant cannot be increasing, as increase in both the inputs does not yield same level of output. If it is constant, it means that the output remains constant through the use of one of the factor is increasing, which is not true, isoquant slope from left to right.

b) **Convex to origin:** isoquant are convex to the origin. It is because the input factors are not perfect substitutes. One input factor can be substituted by other input factor in a diminishing marginal rate. If theinput factors were perfect substitutes, the isoqunt would be a falling straight line. When the inputs are used in fixed proportion, and substitution of one input for the other cannot take place, the isoquant willbe L shaped

c) **Do not intersect:** two isoquant do not intersect with each other. It is because, each of these denote a particular level of output. If the manufacturer wants to operate at a higher level of output, he has to switch over to another isoquant with a higher level of output and vice versa.

d) **Do not axes:** the isoquant touches neither X-axis nor Y- axis, as both inputs are required to produce a given product.

Assumptions:

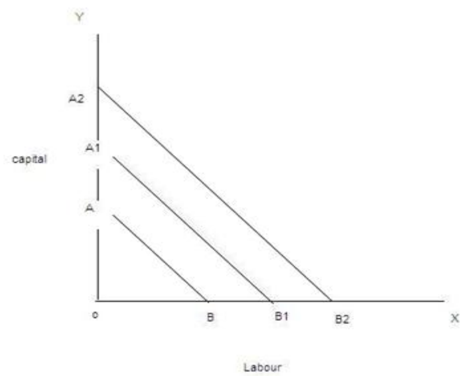
- There are only two factors of production, viz. labour and capital.
- The two factors can substitute each other up to certain limit
- The shape of the Isoquant depends upon the extent of substitutability of the two inputs.
- The technology is given over a period.

ISO COST :

Iso cost refers to that cost curve that represent the combination of inputs that will cost the producer the same amount of money. In other words, each isocost denotes a particular level of total cost for a given level of production. If the level of production changes, the total cost changes and thus the isocost curve moves upwards, and vice verse.

Isocost curve is the locus traced out by various combinations of L and K, each of which costs the producer the same amount of money (C) Differentiating equation with respect to L, we have *dK/dL = -w/r* This gives the slope of the producer"s budget line (isocost curve). Iso cost line shows various combinations of labour and capital that the firm can buy for a given factor prices. The slope of iso cost line = PL/Pk. In this equation, PL is the price of labour and Pk is the price of capital. The slope of iso cost line indicates the ratio of the factor prices. A set of isocost lines can be drawn for different levels of factor prices, or different sums of money. The iso cost line will shift to the right when money spent on factors increases or firm could buy more as the factor prices are given.

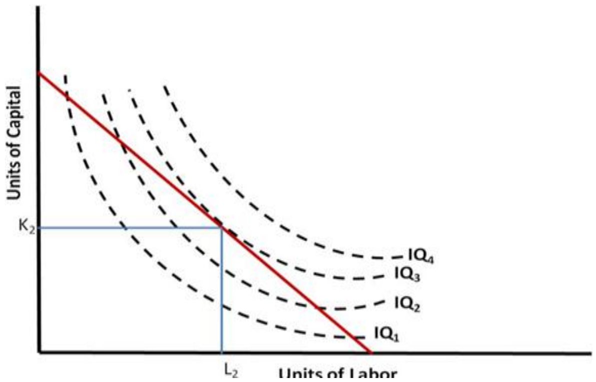
With the change in the factor prices the slope of iso cost lien will change. If the price of labour falls the firm could buy more of labour and the line will shift away from the origin. The slope depends on the prices of factors of production and the amount of money which the firm spends on the factors. When the amount of money spent by the firm changes, the isocost line may shift but its slope remains the same. A change in factor price makes changes in the slope of isocost lines as shown in the figure.



Least Cost Combination Of Inputs

The manufacturer has to produce at lower costs to attain higher profits. The isocost and isoquants can be used to determine the input usage that minimizes the cost of production. Where the slope of isoquant is equal to that of isocost, there lies the lowest point of cost of production. This can be observed by superimposing the isocosts on isoproduct curves. It is evident that the producer can, with a total outlay.

The firm can achieve maximum profits by choosing that combination of factors which will cost it the least. The choice is based on the prices of factors of production at a particular time. The firm can maximize its profits either by maximizing the level of output for a given cost or by minimizing the cost of producing a given output. In both cases the factors will have to be employed in optimal combination at which the cost of production will be minimum. The least cost factor combination can be determined by imposing the isoquant map on isocost line. The point of tangency between the isocost and an isoquant is an important but not a necessary condition for producer"s equilibrium. The essential condition is that the slope of the isocost line must equal the slope of the isoquant. Thus at a point of equilibrium marginal physical productivities of the two factors must be equal the ratio of their prices. The marginal physical product per rupee of one factor must be equal to that of the other factor. And isoquant must be convex to the origin. The marginal rate of technical substitution of labour for capital must be diminishing at the point of equilibrium.



Marginal Rate Of Technical Substitution (MRTS)

The marginal rate of technical substitution (MRTS) refers to the rate at which one input factor is substituted with the other to attain a given level of output. In other words, the lesser units of one input must be compensated by increasing amounts of another input to produce the same level of output.

Ratio of MRTS between Capital and Labour

Combinations	**Capital (Rs. In lakh)**	**Labour**	**Marginal Rate of Technical Substitution (MRTS)**
A	1	20	----
B	2	15	5:1
C	3	11	4:1
D	4	8	3:1
E	5	6	2:1
F	6	5	1:1

The above table presents the ratio of MRTS between the two input factors, say capital and labour. 5units of decrease in labour are compensated by an increase in 1 unit of capital, resulting in a MRTS of 5:1.

The Cobb–Douglas Production Function

Production function of the linear homogenous type is invested by ***Junt wicksell*** and first tested by ***C. W. Cobb*** and ***P. H. Dougles*** in 1928. This famous statistical production function is known as Cobb-Douglas production function. Originally the function is applied on the empirical study of the American manufacturing industry. Cobb – Douglas production function takes the following mathematical form.

Y= (AKX L1-x)

Where Y=output
K=Capital
L=Labour
A, ∞=positive constant

Assumptions:

It has the following assumptions

- The function assumes that output is the function of two factors viz. capital and labour.
- It is a linear homogenous production function of the first degree
- The function assumes that the logarithm of the total output of the economy is a linear function of the logarithms of the labour force and capital stock.

- There are constant returns to scale
- All inputs are homogenous
- There is perfect competition
- There is no change in technology

LAW OF RETURNS TO SCALE

There are three laws of returns governing production function. They are

- **Law of increasing returns to scale :** This law states that the volume of output keeps on increasing with every increase in the inputs,. Where a given increase in inputs leads to a more than proportionate increase in the output, the law of increasing returns to scale is said to operate. We can introduce division of labour and other technological means to increase production. Hence, the total product increases at an increasing rate.
- **Law of constant returns to scale :** When the scope for division of labour gets restricted, the rate of increase in the total output remains constant, the law of constant returns to scale is said to operate, this law states that therate of increase/decrease in volume of output is same to that of rate of increase/decrease in inputs.
- **Law of decreasing returns to scale:** Where the proportionate increase in the inputs does not lead to equivalent increase in output, the output increases at a decreasing rate, the law of decreasing returns to scale is said to operate. This results in higher average cost per unit.

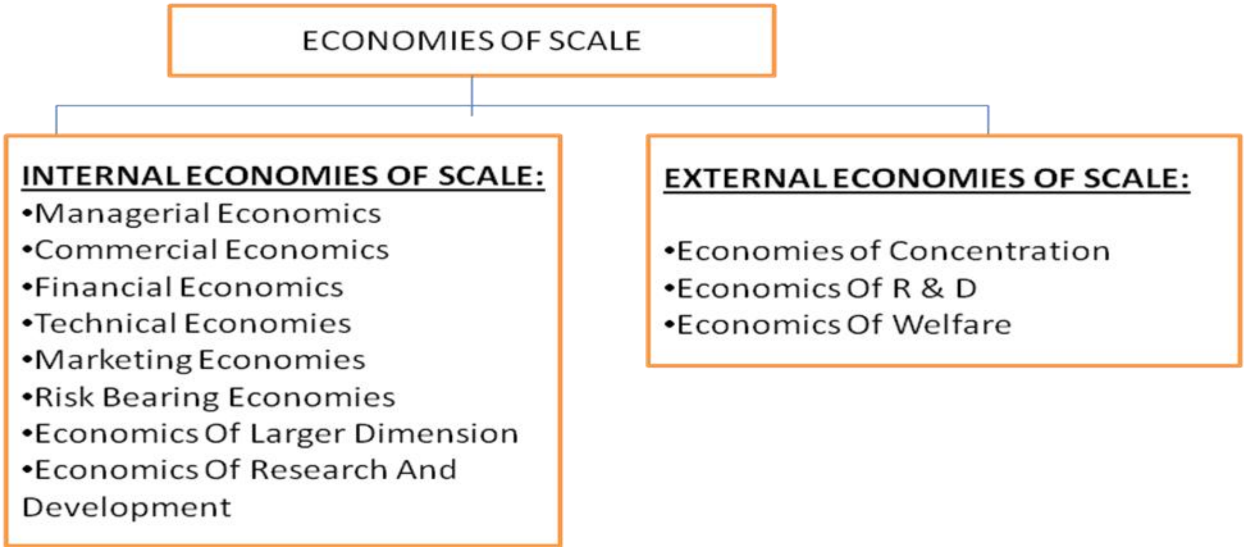
These laws can be illustrated with an example of agricultural land. Take one acre of land. If you till the land well with adequate bags of fertilizers and sow good quality seeds, the volume of output increases the following table illustrates further

Capital (in units)	Labor (in units)	% of increase in both inputs	Output (in units)	% of increase in output	Law applicable
1	3	---	---	---	---
2	6	100	120	140	Law of increase returns to scale
4	12	100	240	100	Law of constant returns to scale
8	24	100	360	50	Law of decrease returns to scale

Economies of Scale:

Economies of scale refers to the phenomenon where the average costs per unit of output decrease with the increase in the scale or magnitude of the output being produced by a firm.

An economy of scale is a microeconomic term that refers to factors driving production costs down while increasing the volume of output. There are two types of economies of scale: internal and external economies of scale. Internal economies of scale are firm-specific—or caused internally—while external economies of scale occur based on larger changes outside the firm. Both result in declining marginal costs of production, yet the net effect is the same.



Internal economies of scale:

INTERNAL ECONOMIES refer to the economies introduction costs which accrue to the firm alone when it expands its output. The internal economies occur as a result of increase in the scale of production.

a. **Managerial Economics**: as the firm expands, the firm needs qualified managerial personnel to handle each of its functions marketing, finance, production, human resources and others in a professional way. Functional specialization ensure minimum wastage and lowers the cost ofproduction in the long –run.

b. **Commercial Economics**: the transaction of buying and selling raw material and other operating supplies such as spares and so on will be rapid and the volume of each transaction also grows as the firm grows, there could be cheaper savings in the procurement, transportation and storage cost, this will lead to lower costs and increased profits.

c. **Financial Economics**: The large firm is able to secure the necessary finances either for block capital purposes or for working capital needs more easily and cheaply. It can barrow from the public, banks and other financial institutions at relatively cheaper rates. It is in this way that a large firm reaps financial economies.

d. **Technical Economies**: Technical economies arise to a firm from the use of better machines and superior techniques of production. As a result, production increases and per unit cost of production falls. A large firm, which employs costly and superior plant and equipment, enjoys a technical superiority over a small firm. Another technical economy lies in the mechanical advantage of using large machines. The cost of operating large machines is less than that of operating mall machine. More over a larger firm is able to reduce it‟s per unit cost of production by linking the various processes of production. Technical economies may also be associated when the large firm is able to utilize all its waste materials for the development of by-products industry. Scope for specialization is also available in a large firm. This increases the productive capacity of the firm and reduces the unit cost of production.

e. **Marketing Economies:** The large firm reaps marketing or commercial economies in buying its requirements and in selling its final products. The large firm generally has a separate marketing department. It can buy and sell on behalf of the firm, when the market trends are more favorable. In the matter of buying they could enjoy advantages like preferential treatment, transport concessions, cheap credit, prompt delivery and fine relation with dealers. Similarly it sells its products more effectively for a higher margin of profit.

f. **Risk Bearing Economies**: The large firm produces many commodities and serves wider areas. It is, therefore, able to absorb any shock for its existence. For example, during business depression, the prices fall for every firm. There is also a possibility for market fluctuations in a particular product of the firm. Under such circumstances the risk-bearing economies or survival economieshelp the bigger firm to survive business crisis.

g. **Economics Of Larger Dimension**: large – scale production is required to take advantage of bigger size plant and equipment. For example, the cost of a 1.00.000 units capacity plant will notbe double that of 50.000 units capacity plant. Likewise the cost of a 10.000 ton oil tanker willnot be double that of a 5000 ton oil tanker. Engineers go by what is called two by three rule wherein when the volume is increase by 100%, the material required will increase only by two –
thirds. Technical economies are available only from large size, improved methods of production processes and when the products are standardized.

h. **Economics Of Research And Development**: large organizations such as Dr.Reddy‟s labs, Hindustan Lever spend heavily on research and development and bring out several innovative products. Only such firms with a strong research and development base can cope with competition globally.

EXTERNAL ECONOMICS:

External economics refer to all the firms in the industry, because of growth of the industry as a whole or because of growth of ancillary industries, external economics benefit al the firms in the industry as the industry expands. This will lead to lowering the cost of production and thereby increasing the profitability. The external economics can be grouped under three types:

A**). Economies of Concentration**: When an industry is concentrated in a particular area, all the member firms reap some common economies like skilled labour, improved means of transport and communications, banking and financial services, supply of power and benefits from subsidiaries. All these facilities tend to lower the unit cost of production of all the firms in the industry.

B)Economics Of Research And Development: all the firms can pool resources to finance research and development activities and thus share the benefits of research. There could be acommon facility to shares journals, newspapers and other valuable reference material of common interest.

C) **Economics Of Welfare**: there could be common facilities such as canteen, industrial housing, community halls, schools and colleges, employment burearu, hospitals and so on,which can be used in common by the employees in the whole industry.

COST ANALYSIS:

The institute of cost and management accountants (ICMA) has define cost as " the amount expenditure, actual or notional, incurred on or attributable to a specified thing oractivity". It is the amount of resources sacrificed to achieve a specific objective. A cost must be with reference to the purpose for which it is used and the conditions under which it is computed. To take decision, managers wish to know the cost of something.

Cost refers to the expenditure incurred to produce a particular product or services. All costs involve a sacrifice of some kind or other to acquire some benefit. For example, if I want to eat food, I should be prepared to sacrifice money.

Cost refers to the amount of expenditure incurred in acquiring something. In business firm, it refers to the expenditure incurred to produce an output or provide service. Thus the cost incurred in connection with raw material , labour, other heads constitute the overall cost of production.

COST CONCEPTS:

A managerial economist must have a clear understanding of the different cost concepts for clear business thinking and proper application. The several alternative bases of classifying cost and the relevance of each for different kinds of problems are to be studied. The various relevant concepts of cost are:

a) **Opportunity costs and outlay costs:**Out lay cost also known as actual costs obsolete costs are those expends which are actually incurred by the firm these are the payments made for labour, material, plant, building, machinery traveling, transporting etc., These are all those expense item appearing in the books of account, hence based on accounting cost concept.

On the other hand opportunity cost implies the earnings foregone on the next best alternative, has the present option is undertaken. This cost is often measured by assessing the alternative, which has to be scarified if the particular line is followed.

The opportunity cost concept is made use for long-run decisions. This concept is very important in capital expenditure budgeting. This concept is very important in capital expenditure budgeting. The concept is also useful for taking short-run decisions opportunity cost is the cost concept to use when the supply of inputs is strictly limited and when there is an alternative. If there is no alternative, Opportunity cost is zero. The opportunity cost of any action is therefore measured by the value of the most favorable alternative course, which had to be foregoing if that action is taken.

b) **Explicit and implicit costs: Explicit costs** are those expenses that involve cash payments. These are the actual or business costs that appear in the books of accounts. These costs include payment of wages and salaries, payment for raw-materials, interest on borrowed capital funds, rent on hired land, Taxes paid etc.

Implicit costs are the costs of the factor units that are owned by the employer himself. These costs are not actually incurred but would have been incurred in the absence of employment of self – owned factors. The two normal implicit costs are depreciation, interest on capital etc. A decision maker must consider implicit costs too to find out appropriate profitability of alternatives.

c) **Historical and Replacement costs:** Historical cost is the original cost of an asset. Historical cost valuation shows the cost of an asset as the original price paid for the asset acquired in the past. Historical valuation is the basis for financial accounts.

A replacement cost is the price that would have to be paid currently to replace the same asset. During periods of substantial change in the price level, historical valuation gives a poor projection of the future cost intended for managerial decision. A replacement cost is a relevant cost concept when financial statements have to be adjusted for inflation.

d) **Short – run and long – run costs:** Short-run is a period during which the physical capacity of the firm remains fixed. Any increase in output during this period is possible only by using the existing physical capacity more extensively. So short run cost is that which varies with output when the plant and capital equipment in constant.

Long run costs are those, which vary with output when all inputs are variable including plant and capital equipment. Long-run cost analysis helps to take investment decisions.

e) **Out-of pocket and books costs:** Out-of pocket costs also known as explicit costs are those costs that involve current cash payment. Book costs also called implicit costs do not require current cash payments. Depreciation, unpaid interest, salary of the owner is examples of back costs.

But the book costs are taken into account in determining the level dividend payable during a period. Both book costs and out-of-pocket costs are considered for all decisions. Book cost is the cost of self-owned factors of production.

f) **Fixed and variable costs:** Fixed cost is that cost which remains constant for a certain level to output. It is not affected by the changes in the volume of production. But fixed cost per unit decrease, when the production is increased. Fixed cost includes salaries, Rent, Administrative expenses depreciations etc.

Variable is that which varies directly with the variation is output. An increase in total output results in an increase in total variable costs and decrease in total output results in a proportionate decline in the total variables costs. The variable cost per unit will be constant. Ex: Raw materials, labour, direct expenses, etc.

g) **Post and Future costs:** Post costs also called historical costs are the actual cost incurred and recorded in the book of account these costs are useful only for valuation and not for decision making.

Future costs are costs that are expected to be incurred in the futures. They are not actual costs. They are the costs forecasted or estimated with rational methods. Future cost estimate is useful for decision making because decision are meant for future.

h) **Traceable and common costs:** Traceable costs otherwise called direct cost, is one, which can be identified with a products process or product. Raw material, labour involved in production is examples of traceable cost.Common costs are the ones that common are attributed to a particular process or product. They are incurred collectively for different processes or different types of products. It cannot be directly identified with any particular process or type of product.

i) **Avoidable and unavoidable costs:** Avoidable costs are the costs, which can be reduced if the business activities of a concern are curtailed. For example, if some workers can be retrenched with a drop in a product – line, or volume or production the wages of the retrenched workers are escapable costs.

The unavoidable costs are otherwise called sunk costs. There will not be any reduction in this cost even if reduction in business activity is made. For example cost of the ideal machine capacity is unavoidable cost.

j) **Controllable and uncontrollable costs***:* Controllable costs are ones, which can be regulated by the executive who is in change of it. The concept of controllability of cost varies with levels of management. Direct expenses like material, labour etc. are controllable costs.

Some costs are not directly identifiable with a process of product. They are appointed to various processes or products in some proportion. This cost varies with the variation in the basis of allocation and is independent of the actions of the executive of that department. These apportioned costs are called uncontrollable costs.

k) **Incremental and sunk costs:** Incremental cost also known as different cost is the additional cost due to a change in the level or nature of business activity. The change may be caused by adding a new product, adding new machinery, replacing a machine by a better one etc.

Sunk costs are those which are not altered by any change – They are the costs incurred in the past. This cost is the result of past decision, and cannot be changed by future decisions. Investments in fixed assets are examples of sunk costs.

l) **Total, average and marginal costs:** Total cost is the total cash payment made for the input needed for production. It may be explicit or implicit. It is the sum total of the fixed and variable costs. Average cost is the cost per unit of output. If is obtained by dividing the total cost (TC) by the total quantity produced (Q)

Average cost = TC/Q

Marginal cost is the additional cost incurred to produce and additional unit of output or it is the cost of the marginal unit produced.

m) **Accounting and Economics costs:** Accounting costs are the costs recorded for the purpose of preparing the balance sheet and profit and ton statements to meet the legal, financial and tax purpose of the company. The accounting concept is a historical concept and records what has happened in the post.

Economics concept considers future costs and future revenues, which help future planning, and choice, while the accountant describes what has happened, the economics aims at projecting what will happen.

BREAKEVEN ANALYSIS

A business is said to break even when its total sales are equal to its total costs. It is a point of **no profits no loss.** Break even analysis is defined as analysis of costs and their possible impact on revenues and volume of the firm. Hence, it is also called the cost – volume- profit analysis. A firm is said to attain the BEP when its total revenue is equal to total cost.

Assumptions:

- All costs are classified into two – fixed and variable.
- Fixed costs remain constant at all levels of output.
- Variable costs vary proportionally with the volume of output.
- Selling price per unit remains constant in spite of competition or change in the volume of production.
- There will be no change in operating efficiency.
- There will be no change in the general price level.
- Volume of production is the only factor affecting the cost.
- Volume of sales and volume of production are equal. Hence there is no unsold stock.
- There is only one product or in the case of multiple products. Sales mix remainsconstant.
- All the goods produced are sold. There is no closing stock.

Significance of BEA

- To ascertain the profit on a particular level of sales volume or a given capacity of production To calculate sales required to earn a particular desired level of profit.
- To compare the product lines, sales area, methods of sales for individual company To compare the efficiency of the different firms
- To decide whether to add a particular product to the existing product line or drop one from it To decide to "make or buy" a given component or spare part
- To decide what promotion mix will yield optimum sales
- To assess the impact of changes in fixed cost, variable cost or selling price on BEP and profitsduring a given period.

Limitations of BEA

- Break – even - point is based on fixed cost, variable cost and total revenue. A change in one variable is going to affect the BEP
- All cost cannot be classified into fixed and variable costs. We have semi-variable costs also
- In case of multi-product firm, a single chart cannot be of any use. Series of charts have to bemade use of..
- It is based on fixed cost concept and hence holds good only in the short – run.
- Total cost and total revenue lines are not always straight as shown in the figure. The quantityand price discounts are the usual phenomena affecting the total revenue line.
- Where the business conditions are volatile, BEP cannot give stable results

Merits:

- Information provided by the Break Even Chart can be understood more easily then those contained in the profit and Loss Account and the cost statement.
- Break Even Chart discloses the relationship between cost, volume and profit. It reveals how

changes in profit. So, it helps management in decision-making.

- It is very useful for forecasting costs and profits long term planning and growth
- The chart discloses profits at various levels of production.
- It serves as a useful tool for cost control.
- It can also be used to study the comparative plant efficiencies of the industry.
- Analytical Break-even chart present the different elements, in the costs – direct material, direct labour, fixed and variable overheads.

Demerits:

- Break-even chart presents only cost volume profits. It ignores other considerations such as capital amount, marketing aspects and effect of government policy etc., which are necessary in decision making.
- It is assumed that sales, total cost and fixed cost can be represented as straight lines. In actual practice, this may not be so.
- It assumes that profit is a function of output. This is not always true. The firm mayincrease the profit without increasing its output.
- A major drawback of BEC is its inability to handle production and sale of multipleproducts.
- It is difficult to handle selling costs such as advertisement and sale promotion in BEC.
- It ignores economics of scale in production.
- Fixed costs do not remain constant in the long run.
- Semi-variable costs are completely ignored.
- It assumes production is equal to sale. It is not always true because generally there may be opening stock.
- When production increases variable cost per unit may not remain constant but may reduce on account of bulk buying etc.
- The assumption of static nature of business and economic activities is a well-known defect ofBEC.

Determination of break even point

a) Fixed cost
b) Variable cost
c) Contribution
d) Margin of safety
e) Angle of incidence

I. Profit volume ratio

Fixed cost: Expenses that do not vary with the volume of production are known as fixed expenses. Eg. Manager‟s salary, rent and taxes, insurance etc. It should be noted that fixed changes are fixed only within a certain range of plant capacity. The concept of fixed overhead is most useful in formulating a price fixing policy. Fixed cost per unit is not fixed

Variable Cost*:* Expenses that vary almost in direct proportion to the volume of production of sales are called variable expenses. Eg. Electric power and fuel, packing materials consumable stores. It should be noted that variable cost per unit is fixed.

Contribution*:* Contribution is the difference between sales and variable costs and it contributed towards fixed costs and profit. It helps in sales and pricing policies and measuring the profitability of different proposals. Contribution is a sure test to decide whether a product is worthwhile to be continued among different products.

Contribution = Sales – Variable cost
Contribution = Fixed Cost + Profit.

Margin of safety*:* Margin of safety is the excess of sales over the break even sales. It can be expressed in absolute sales amount or in percentage. It indicates the extent to which the sales can be reduced without resulting in loss. A large margin of safety indicates the soundness of the business. The formula for the margin of safety is:

Profit
Present sales – Break even sales **or**
P. V. ratio

Margin of safety can be improved by taking the following steps.

- Increasing production
- Increasing selling price
- Reducing the fixed or the variable costs or both
- Substituting unprofitable product with profitable one.

Angle of incidence*:* This is the angle between sales line and total cost line at the Break-even point. It indicates the profit earning capacity of the concern. Large angle of incidence indicates a high rate of profit; a small angle indicates a low rate of earnings. To improve this angle, contribution should be increased either by raising the selling price and/or by reducing variable cost. It also indicates as to what extent the output and sales price can be changed to attain a desired amount of profit.

Profit Volume Ratio is usually called P. V. ratio. It is one of the most useful ratios for studying the profitability of business. The ratio of contribution to sales is the P/V ratio. It may be expressed in percentage. Therefore, every organization tries to improve the P. V. ratio of each product by reducing the
variable cost per unit or by increasing the selling price per unit. The concept of P. V. ratio helps in determining break even-point, a desired amount of profit etc.

Profit Volume Ratio is usually called P. V. ratio. It is one of the most useful ratios for studying the profitability of business. The ratio of contribution to sales is the P/V ratio. It may be expressed in percentage. Therefore, every organization tries to improve the P. V. ratio of each product by reducing thevariable cost per unit or by increasing the selling price per unit. The concept of P. V. ratio helps in determining break even-point, a desired amount of profit etc.

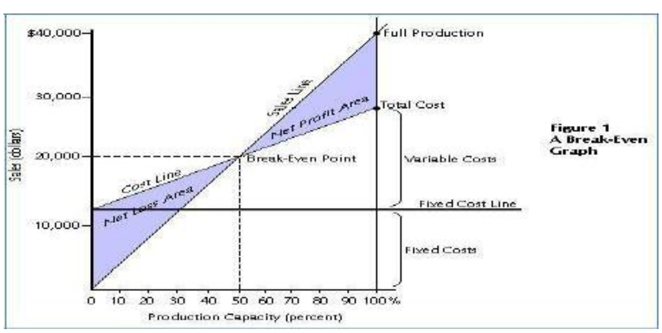


Figure 1
A Break-Even Graph

Determinants of breakeven point

1. ***Fixed cost:*** Expenses that do not vary with the volume of production are known as fixed expenses.

Eg. Manager's salary, rent and taxes, insurance etc. It should be noted that fixed changes are fixed only within a certain range of plant capacity. The concept of fixed overhead is most useful in formulating a price fixing policy. Fixed cost per unit is not fixed.

2. ***Variable Cost:*** Expenses that vary almost in direct proportion to the volume of production of sales are called variable expenses.
Eg. Electric power and fuel, packing materials consumable stores. It should be noted that variable cost per unit is fixed.

3. ***Contribution:*** Contribution is the difference between sales and variable costs and it contributed towards fixed costs and profit.
Contribution = Sales – Variable cost

Contribution = Fixed Cost + Profit.

4. ***Margin of safety:*** Margin of safety is the excess of sales over the break even sales. It can be expressed in absolute sales amount or in percentage.
The formula for the margin of safety is:

Present sales – Break even sales **or** $\frac{\text{Profit}}{\text{P. V. ratio}}$

Margin of safety can be improved by taking the following steps.

1. Increasing production
2. Increasing selling price
3. Reducing the fixed or the variable costs or both
4. Substituting unprofitable product with profitable one.

5. ***Angle of incidence:*** This is the angle between sales line and total cost line at the Break-even point. It indicates the profit earning capacity of the concern. Large angle of incidence indicates a high rate of profit; a small angle indicates a low rate of earnings.

6. ***Profit Volume Ratio*** is usually called P. V. ratio. It is one of the most useful ratios for studying the profitability of business

The formula is, $\frac{\text{Contributi on}}{Sales} \text{ X } 100$

7. ***Break – Even- Point:***
Break Even Point refers to the point where total cost is equal to total revenue. It is a point of no profit, no loss.

1. **B**reak Even point (Units) = $\frac{\text{Fixed Expenses}}{\text{Contributi on per unit}}$

2. Break Even point (In Rupees) = $\frac{\text{Fixed expenses}}{\text{Contributi on}} \text{ X sales}$

   (or) Fixed cost / Contribution margin ratio

   Contripution margin ratio = (selling price – variable cost)/selling price

MC=MR- NO PROFIT AND NO LOSS- BEP,
MC>MR-LOSS,
MC<MR-PROFITS

3. To ascertain the volume of sales required to achive a targeted amount of profit:

$$= \frac{\text{Fixed cost + Targeted profit}}{\text{Contribution margin}}$$

UNIT- III
Business Organizations and Markets

Forms of Business Organizations:

Imagine you want to do business. Which are you interested in? For example, you want to get into InfoTech industry. What can you do in this industry? Which one do you choose? The following are the alternatives you have on hand:

- You can buy and sell
- You can set up a small/medium/large industry to manufacture
- You can set up a workshop to repair
- You can develop software
- You can design hardware
- You can be a consultant/trouble-shooter

If you choose any one or more of the above, you have chosen the line of activity. The next step for you is to decide whether.

- You want to be only owner (It means you what to be sole trader) or
- You want to take some more professionals as co-owners along with you (If means you what to from partnership with others as partners) or
- You want to be a global player by mobilizing large resources across the country/world
- You want to bring all like-minded people to share the benefits of the common enterprise (You want to promote a joint stock company) or
- You want to involve government in the IT business (here you want to suggest government to promote a public enterprise!)

To decide this, it is necessary to know how to evaluate each of these alternatives.

Factors affecting the choice of form of business organization

Before we choose a particular form of business organization, let us study what factors affect such a choice? The following are the factors affecting the choice of a business organization:

1. **Easy to start and easy to close**: The form of business organization should be such that it should be easy to close. There should not be hassles or long procedures in the process of setting up business or closing the same.
2. **Division of labour**: There should be possibility to divide the work among the available owners.
3. **Large amount of resources**: Large volume of business requires large volume of resources. Some forms of business organization do not permit to raise larger resources. Select the one which permits to mobilize the large resources.
4. **Liability:** The liability of the owners should be limited to the extent of money invested in business. It is better if their personal properties are not brought into business to make up the losses of the business.
5. **Secrecy:** The form of business organization you select should be such that it should permit to take care of the business secrets. We know that century old business units are still surviving only because they could successfully guard their business secrets.
6. **Transfer of ownership:** There should be simple procedures to transfer the ownership to the next legal heir.
7. **Ownership, Management and control:** If ownership, management and control are in the hands of one or a small group of persons, communication will be effective and coordination will be easier.

Where ownership, management and control are widely distributed, it calls for a high degree of professional's skills to monitor the performance of the business.

8. **Continuity:** The business should continue forever and ever irrespective of the uncertainties in future.
9. **Quick decision-making:** Select such a form of business organization, which permits you to take decisions quickly and promptly. Delay in decisions may invalidate the relevance of the decisions.
10. **Personal contact with customer:** Most of the times, customers give us clues to improve business. So choose such a form, which keeps you close to the customers.
11. **Flexibility:** In times of rough weather, there should be enough flexibility to shift from one business to the other. The lesser the funds committed in a particular business, the better it is.
12. **Taxation:** More profit means more tax. Choose such a form, which permits to pay low tax.

These are the parameters against which we can evaluate each of the available forms of business organizations.

SOLE TRADER

The sole trader is the simplest, oldest and natural form of business organization. It is also called sole proprietorship. 'Sole' means one. 'Sole trader' implies that there is only one trader who is the owner of the business.

It is a one-man form of organization wherein the trader assumes all the risk of ownership carrying out the business with his own capital, skill and intelligence. He is the boss for himself. He has total operational freedom. He is the owner, Manager and controller. He has total freedom and flexibility. Full control lies with him. He can take his own decisions. He can choose or drop a particular product or business based on its merits. He need not discuss this with anybody. He is responsible for himself. This form of organization is popular all over the world. Restaurants, Supermarkets, pan shops, medical shops, hosiery shops etc.

Features

- It is easy to start a business under this form and also easy to close.
- He introduces his own capital. Sometimes, he may borrow, if necessary
- He enjoys all the profits and in case of loss, he lone suffers.
- He has unlimited liability which implies that his liability extends to his personal properties in case of loss.
- He has a high degree of flexibility to shift from one business to the other.
- Business secretes can be guarded well
- There is no continuity. The business comes to a close with the death, illness or insanity of the sole trader. Unless, the legal heirs show interest to continue the business, the business cannot be restored.
- He has total operational freedom. He is the owner, manager and controller.
- He can be directly in touch with the customers.
- He can take decisions very fast and implement them promptly.
- Rates of tax, for example, income tax and so on are comparatively very low.

Advantages

The following are the advantages of the sole trader from of business organization:

1. **Easy to start and easy to close :** Formation of a sole trader from of organization is relatively easy even closing the business is easy.
2. **Personal contact with customers directly:** Based on the tastes and preferences of the customers the stocks can be maintained.

3. **Prompt decision-making :** To improve the quality of services to the customers, he can take any decision and implement the same promptly. He is the boss and he is responsible for his business Decisions relating to grow their expansion can be made promptly.
4. **High degree of flexibility:** Based on the profitability, the trader can decide to continue or change the business, if needed.
5. **Secrecy:** Business secrets can well be maintained because there is only one trader.
6. **Low rate of taxation:** The rate of income tax for sole traders is relatively very low.
7. **Direct motivation:** If there are profits, all the profits belong to the trader himself. In other words. If he works more hard, he will get more profits. This is the direct motivating factor. At the same time, if he does not take active interest, he may stand to lose badly also.
8. **Total Control:** The ownership, management and control are in the hands of the sole trader and hence it is easy to maintain the hold on business.
9. **Minimum interference from government:** Except in matters relating to public interest, government does not interfere in the business matters of the soletrader. The sole trader is free to fix price for his products/services if he enjoys monopoly market.
10. **Transferability:** The legal heirs of the sole trader may take the possession of the business.

Disadvantages

The following are the disadvantages of sole trader form:

1. **Unlimited liability:** The liability of the sole trader is unlimited. It means that the sole trader has to bring his personal property to clear off the loans of his business. From the legal point of view, he is not different from his business.
2. **Limited amounts of capital:** resources a sole trader can mobilize cannot be very large and hence this naturally sets a limit for the scale of operations.
3. **No division of labour:** All the work related to different functions such as marketing, production, finance, labour and so on has to be taken care of by the sole trader himself. There is nobody else to take his burden. Family members and relatives cannot show as much interest as the trader takes.
4. **Uncertainty:** There is no continuity in the duration of the business. On the death, in sanity of insolvency the business may become to an end.
5. **Inadequate for growth and expansion:** This from is suitable for only small size, one-man-show type of organizations. This may not really work out for growing and expanding organizations.
6. **Lack of specialization:** The services of specialists such as accountants, market researchers, consultants and soon, are not within the reach of most of the sole traders.
7. **More competition:** Because it is easy to setup a small business, there is a high degree of competition among the small businessmen and a few who are good in taking care of customer requirements along can service.
8. **Low bargaining power:** The sole trader is the in the receiving end in terms of loans or supply of raw materials. He may have to compromise many times regarding the terms and conditions of purchase of materials or borrowing loans from the finance houses or banks.

PARTNERSHIP

Partnership is an improved from of sole trader in certain respects. Where there are like-minded persons with resources, they can come together to do the business and share the profits/losses of the business in an agreed ratio. Persons who have entered into such an agreement are individually called 'partners' and collectively called 'firm'. The relationship among partners is called a partnership.

Indian Partnership Act, 1932 defines partnership as the relationship between two or more persons who agree to share the profits of the business carried on by all or any one of them acting for all.

Features

1. **Relationship:** Partnership is a relationship among persons. It is relationship resulting out of an agreement.
2. **Two or more persons:** There should be two or more number of persons.
3. **There should be a business**: Business should be conducted.
4. **Agreement:** Persons should agree to share the profits/losses of the business
5. **Carried on by all or any one of them acting for all:** The business can be carried on by all or any one of the persons acting for all. Every partner is both an agent and a principal. Agent for other partners and principal for himself. All the partners are agents and the 'partnership' is their principal.

The following are the other features:

(a) **Unlimited liability:** The liability of the partners is unlimited. The partnership and partners, in the eye of law, and not different but one and the same. Hence, the partners have to bring their personal assets to clear the losses of the firm, if any.

(b) **Number of partners:** According to the Indian Partnership Act, the minimum number of partners should be two and the maximum number if restricted, as given below:
- 10 partners is case of banking business
- 20 in case of non-banking business

(c) **Division of labour:** Because there are more than two persons, the work can be divided among the partners based on their aptitude.

(d) **Personal contact with customers:** The partners can continuously be in touch with the customers to monitor their requirements.

(e) **Flexibility:** All the partners are likeminded persons and hence they can take any decision relating to business.

Partnership Deed

The written agreement among the partners is called 'the partnership deed'. It contains the terms and conditions governing the working of partnership. The following are contents of the partnership deed.

1. Names and addresses of the firm and partners
2. Nature of the business proposed
3. Duration
4. Amount of capital of the partnership and the ratio for contribution by each of the partners.
5. Their profit sharing ration (this is used for sharing losses also)
6. Rate of interest charged on capital contributed, loans taken from the partnership and the amounts drawn, if any, by the partners from their respective capital balances.
7. The amount of salary or commission payable to any partner
8. Procedure to value good will of the firm at the time of admission of a new partner, retirement of death of a partner
9. Allocation of responsibilities of the partners in the firm
10. Procedure for dissolution of the firm
11. Name of the arbitrator to whom the disputes, if any, can be referred to for settlement.
12. Special rights, obligations and liabilities of partners(s), if any.

TYPES OF PARTNERS

The following are the different kinds of partners:

1. **Active Partner:** Active partner takes active part in the affairs of the partnership. He is also called working partner.

2. **Sleeping Partner:** Sleeping partner contributes to capital but does not take part in the affairs of the partnership.
3. **Nominal Partner:** Nominal partner is partner just for namesake. He neither contributes to capital nor takes part in the affairs of business. Normally, the nominal partners are those who have good business connections, and are well places in the society.
4. **Partner by Estoppels:** Estoppels means behavior or conduct. Partner by estoppels gives an impression to outsiders that he is the partner in the firm. In fact be neither contributes to capital, nor takes any role in the affairs of the partnership.
5. **Partner by holding out:** If partners declare a particular person (having social status) as partner and this person does not contradict even after he comes to know such declaration, he is called a partner by holding out and he is liable for the claims of third parties. However, the third parties should prove they entered into contract with the firm in the belief that he is the partner of the firm. Such a person is called partner by holding out.
6. **Minor Partner:** Minor has a special status in the partnership. A minor can be admitted for the benefits of the firm. A minor is entitled to his share of profits of the firm. The liability of a minor partner is limited to the extent of his contribution of the capital of the firm.

Right of partners

Every partner has right

(a) To take part in the management of business
(b) To express his opinion
(c) Of access to and inspect and copy and book of accounts of the firm
(d) To share equally the profits of the firm in the absence of any specific agreement to the contrary
(e) To receive interest on capital at an agreed rate of interest from the profits of the firm
(f) To receive interest on loans, if any, extended to the firm.
(g) To be indemnified for any loss incurred by him in the conduct of the business
(h) To receive any money spent by him in the ordinary and proper conduct of the business of the firm.

Advantages

The following are the advantages of the partnership from:

1. **Easy to form:** Once there is a group of like-minded persons and good business proposal, it is easy to start and register a partnership.
2. **Availability of larger amount of capital:** More amount of capital can be raised from more number of partners.
3. **Division of labour:** The different partners come with varied backgrounds and skills. This facilities division of labour.
4. **Flexibility:** The partners are free to change their decisions, add or drop a particular product or start a new business or close the present one and soon.
5. **Personal contact with customers:** There is scope to keep close monitoring with customers requirements by keeping one of the partners in charge of sales and marketing. Necessary changes can be initiated based on the merits of the proposals from the customers.
6. **Quick decisions and prompt action:** If there is consensus among partners, it is enough to implement any decision and initiate prompt action. Sometimes, it may more time for the partners on strategic issues to reach consensus.
7. **The positive impact of unlimited liability:** Every partner is always alert about his impending danger of unlimited liability. Hence he tries to do his best to bring profits for the partnership firm by making good use of all his contacts.

Disadvantages:

The following are the disadvantages of partnership:

1. **Formation of partnership is difficult:** Only like-minded persons can start a partnership. It is sarcastically said,' it is easy to find a life partner, but not a business partner'.
2. **Liability:** The partners have joint and several liabilities beside unlimited liability. Joint and several liability puts additional burden on the partners, which means that even the personal properties of the partner or partners can be attached. Even when all but one partner become insolvent, the solvent partner has to bear the entire burden of business loss.
3. **Lack of harmony or cohesiveness:** It is likely that partners may not, most often work as a group with cohesiveness. This result in mutual conflicts, an attitude of suspicion and crisis of confidence. Lack of harmony results in delay in decisions and paralyses the entire operations.
4. **Limited growth:** The resources when compared to sole trader, a partnership may raise little more. But when compare to the other forms such as a company, resources raised in this form of organization are limited. Added to this, there is a restriction on the maximum number of partners.
5. **Instability:** The partnership form is known for its instability. The firm may be dis solved on death, insolvency or insanity of any of the partners.
6. **Lack of Public confidence:** Public and even the financial institutions look at the un registered firm with a suspicious eye. Though registration of the firm under the Indian Partnership Act is a solution of such problem, this cannot revive public confidence in to this form of organization overnight. The partnership can create confidence in other only with their performance.

JOINT STOCK COMPANY

The joint stock company emerges from the limitations of partnership such as joint and several liability, unlimited liability, limited resources and uncertain duration and so on. Normally, to take part in a business, it may need large money and we cannot foretell the fate of business. The main principle of the joint stock company from is to provide opportunity to take part in business with a low investment as possible say Rs.1000. Joint Stock Company has been a boon for investors with moderate funds to invest.

The word ' company' has a Latin origin, com means ' come together', pany means ' bread', joint stock company means, people come together to earn their livelihood by investing in the stock of company jointly.

Company Defined

Lord Justice Lindley explained the concept of the joint stock company from of organization as 'an association of many persons who contribute money or money's worth to a common stock and employ it for a common purpose.

Features

This definition brings out the following features of the company:

1. **Artificial person:** The Company has no form or shape. It is an artificial person created by law. It is intangible, invisible and existing only, in the eyes of law.
2. **Separate legal existence**: it has an independence existence, it separate from its members. It can acquire the assets. It can borrow for the company. It can sue other if they are in default in payment of dues, breach of contract with it, if any. Similarly, outsiders for any claim can sue it. A shareholder is not liable for the acts of the company. Similarly, the shareholders cannot bind the company by their acts.
3. **Voluntary association of persons**: The Company is an association of voluntary association of persons who want to carry on business for profit. To carry on business, they need capital. So they invest in the share capital of the company.

4. **Limited Liability**: The shareholders have limited liability i.e., liability limited to the face value of the shares held by him. In other words, the liability of a shareholder is restricted to the extent of his contribution to the share capital of the company. The shareholder need not pay anything, even in times of loss for the company, other than his contribution to the share capital.
5. **Capital is divided into shares**: The total capital is divided into a certain number of units. Each unit is called a share. The price of each share is priced so low that every investor would like to invest in the company. The companies promoted by promoters of good standing (i.e., known for their reputation in terms of reliability character and dynamism) are likely to attract huge resources.
6. **Transferability of shares**: In the company form of organization, the shares can be transferred from one person to the other. A shareholder of a public company can cell sell his holding of shares at his will. However, the shares of a private company cannot be transferred. A private company restricts the transferability of the shares.
7. **Common Seal**: As the company is an artificial person created by law has no physical form, it cannot sign its name on a paper; so, it has a common seal on which its name is engraved. The common seal should affix every document or contract; otherwise the company is not bound by such a document or contract.
8. **Perpetual succession**: 'Members may come and members may go, but the company continues for ever and ever' A. company has uninterrupted existence because of the right given to the shareholders to transfer the shares.
9. **Ownership and Management separated**: The shareholders are spread over the length and breadth of the country, and sometimes, they are from different parts of the world. To facilitate administration, the shareholders elect some among themselves or the promoters of the company as directors to a Board, which looks after the management of the business. The Board recruits the managers and employees at different levels in the management. Thus the management is separated from the owners.
10. **Winding up**: Winding up refers to the putting an end to the company. Because law creates it, only law can put an end to it in special circumstances such as representation from creditors of financial institutions, or shareholders against the company that their interests are not safeguarded. The company is not affected by the death or insolvency of any of its members.
11. **The name of the company ends with 'limited'**: it is necessary that the name of the company ends with limited (Ltd.) to give an indication to the outsiders that they are dealing with the company with limited liability and they should be careful about the liability aspect of their transactions with the company.

Formation of Joint Stock Company

There are two stages in the formation of a joint stock company. They are:

(a) To obtain Certificates of Incorporation
(b) To obtain certificate of commencement of Business

Certificate of Incorporation: The certificate of Incorporation is just like a 'date of birth' certificate. It certifies that a company with such and such a name is born on a particular day.

Certificate of commencement of Business: A private company need not obtain the certificate of commencement of business. It can start its commercial operations immediately after obtaining the certificate of Incorporation.

The promoters have to file the following documents, along with necessary fee, with a registrar of joint stock companies to obtain certificate of incorporation:

(a) **Memorandum of Association**: The Memorandum of Association is also called the charter of the company. It outlines the relations of the company with the outsiders. If furnishes all its details in six clause such as (ii) Name clause (II) situation clause (iii) objects clause (iv) Capital clause and (vi) subscription clause duly executed by its subscribers.

(b) **Articles of association**: Articles of Association furnishes the byelaws or internal rules government the internal conduct of the company.

(c) The list of names and address of the proposed directors and their willingness, in writing to act as such, in case of registration of a public company.

(d) A statutory declaration that all the legal requirements have been fulfilled. The declaration has to be duly signed by any one of the following: Company secretary in whole practice, the proposed director, legal solicitor, chartered accountant in whole time practice or advocate of High court.

The registrar of joint stock companies peruses and verifies whether all these documents are in order or not. If he is satisfied with the information furnished, he will register the documents and then issue a certificate of incorporation, if it is private company, it can start its business operation immediately after obtaining certificate of incorporation.

Advantages

The following are the advantages of a joint Stock Company

1. **Mobilization of larger resources:** A joint stock company provides opportunity for the investors to invest, even small sums, in the capital of large companies. The facilities rising of larger resources.
2. **Separate legal entity:** The Company has separate legal entity. It is registered underIndianCompaniesAct,1956.
3. **Limited liability:** The shareholder has limited liability in respect of the shares held by him. In no case, does his liability exceed more than the face value of the shares allotted to him.
4. **Transferability of shares:** The shares can be transferred to others. However, the private company shares cannot be transferred.
5. **Liquidity of investments**: By providing the transferability of shares, shares can be converted in to cash.
6. **Inculcates the habit of savings and investments:** Because the share face value is very low, this promotes the habit of saving among the common man and mobilizes the same towards investments in the company.
7. **Democracy in management:** the shareholders elect the directors in a democratic way in the general body meetings. The shareholders are free to make any proposals, question the practice of the management, suggest the possible remedial measures, as they perceive, The directors respond to the issue raised by the shareholders and have to justify their actions.
8. **Economics of large scale production & continued existence:** The Company has perpetual succession. It has no natural end. It continues forever and ever unless law put an end to it.
9. **Institutional confidence:** Financial Institutions prefer to deal with companies in view of their professionalism and financial strengths.
10. **Professional management:** With the larger funds at its disposal, the Board of Directors recruits competent and professional managers to handle the affairs of the company in a professional manner.
11. **Growth and Expansion:** With large resources and professional management, the company can earn good returns on its operations, build good amount of reserves and further consider the proposals for growth and expansion.

All that shines is not gold. The company from of organization is not without any disadvantages. The following are the disadvantages of joint stock companies.

Disadvantages

1. **Formation of company is a long drawn procedure:** Promoting a joint stock company involves a long drawn procedure. It is expensive and involves large number of legal formalities.
2. **High degree of government interference:** The government brings out a number of rules and regulations governing the internal conduct of the operations of a company such as meetings, voting, audit and soon, and any violation of these rules results in to statutory lapses, punishable under the companies act.
3. **Inordinate delays in decision-making:** As the size of the organization grows, the number of levels in organization also increases in the name of specialization. The more the number of levels, the more is the delay in decision-making. Sometimes, so-calledprofessionalsdonotrespondtotheurgenciesasrequired.Itpromotesdelayinadministration,which is referred to 'redtape and bureaucracy'.
4. **Lack or initiative:** In most of the cases, the employees of the company at different levels show slack in their personal initiative with the result, the opportunities once missed do not recur and the company loses the revenue.
5. **Lack of responsibility and commitment:** In some cases, the managers at different levels are afraid to take risk and more worried about their jobs rather than the huge funds invested in the capital of the company lose the revenue.
6. **Lack of responsibility and commitment:** In some cases, the managers at different levels are afraid to take risk and more worried about their jobs rather than the huge funds invested in the capital of the company. Where managers do not show up willingness to take responsibility, they cannot be considered as committed. They will not be able to handle the business risks.

PUBLIC ENTERPRISES

Public enterprises occupy an important position in the Indian economy. Today, public enterprises provide the substance and heart of the economy. Its investment of over Rs.10,000 crore is in heavy and basic industry, and infrastructure like power, transport and communications. The concept of public enterprise in Indian dates back to the era of pre-independence.

Genesis of Public Enterprises

In consequence to declaration of its goal as socialistic pattern of society in 1954, the Government of India realized that it is through progressive extension of public enterprises only, the following aims of our five years plans can be fulfilled.

- Higher production
- Greater employment
- Economic equality, and
- Dispersal of economic power

The government found it necessary to revise its industrial policy in 1956 to give it a socialistic bent.

Need for Public Enterprises

The Industrial Policy Resolution 1956 states the need for promoting public enterprises as follows:

- To accelerate the rate of economic growth by planned development
- To speed up industrialization, particularly development of heavy industries and to expand public sector and to build up a large and growing cooperative sector.
- To increase infrastructure facilities

- To disperse the industries over different geographical areas for balanced regional development
- To increase the opportunities of gainful employment
- To help in raising the standards of living
- To reducing disparities in income and wealth (By preventing private monopolies and curbing concentration of economic power and vast industries in the hands of a small number of individuals)

Achievements of public Enterprises

The achievements of public enterprise are vast and varied. They are:

1. Setting up a number of public enterprises in basic and key industries
2. Generating considerably large employment opportunities in skilled, unskilled, supervisory and managerial cadres.
3. Creating internal resources and contributing towards national exchequer for funds for development and welfare.
4. Bringing about development activities in backward regions, through locations in different areas of the country.
5. Assisting in the field of export promotion and conservation of foreign exchange.
6. Creating viable infrastructure and bringing about rapid industrialization (ancillary industries developed around the public sector as its nucleus).
7. Restricting the growth of private monopolies
8. Stimulating diversified growth in private sector
9. Taking over sick industrial units and putting them, in most of the vases, in order,
10. Creating financial systems, through a powerful networking of financial institutions, development and promotional institutions, which has resulted in social control and social orientation of investment, credit and capital management systems.
11. Benefiting the rural areas, priority sectors, small business in the fields of industry, finance, credit, services, trade, transport, consultancy and so on.

Let us see the different forms of public enterprise and their features now.

Forms of public enterprises

Public enterprises can be classified into three forms:

(a) Departmental undertaking
(b) Public corporation
(c) Government company

These are explained below

(a) Departmental Undertaking

This is the earliest from of public enterprise. Under this form, the affairs of the public enterprise are carried out under the overall control of one of the departments of the government. The government department appoints a managing director (normally a civil servant) for the departmental undertaking. He will be given the executive authority to take necessary decisions.

Examples for departmental undertakings are Railways, Department of Posts, All India Radio, Doordarshan, Defence undertakings like DRDL, DLRL, ordinance factories, and such.

Features

1. **Under the control of a government department**: The departmental undertaking is not an independent organization. It has no separate existence. It is designed to work under close control of a government department. It is subject to direct ministerial control.
2. **More financial freedom:** The departmental undertaking can draw funds from government account as per the needs and deposit back when convenient.

3. **Like any other government department**: The departmental undertaking is almost similar to any other government department
4. **Budget, accounting and audit controls**: The departmental undertaking has to follow guidelines (as applicable to the other government departments) underlying the budget preparation, maintenance of accounts, and getting the accounts audited internally and by external auditors.
5. **More a government organization, less a business organization.** The setup of a departmental undertaking is more rigid, less flexible, slow in responding to market needs.

Advantages

1. **Effective control:** Control is likely to be effective because it is directly under the Ministry.
2. **Responsible Executives:** Normally the administration is entrusted to a senior civil servant. The administration will be organized and effective.
3. **Less scope for mystification of funds:** Departmental undertaking does not draw any money more than is needed, that too subject to ministerial sanction and other controls. So chances for mis-utilisation are low.
4. **Adds to Government revenue:** The revenue of the government is on the rise when the revenue of the departmental under taking is deposited in the government account.

Disadvantages

1. **Decisions delayed:** Control is centralized. This results in lower degree of flexibility. Officials in the lower levels cannot take initiative. Decisions cannot be fast and actions cannot be prompt.
2. **No incentive to maximize earnings:** the departmental under taking does not retain any surplus with it. So there is no inventive for maximizing the efficiency or earnings.
3. **Slow response to market conditions:** Since there is no competition, there is no profit motive; there is no incentive to move swiftly to market needs.
4. **Redtapism and bureaucracy:** The departmental undertakings are in the control of a civil servant and under the immediate supervision of a government department. Administration gets delayed substantially.
5. **Incidence of more taxes:** At times, in case of losses, these are made up by the government funds only. To make up these, there may be a need for fresh taxes, which is un desirable.

Any business organization to be more successful needs to be more dynamic, flexible, and responsive to market conditions, fast in decision making and prompt in actions. None of these qualities figure in the features of a departmental undertaking.

PUBLIC CORPORATION

Public corporation is a 'right mix of public ownership, public accountability and business management for public ends'. The public corporation provides machinery, which is flexible, while at the same time retaining public control.

Definition

A public corporation is defined as a 'body corporate create by an Act of Parliament or Legislature and notified by the name in the official gazette of the central or state government. It is a corporate entity having perpetual succession, and common seal with power to acquire, hold, dispose of property, sue and be sued by its name".

Examples of a public corporation are Life Insurance Corporation of India, Unit Trust of India, Industrial Finance Corporation of India, Damodar Valley Corporation and others.

Features

1. **A body corporate**: It has a separate legal existence. It is a separate company by itself. If can raise resources, buy and sell properties, by name sue and be sued.

2. **More freedom and day-to-day affairs**: It is relatively free from any type of political interference. It enjoys administrative autonomy.
3. **Freedom regarding personnel**: The employees of public corporation are not government civil servants. The corporation has absolute freedom to formulate its own personnel policies and procedures, and these are applicable to all the employees including directors.
4. **Perpetual succession**: A statute in parliament or state legislature creates it. It continues forever and till a statue is passed to wind it up.
5. **Financial autonomy**: Through the public corporation is fully owned government organization, and the initial finance are provided by the Government, it enjoys total financial autonomy, its income and expenditure are not shown in the annual budget of the government, and it enjoys total financial autonomy.
6. **Commercial audit**: Except in the case of banks and other financial institutions where chartered accountants are auditors, in all corporations, the audit is entrusted to the comptroller and auditor general of India.
7. **Run on commercial principles**: As far as the discharge of functions, the corporation shall act as far as possible on sound business principles.

Advantages

1. **Independence, initiative and flexibility:** The corporation has an autonomous set up. So it is independent, take necessary initiative to realize its goals, and it can be flexible in its decisions as required.
2. **Scope for Redtapism and bureaucracy minimized:** The Corporation has its own policies and procedures. If necessary they can be simplified to eliminate redtapism and bureaucracy, if any.
3. **Public interest protected:** The corporation can protect the public interest by making its policies more public friendly, Public interests are protected because every policy of the corporation is subject to ministerial directives and board parliamentary control.
4. **Employee friendly work environment:** Corporation can design its own work culture and train its employees accordingly. It can provide better amenities and better terms of service to the employees and there by secured greater productivity.
5. **Competitive prices:** the corporation is a government organization and hence can afford with minimum margins of profit, It can offer its products and services at competitive prices.
6. **Economics of scale:** By increasing the size of its operations, it can achieve economics of large-scale production.
7. **Public accountability:** It is accountable to the Parliament or legislature; it has to submit its annual report on its working results.

Disadvantages:

1. **Continued political interference:** the autonomy is on paper only and in reality, the continued.
2. **Misuse of Power:** In some cases, the greater autonomy leads to misuse of power. It takes time to unearth the impact of such misuse on the resources of the corporation. Cases of misuse of power defeat the very purpose of the public corporation.
3. **Burden for the government:** Where the public corporation ignores the commercial principles and suffers losses, it is burdensome for the government to provide subsidies to make up the losses.

Government Company

Section 617 of the Indian Companies Act defines a government company as "any company in which not less than 51 percent of the paid up share capital" is held by the Central Government or by any State Government or Governments or partly by Central Government and partly by one or more of the state Governments and includes and company which is subsidiary of government company as thus defined".

A government company is the right combination of operating flexibility of privately organized companies with the advantages of state regulation and control in public interest. Government companies differ in the degree of control and their motive also. Some government companies are promoted as

- Industrial under takings (such as Hindustan Machine Tools, Indian Telephone industries, and so on)
- Promotional agencies (such as National Industrial Development Corporation, National Small Industries Corporation, and so on) to prepare feasibility reports for promoters who want to set up public or private companies.
- Agency to promote trade or commerce. For example, state trading corporation, Export Credit Guarantee Corporation and so such like.
- A company to take over the existing sick companies under private management (E.g. Hindustan Shipyard).
- A company established as a totally state enterprise to safeguard national interests such as Hindustan Aeronautics Ltd. And soon.
- Mixed ownership company in collaboration with a private consult to obtain technical knowhow and guidance for the management of its enterprises, e.g. Hindustan Cables.

Features of Government Company:

1. **Like any other registered company**: It is incorporated as a registered company under the Indian companies Act. 1956. Like any other company, the government company has separate legal existence. Common seal, perpetual succession, limited liability, and so on. The provisions of the Indian Companies Act apply for all matters relating to formation, administration and winding up. However, the government has a right to exempt the application of any provisions of the government companies.
2. **Shareholding**: The majority of the share are held by the Government, Central or State, partly by the Central and State Government(s), in the name of the President of India, It is also common that the collaborators and allotted some shares for providing the transfer of technology.
3. **Directors are nominated**: As the government is the owner of the entire or majority of the share capital of the company, it has freedom to nominate the directors to the Board. Government may consider the requirements of the company in terms of necessary specialization and appoints the directors accordingly.
4. **Administrative autonomy and financial freedom**: A government company functions independently with full discretion and in the normal administration of affairs of the undertaking.
5. **Subject to ministerial control**: Concerned minister may act as the immediate boss. It is because it is the government that nominates the directors, the minister issue directions for a company and he can call for information related to the progress and affairs of the company any time.

Advantages of Government Company:

1. **Formation is easy**: There is no need for an Act in legislature or parliament to promote a government company. A Government company can be promoted as per the provisions of the companies Act. Which is relatively easier?
2. **Separate legal entity**: It retains the advantages of public corporation such as autonomy, legal entity.
3. **Ability to compete:** It is free from the rigid rules and regulations. It can smoothly function with all the necessary initiative and drive necessary to complete with any other private organization. It retains its independence in respect of large financial resources, recruitment of personnel, management of its affairs, and soon.
4. **Flexibility**: A Government company is more flexible than a departmental under taking or public corporation. Necessary changes can be initiated, which the frame work of the company law. Government can, if necessary, change the provisions of the Companies Act. If found restricting the freedom of the government company. The form of Government Company is so flexible that it can be

used for taking over sick units promoting strategic industries in the context to national security and interest.

5. **Quick decision and prompt actions**: In view of the autonomy, the government company take decision quickly and ensure that the actions and initiated promptly.

6. **Private participation facilitated**: Government company is the only from providing scope for private participation in the ownership. The facilities to take the best, necessary to conduct the affairs of business, from the private sector and also from the public sector.

Dis advantages of Government Company:

1. **Continued political and government interference**: Government seldom leaves the government company to function on its own. Government is the major shareholder and it dictates its decisions to the Board. The Board of Directors gets these approved in the general body. There were a number of cases where the operational polices were influenced by the whims and fancies of the civil servants and the ministers.
2. **Higher degree of government control**: The degree of government control is so high that the government company is reduced to mere adjuncts to the ministry and is, in majority of the cases, not treated better than the subordinate organization or offices of the government.
3. **Evades constitutional responsibility**: A government company is creating by executive action of the government without the specific approval of the parliament or Legislature.
4. **Poor sense of attachment or commitment**: The members of the Board of Management of government companies and from the ministerial departments in their ex-officio capacity. The lack the sense of attachment and do not reflect any degree of commitment to lead the company in a competitive environment.
5. **Divided loyalties**: The employees are mostly drawn from the regular government departments for a defined period. After this period, they go back to their government departments and hence their divided loyalty dilutes their interest towards their job in the government company.
6. **Flexibility on paper:** The powers of the directors are to be approved by the concerned Ministry, particularly the power relating to borrowing, increase in the capital, appointment of top officials, entering into contracts for large orders and restrictions on capital expenditure. The government companies are rarely allowed to exercise their flexibility and independence.

INTRODUCTION TO MARKET:

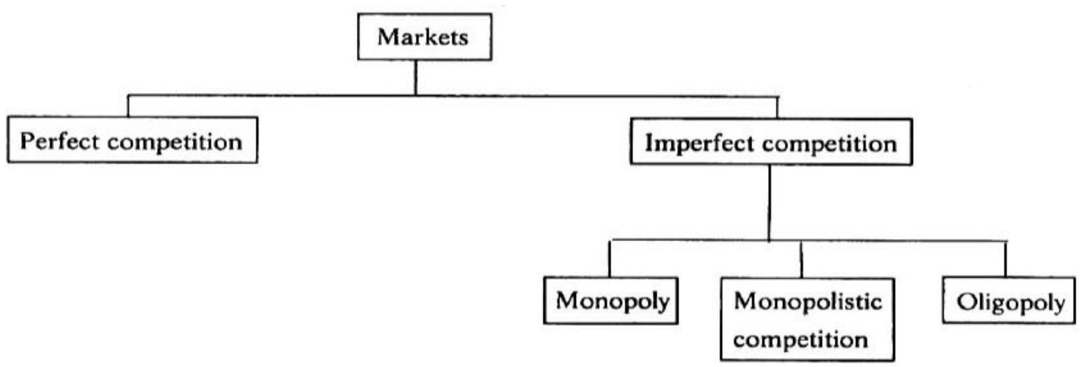
Market is a place where buyer and seller meet, goods and services are offered for the sale and transfer of ownership occurs. A market may be also defined as the demand made by a certain group of potential buyers for a good or service. The former one is a narrow concept and later one, a broader concept. Economists describe a market as a collection of buyers and sellers who transact over a particular product or product class (the housing market, the clothing market, the grain market etc.). Hence the understanding on the market structure and the nature of competition are a pre-requisite in price determination.

Different Market Structures

Market structure describes the competitive environment in the market for any good or service. A market consists of all firms and individuals who are willing and able to buy or sell a particular product. This includes firms and individuals currently engaged in buying and selling a particular product, as well as potential entrants.

The determination of price is affected by the competitive structure of the market. This is because the firm operates in a market and not in isolation. In marking decisions concerning economic variables it is affected, as are all institutions in society by its environment.

Perfect Competition



Perfect competition refers to a market structure where competition among the sellers and buyers prevails in its most perfect form. In a perfectly competitive market, a single market price prevails for the commodity, which is determined by the forces of total demand and total supply in the market.

Characteristics of Perfect Competition

The following features characterize a perfectly competitive market:

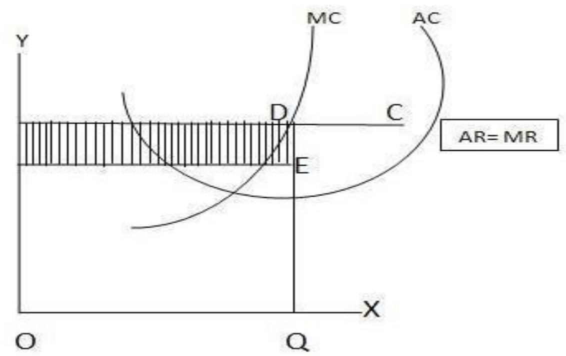
a) **A large number of buyers and sellers:** The number of buyers and sellers is large and the share of each one of them in the market is so small that none has any influence on the market price.
b) **Homogeneous product:** The product of each seller is totally undifferentiated from those of the others.
c) **Free entry and exit:** Any buyer and seller is free to enter or leave the market of the commodity.
d) **Perfect knowledge:** All buyers and sellers have perfect knowledge about the market for the commodity.
e) **Indifference:** No buyer has a preference to buy from a particular seller and no seller to sell to a particular buyer.
f) **Non-existence of transport costs:** Perfectly competitive market also assumes the non-existence of transport costs.
g) **Perfect mobility of factors of production:** Factors of production must be in a position to move freely into or out of industry and from one firm to the other.

Under such a market no single buyer or seller plays a significant role in price determination. One the other hand all of them jointly determine the price. The price is determined in the industry, which is composed of all the buyers and seller for the commodity.

PRICE OUTPUT DETERMINATION INCASE OF PERFECT COMPETITION:

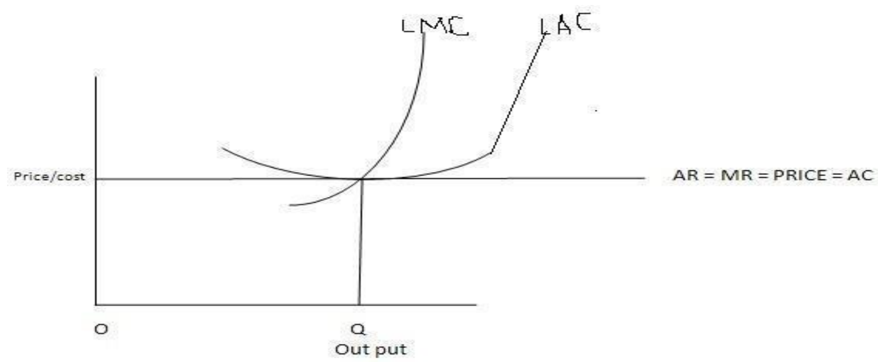
SHORT RUN:

The price and output of the firm are determined, under perfect competition, based on the industry price and its own costs. The industry price has greater say in this process because the firm own sales are very small and insignificant. The process of price output determination in case of perfect competition. The firm demand curve is horizontal at the price determined in the industry (MR = AR = price). This demand curve is also known as average revenue curve. This is because if all the units are sold at the same price, on an average , the revenue to the firm equal its price.



LONG RUN UNDER PERFECT COMPETITION

Having been attracted by supernormal profits, more and more firms enter the industry. With the result, there will be a scramble for scarce inputs among the competing firms pushing the input prices. Hence, the average cost increases. The entry of more and more firms will expand the supply pulling down the market price. The entry of the firms into the industry continues till the supernormal profit is completely eroded. In the long run, the firms will be in the position to enjoy only normal profits but not supernormal profit. Normal profits are the profit that is just sufficient for the firms to stay in the business. Here they satisfies two conditions : i)AR=AC ii)MR=MC



Monopoly

The word monopoly is made up of two syllables, Mono and poly. Mono means single while poly implies selling. Thus monopoly is a form of market organization in which there is only one seller of the commodity. There are no close substitutes for the commodity sold by the seller. Pure monopoly is a market situation in which a single firm sells a product for which there is no good substitute.

Features of monopoly

The following are the features of monopoly.

1. **Single person or a firm:** A single person or a firm controls the total supply of the commodity. There will be no competition for monopoly firm. The monopolist firm is the only firm in the whole industry.
2. **No close substitute:** The goods sold by the monopolist shall not have closely competition substitutes. Even if price of monopoly product increase people will not go in far substitute. For example: If the price of electric bulb increase slightly, consumer will not go in for kerosene lamp.
3. **Large number of Buyers:** Under monopoly, there may be a large number of buyers in the market who compete among themselves.

4. **Price Maker:** Since the monopolist controls the whole supply of a commodity, he is a price-maker, and then he can alter the price.
5. **Supply and Price:** The monopolist can fix either the supply or the price. He cannot fix both. If he charges a very high price, he can sell a small amount. If he wants to sell more, he has to charge a low price. He cannot sell as much as he wishes for any price he pleases.
6. **Downward Sloping Demand Curve:** The demand curve (average revenue curve) of monopolist slopes downward from left to right. It means that he can sell more only by lowering price.

Types of Monopoly

Monopoly may be classified into various types. The different types of monopolies are explained below:

1. **Legal Monopoly:** If monopoly arises on account of legal support or as a matter of legal privilege, it is called Legal Monopoly. Ex. Patent rights, special brands, trade means, copyright etc.
2. **Voluntary Monopoly:** To get the advantages of monopoly some private firms come together voluntarily to control the supply of a commodity. These are called voluntary monopolies. Generally, these monopolies arise with industrial combinations. These voluntary monopolies are of three kinds (a) cartel (b) trust (c) holding company. It may be called artificial monopoly.
3. **Government Monopoly:** Sometimes the government will take the responsibility of supplying a commodity and avoid private interference. Ex. Water, electricity. These monopolies, created to satisfy social wants, are formed on social considerations. These are also called Social Monopolies.
4. **Private Monopoly:** If the total supply of a good is produced by a single private person or firm, it is called private monopoly. Hindustan Lever Ltd. Is having the monopoly power to produce Lux Soap.
5. **Limited Monopoly:** if the monopolist is having limited power in fixing the price of his product, it is called as 'Limited Monopoly'. It may be due to the fear of distant substitutes or government intervention or the entry of rivals firms.
6. **Unlimited Monopoly:** If the monopolist is having unlimited power in fixing the price of his good or service, it is called unlimited monopoly. Ex. A doctor in a village.
7. **Single Price Monopoly:** When the monopolist charges same price for all units of his product, it is called single price monopoly. Ex. Tata Company charges the same price to all the Tata Indiaca Cars of the same model.
8. **Discriminating Monopoly:** When a Monopolist charges different prices to different consumers for the same product, it is called discriminating monopoly. A doctor may take Rs.20 from a rich man and only Rs.2 from a poor man for the same treatment.
9. **Natural Monopoly:** Sometimes monopoly may arise due to scarcity of natural resources. Nature provides raw materials only in some places. The owner of the place will become monopolist. For Ex. Diamond mine in South Africa.

Pricing under Monopoly

Monopoly refers to a market situation where there is only one seller. He has complete control over the supply of a commodity. He is therefore in a position to fix any price. Under monopoly there is no distinction between a firm and an industry. This is because the entire industry consists of a single firm.

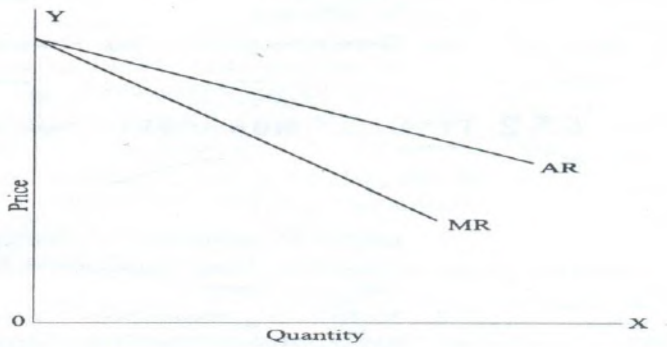


Fig. 6.11

Being the sole producer, the monopolist has complete control over the supply of the commodity. He has also the power to influence the market price. He can raise the price by reducing his output and lower the price by increasing his output. Thus he is a price-maker. He can fix the price to his maximum advantages. But he cannot fix both the supply and the price, simultaneously. He can do one thing at a time. If the fixes the price, his output will be determined by the market demand for his commodity. On the other hand, if he fixes the output to be sold, its market will determine the price for the commodity. Thus his decision to fix either the price or the output is determined by the market demand.

The market demand curve of the monopolist (the average revenue curve) is downward sloping. Its corresponding marginal revenue curve is also downward sloping. But the marginal revenue curve lies below the average revenue curve as shown in the figure. The monopolist faces the down-sloping demand curve because to sell more output, he must reduce the price of his product. The firm's demand curve and industry's demand curve are one and the same. The average cost and marginal cost curve are U shaped curve. Marginal cost falls and rises steeply when compared to average cost.

Price output determination (Equilibrium Point)

The monopolistic firm attains equilibrium when its marginal cost becomes equal to the marginal revenue. The monopolist always desires to make maximum profits. He makes maximum profits when MC=MR. He does not increasing his output if his revenue exceeds his costs. But when the costs exceed the revenue, the monopolist firm incur loses. Hence the monopolist curtails his production. He produces up to that point where additional cost is equal to the additional revenue (MR=MC). Thus point is called equilibrium point. The price output determination under monopoly may be explained with the help of a diagram.

In the diagram 6.12 the quantity supplied or demanded is shown along X-axis. The cost or revenue is shown along Y-axis. AC and MC are the average cost and marginal cost curves respectively. AR and MR curves slope downwards from left to right. AC and MC and U shaped curves. The monopolistic firm attains equilibrium when its marginal cost is equal to marginal revenue (MC=MR). Under monopoly, the MC curve may cut the MR curve from below or from a side. In the diagram, the above condition is satisfied at point E. At point E, MC=MR. The firm is in equilibrium. The equilibrium output is OM.

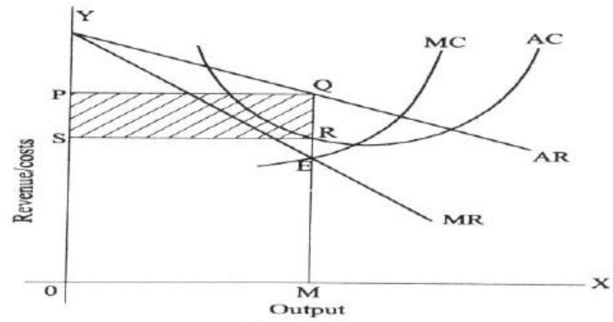


Fig. 6.12

The above diagram (Average revenue) = MQ or OP
Average cost = MR
Profit per unit = Average Revenue-Average cost=MQ-MR=QR
Total Profit = QRXSR=PQRS

The area PQRS resents the maximum profit earned by the monopoly firm.

But it is not always possible for a monopolist to earn super-normal profits. If the demand and cost situations are not favorable, the monopolist may realize short run losses.

Through the monopolist is a price marker, due to weak demand and high costs; he suffers a loss equal to PABC.

If AR > AC -> Abnormal or super normal profits.
If AR = AC -> Normal Profit
If AR < AC -> Loss

In the long run the firm has time to adjust his plant size or to use existing plant so as to maximize profits.

Monopolistic competition

Perfect competition and pure monopoly are rate phenomena in the real world. Instead, almost every market seems to exhibit characteristics of both perfect competition and monopoly. Hence in the real world it is the state of imperfect competition lying between these two extreme limits that work. Edward. H. Chamberlain developed the theory of monopolistic competition, which presents a more realistic picture of the actual market structure and the nature of competition.

Characteristics of Monopolistic Competition:

The important characteristics of monopolistic competition are:

1. **Existence of Many firms:** Industry consists of a large number of sellers, each one of whom does not feel dependent upon others. Every firm acts independently without bothering about the reactions of its rivals. The size is so large that an individual firm has only a relatively small part in the total market, so that each firm has very limited control over the price of the product. A monopolistically competitive firm follows an independent price policy.
2. **Product Differentiation:** Product differentiation means that products are different in some ways, but not altogether so. The products are not identical but the same time they will not be entirely different from each other. IT really means that there are various monopolist firms competing with each other.

3. **Large Number of Buyers:** There are large number buyers in the market. But the buyers have their own brand preferences. So the sellers are able to exercise a certain degree of monopoly over them. Each seller has to plan various incentive schemes to retain the customers who patronize his products.
4. **Free Entry and Exist of Firms:** As in the perfect competition, in the monopolistic competition too, there is freedom of entry and exit. That is, there is no barrier as found under monopoly.
5. **Selling costs:** Since the products are close substitute much effort is needed to retain the existing consumers and to create new demand. So each firm has to spend a lot on selling cost, which includes cost on advertising and other sale promotion activities.
6. **Imperfect Knowledge:** Imperfect knowledge about the product leads to monopolistic competition. If the buyers are fully aware of the quality of the product they cannot be influenced much by advertisement or other sales promotion techniques.
7. **The Group:** Under perfect competition the term industry refers to all collection of firms producing a homogenous product. But under monopolistic competition the products of various firms are not identical through they are close substitutes. Prof. Chamberlin called the collection of firms producing close substitute products as a group.

Price – Output Determination under Monopolistic Competition:

Since under monopolistic competition different firms produce different varieties of products, different prices for them will be determined in the market depending upon the demand and cost conditions. Each firm will set the price and output of its own product. Here also the profit will be maximized when marginal revenue is equal to marginal cost.

Short-run equilibrium of the firm:

In monopolistic competition, since the product is differentiated between firms, each firm does not have a perfectly elastic demand for its producrs. In such a market, all firms determine the price of their own products. Therefore, it faces a downward slopping demand curve. Overall, we can say that the elasticity of demand increases as the defferentiqation between products decreases.

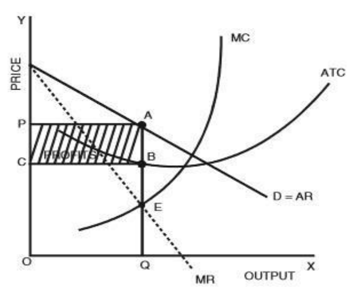


Fig. 1 : Short run equilibrium of a firm in monopolistic competition : Super-normal profits

Fig. 1 above depicts a firm facing a downward sloping, but flat demand curve. It also has U – shaped short – run cost curve.

Conditions for the Equilibrium of an individual firm:

The conditions for price – output determination and equilibrium of an individual firm are as follows:

1. MC = MR
2. The MC curve cuts the MR curve from below.

In Fig.1, we can see that the MC curve cuts the MR curve at point E. At this point,

- Equilibrium price = OP and
- Equilibrium output = OQ

Now, since the price unit cost is BQ, we have

- Per unit super – normal profit (price – cost) = AB or PC

- Total super – normal profit = APCB

The following figure depicts a firm earning losses in the short – run.

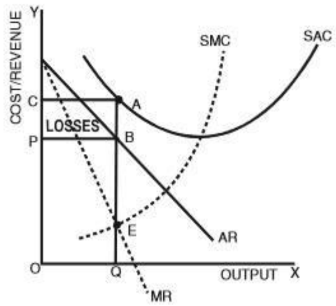


Fig. 2 : Short run equilibrium of a firm in Monopolistic Competition – With losses

From Fig.2, we can see that the per unit cost is higher than the price of the firm. Therefore,

- AQ > OP or BQ
- Loss per unit = AQ – BQ = AB
- Total losses = ACPB

Long – run equilibrium:

If firms in a monopolistic competition earn super – normal profits in the short – run, then new firms will have an incentive to enter the industry. As these firms enter, the profits per firm decrease as the total demand gets shared between a larger number of firms. This continues until all firms earn only normal profits. Therefore, in the long-run, firms, in such a market, earn only normal profits.

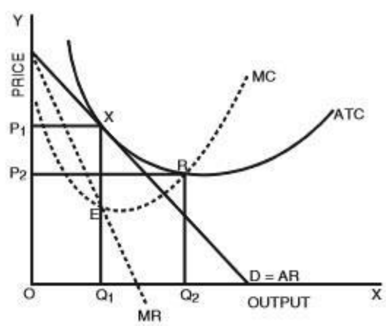


Fig. 3 : The long-term equilibrium of a firm in monopolistic competition

As we can see in Fig.3 above, the average revenue (AR) curve touches the average total cost (ATC) curve at point X. This corresponds to quantity Q1 and Price P1. Now, at equilibrium (MC = MR), all super – normal profits are zero since the average revenue = average costs. Therefore, all firms earn zero super – normal profits or earn only normal profits.

It is important to note that in the long – run, a firm is in an equilibrium position having excess capacity. In simple words, it produces a lower quantity than its full capacity. From Fig. 3 above, we can see that the firm can increase its output from q1 to q2 and reduce average costs. However, it does not do so because it reduces the average revenue more than the average costs. Hence, we can conclude that in monopolistic competition, firms do not operate optimally. There always exists an excess capacity of production with each firm.

In case of losses in the short – run, the firms making a loss will exit from the market. This continues until the remaining firms make normal profits only.

Oligopoly

The term oligopoly is derived from two Greek words, oligos meaning a few, and pollen meaning to sell. Oligopoly is the form of imperfect competition where there are a few firms in the market, producing either a homogeneous product or producing products, which are close but not perfect substitute of each other.

Characteristics of Oligopoly

The main features of oligopoly are:

1. **Few Firms:** There are only a few firms in the industry. Each firm contributes a sizeable share of the total market. Any decision taken by one firm influence the actions of other firms in the industry. The various firms in the industry compete with each other.
2. **Interdependence:** As there are only very few firms, any steps taken by one firm to increase sales, by reducing price or by changing product design or by increasing advertisement expenditure will naturally affect the sales of other firms in the industry. An immediate retaliatory action can be anticipated from the other firms in the industry every time when one firm takes such a decision. He has to take this into account when he takes decisions. So the decisions of all the firms in the industry are interdependent.
3. **Indeterminate Demand Curve:** The interdependence of the firms makes their demand curve indeterminate. When one firm reduces price other firms also will make a cut in their prices. So he firm cannot be certain about the demand for its product. Thus the demand curve facing an oligopolistic firm loses its definiteness and thus is indeterminate as it constantly changes due to the reactions of the rival firms.
4. **Advertising and selling costs:** Advertising plays a greater role in the oligopoly market when compared to other market systems. According to Prof. William J. Banumol "it is only oligopoly that advertising comes fully into its own". A huge expenditure on advertising and sales promotion techniques is needed both to retain the present market share and to increase it. So Banumol concludes "under oligopoly, advertising can become a life-and-death matter where a firm which fails to keep up with the advertising budget of its competitors may find its customers drifting off to rival products."
5. **Price Rigidity:** In the oligopoly market price remain rigid. If one firm reduced price it is with the intention of attracting the customers of other firms in the industry. In order to retain their consumers they will also reduce price. Thus the pricing decision of one firm results in a loss to all the firms in the industry. If one firm increases price. Other firms will remain silent there by allowing that firm to lose its customers. Hence, no firm will be ready to change the prevailing price. It causes price rigidity in the oligopoly market.

OTHER MARKET STRUCTURES

Duopoly

Duopoly refers to a market situation in which there are only two sellers. As there are only two sellers any decision taken by one seller will have reaction from the other Eg. Coca-Cola and Pepsi. Usually these two sellers may agree to co-operate each other and share the market equally between them, So that they can avoid harmful competition.

The duopoly price, in the long run, may be a monopoly price or competitive price, or it may settle at any level between the monopoly price and competitive price. In the short period, duopoly price may even fall below the level competitive price with the both the firms earning less than even the normal price.

Monopsony

Mrs. Joan Robinson was the first writer to use the term monopsony to refer to market, which there is a single buyer. Monoposony is a single buyer or a purchasing agency, which buys the show, or nearly whole of a commodity or service produced. It may be created when all consumers of a commodity are organized together and/or when only one consumer requires that commodity which no one else requires.

Bilateral Monopoly

A bilateral monopoly is a market situation in which a single seller (Monopoly) faces a single buyer (Monoposony). It is a market of monopoly-monoposy.

Oligopsony

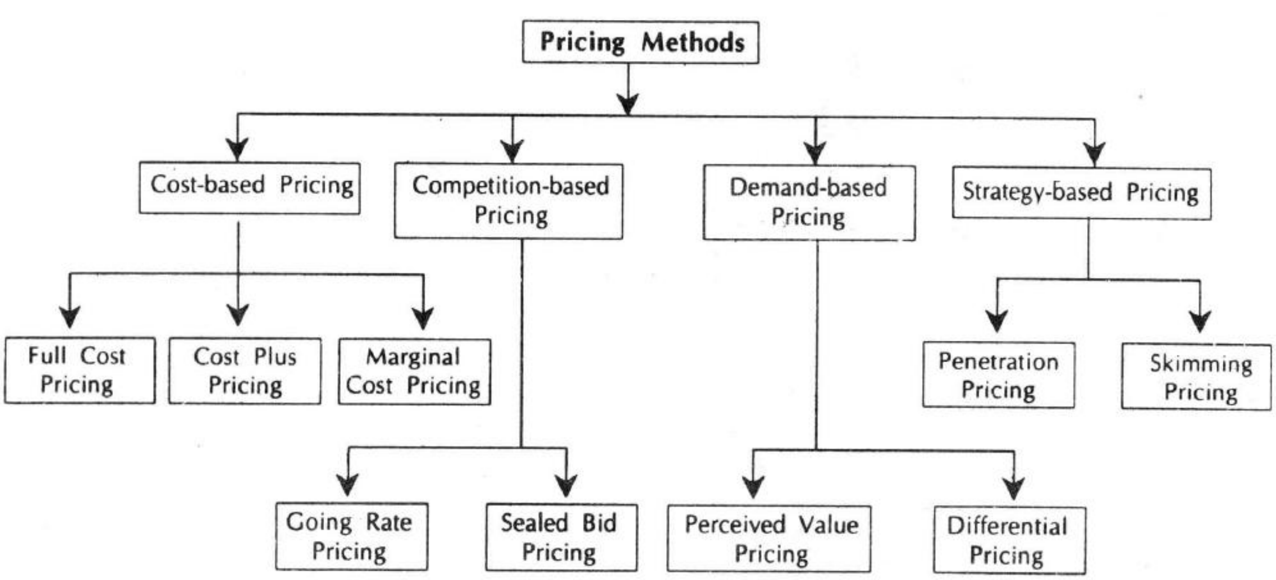
Oligopsony is a market situation in which there will be a few buyers and many sellers. As the sellers are more and buyers are few, the price of product will be comparatively low but not as low as under monopoly.

PRICING METHODS

The micro – economic principle of profit maximization suggests pricing by the marginal analysis. That is by equating MR to MC. However the pricing methods followed by the firms in practice around the world rarely follow this procedure. This is for two reasons; uncertainty with regard to demand and cost function and the deviation from the objective of short run profit maximization.

It was seen that there is no unique theory of firm behavior. While profit certainly on important variable for which every firm cares. Maximization of short – run profit is not a popular objective of a firm today. At the most firms seek maximum profit in the long run. If so the problem is dynamic and its solution requires accurate knowledge of demand and cost conditions over time. Which is impossible to come by?

In view of these problems economic prices are a rare phenomenon. Instead, firms set prices for their products through several alternative means. The important pricing methods followed in practice are shown in the chart.



I.**Cost Based Pricing**

a) Cost plus pricing: This is also called full cost or mark up pricing. Here the average cost normal capacity of output is ascertained and then a conventional margin of profit is added to the cost to arrive at the price. In other words, find out the product unit‟s total cost and add percentage of profit to arrive at the selling price.

This method is suitable where the cost keep fluctuating from time to time. It is commonly followedin departmental stores and other retail shops. This method is simple to be administered but it does not consider the competition factor. The competitor may produce the same product at lower cost and thus offer it at a lower price.

b) Marginal cost pricing : in marginal cost pricing, selling price is fixed in such a way that it coversfully the variable or marginal cost and contributes towards recovery of fixed costs fully or partly, depending upon the market situations. In times of stiff competition, marginal cost offers a guideline as to how far the selling price can be lowered. This is also called break even pricing or target profit pricing. How break – even analysis helps intaking pricing decisions.

II. COMPETITION – ORIENTED PRICING:

Some commodities are priced according to the competition in their markets. Thus we have the going rate method of price and the sealed bid pricing technique. Under the former a firm prices its new product according to the prevailing prices of comparable products in the market.

a) **Sealed bid pricing:** this method is more popular in tenders and contracts. Each contracting firm quotes its price in a sealed cover called tender. All the tenders are opened on a scheduled date and the person who quotes the lowest prices, other things remaining the same, is awarded the contract.
b) **Going rate pricing:** here the price charged by the firm is in tune with the price charged in the industry as a whole. In other words, the prevailing market price at a given point of time is the guiding factor. When one wants to buy or sell gold, the prevailing market rate at a given point of time is taken as the basis to determine the price, normally the market leaders keep announcing the prevailing prices at a given point of time based on demand and supply positions.

III.DEMAND – ORIENTED PRICING

The higher the demand, the higher can be the price. Cost is not the consideration here. The key to pricing here is the value as perceived by the consumer. This is a relatively modern marketing concept.

a) Price discrimination: price discrimination refer to the practice of charging different prices to customers for the same good. The firm uses its discretion to charge differently the different customer. It is also called differential pricing. Customers of different profile can be separated in various ways, such as by different consumer requirement by nature of product itself , by geographical areas, by income group and so on.

b) Perceived value pricing: perceived value pricing refers to where the price is fixed on the basis ofthe perception of the buyer of the value of the product.

IV.STRATEGY – BASED PRICING:

a) **Market skimming**: when the product is introduced for the first time in the market, the company follows this method. Under this method, the company fixes a very high price for the product. The main idea is to charge the customer maximum possible. For example Sony introduces a particular TV model , it fixed a very high price and other company.
b) **Market penetration**: this is exactly opposite to the market skimming method. Here the price of the product is fixed so low that the company can increase its market share. the company attains profits with increasing volumes and increase in the market share. More often , the companies believe that it is necessary to dominate the market in the long –run making profit in the short-

run.

c) **Two – part pricing** : the firms with market power can enhance profits by the strategy of two – part pricing. Under this strategy, a firm charges a fixed fee for the right to purchase its goods, plus a per unit charge for each unit purchased. Entertainment houses such as country clubs, athletic clubs, golf courses, health clubs usually adopt this strategy. They charge a fixed initiation fee plus a charge, per month or per visit, to use the facilities.

d) **Block pricing**: block pricing is another way a firm with market power can enhance its profits. We see block pricing in out day – to – day life very frequently. Six lux soaps in a single pack or five magi noodles in a single pack.

e) **Commodity bundling**: commodity bundling refers to the practice of bundling two or more different products together and selling them at a single bundle price, the package deals offeredby the tourist companies, airlines hold testimony to this practice. The package includes the airfare, hotel, meals, sight seeing and so on.

f) **Peak load pricing:** during seasonal period when demand is likely to be higher, a firm may enhance profits by peak load pricing. The firm philosophy is to charge a higher price during peaktimes than is charged during off – peak times. Apsrtc, air india, jet air etc,.

g) **Cross subsidization**: in case where demand for two products produced by a firm is interrelated through demand or costs, the firm may enhance the profitability of its operation through cross subsidization .

h) **Transfer pricing**: transfer pricing is an internal pricing technique. It refers to a price at which inputs of one department are transferred to another, in order to maximize the overall profits of the company. For example kinetic Honda, hero Honda,

<u>PRICING STRATEGIES IN TIMES OF STIFF PRICE COMPETITION</u>

a) **Pricing matching**: price matching is a strategy in which a firm promise to match a lower price offered by any competitor, while announcing its own price. It is necessary that one should be confident, before this strategy is adopted, that the price cannot be lower in the market than one offered.

b) **Promoting brand loyalty**: this is an advertising strategy where the customers are frequently reminded by the brand value of given product or services. The conviction here is that the customers, once they are loyal to the given branded product or services, will not slip away when the competitors come out with products at lower prices.

c) **Time – to – time**: this is also called randomized pricing strategy where the firm varies its prices form time- to – time, say hour – to – time, say hour – to – hour or day – to –day. This methods offers two advantages , the rival firms can no more play with price cuts. Also customers cannot learn form experience which firm charges the lowers price in the market.

d) **Promotional pricing**: to promote a particular product, at time, the firm may offer the product at the most competitive price. Some time, the price of a particular product is kept intentionally lower to attract the attention f the customer to other products of the firm.

e) **Target pricing**: the company operates with a particular targeted profit in mind. Normally the cost of capital will be one of the yardsticks to guide the targeted rate of return. How much is the rate of return the other companies are achieving also could be another yardstick to determine the price. The higher the risk and investment, the higher is the targeted profit and so is the price.

UNIT -IV

CAPITAL BUDGETING :

Capital is defined as wealth, which is created over a period of time through abstinence to spend. There are different forms of capital property, cash or titles to wealth. It is the aggregate of funds used in the short run and long run. An economist views capital as the value total assets available with the business. An accountant sees the capital as the different between the assets and liabilities.

Significance of capital

1. **To promote a business**: Capital is required at the promotion stage. A large variety of expenses have to be incurred on project reports, feasibility studies and reports, preparation and filing of various documents, and for meeting various other expenses in connection with the raising of capital from the public.

2. **To conduct business operations smoothly**: Business firms also need capital for the purpose of conducting their business operations such as research and development, advertising, sales promotion, distribution and operation expenses.

3. **To expand and diversify:** The firm requires a lot of capital for expansion and diversification purposes. This includes development expense such as purchase of sophistical machinery and equipment and also payment towards sophisticated technology.

4. **To meet contingencies**: A firm needs funds to meet contingencies such as sudden fall in sales, major litigation, nature calamities like fire, and so on.
5. **To pay taxes**: The firm has to meet its statutory commitments such as income tax and sales tax, excise duty and so on.

6. **To pay dividends and interests:** The business has to make payment towards dividends and its interest to shareholders and financial institutions respectively.

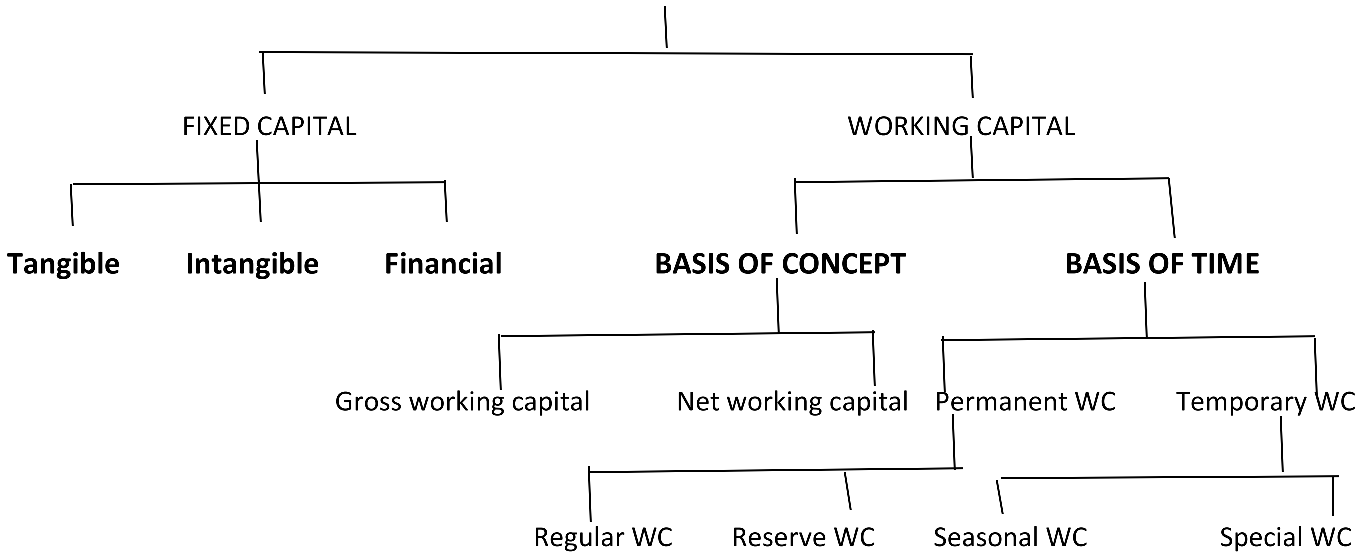
7. **To replace the assets:** The business needs to replace its assets like plant and machinery after a certain period of use. For this purpose the firm needs funds to make suitable replacement of assets in place of old and worn out assets.

8. **To support welfare programmes**: The company may also have to take up social welfare programmes such as literacy drive, and health camps, It may have to donate to charitable trusts, educational institutions or public services organizations.

9. **To wind up**: At the time of winding up, the company may need funds to meet liquidation expenses

Types of capital :

TYPRS OF CAPITAL



A.FIXED CAPITAL :

Fixed capital is that portion of capital which invested in acquiring long term assets such as land and buildings, plant and machinery, furniture and fixtures, and so on, fixed capital forms the skeleton of the business. It provides the basic assets as per the business needs.

Types of fixed assets

a) **Tangible fixed assets** : these are physical items which can be seen and touched. Most of the common fixed assets are land, buildings, machinery, motor vehicles, furniture and so on.
b) **Intangible fixed assets** : these do not have physical form. They cannot be seen or touched. But these are very valuable to business. Examples are goodwill, brand names, trademarks, patents, copy rights and so on.
c) **Financial fixed assets** : these are investments in shares, foreign currency deposits, government bonds , shares held by the business in other companies and so on.

Features of fixed assets:

- **Permanent in nature**: fixed capital is more or less permanent in nature, it is generally not withdrawn as long as the business carries on its business.
- **Profit generation**: fixed asset are the sources of profits but they can never generate profits by themselves. They use stocks, cash and debtors to generate profits.
- **Low liquidity**: the fixed assets cannot be converted into cash quickly. Liquidity refers to conversion of assets into cash.
- **Amount of fixed capital** : the amount of fixed capital of a company depends on a number of factors such as size of the company, nature of business, method of production and so on. A

manufacturing company such as steel factory may require relatively large finance when compared to a service organization such as a software company.

- **Utilized for promotional and expansion**: the fixed capital is mostly needed at the time of promoting the company to purchase the fixed assets or at the time of expansion. In other words, the need for fixed capital arises less frequently.

B.WORKING CAPITAL: Working capital is the flesh and blood of the business. It is that portion of capital that makes a company work. It is not just possible to carry on the business with only fixed assets. Working capital is a must, working capital is also called circulating capital. It is used to meet regular or recurring needs of the business. The regular needs refer to the purchase of materials, payment of wages and salaries, expenses like rent, advertising, and power so on. In short, working capital is the amounts needed to cover the cost of operating the business.

Definition of working capital

Working capital define as a current assets excess of current liabilities

Its also define in mathematically formula as

Working capital = current assets – current liabilitiesfeatures of working capital

Features of working capital:

- **Short life span**: working capital changes in its form cash to stock, stock to debtors, debtors to cash, the cash balances may be kept idle for a week or so, debtors have a life span of a few months , raw materials are held for a short – time until they go into production, finished goods asheld for a short – time until they are sold.

- **Smoothly flow of operations**: adequate amount of working capital enables the business to conduct its operations smoothly. It is there fore, called the flesh and blood of the business.

- **Liquidity:** the assets represented by the working capital can be converted into cash quicklywithin a short period of time unlike fixed assets.

- **Amount of working capital**: the amount of working capital of a business depends on many factors such as size and nature of the business, production and marketing policies, business cycles and so on.
- **Utilized for payment of current expenses**: the working capital is used to pay for current expenses such as suppliers of raw materials, payment of wages and salaries, rent and other expenses andso on.

Components of working capital:

- **Current assets**: current assets are those assets which are converted into cash with in accounting period or within the year. For example, cash in hand, cash at bank, sundry debtor, bill receivable, prepaid expenses etc.

- **Current liabilities**: current liabilities are those liabilities to pay outside with in the year. For example sundry creditor, bill payable, bank overdraft, outstanding expenses.

Types of Working Capital:

A) On the basis of concept:

a) Gross working capital: In the broader sense, the term working capital refers to the gross working capital. The notion of the gross working capital refers to the capital invested in total current assets of the enterprise. Current assets are those assets, which in the ordinary course of business, can be converted into cash within a short period, normally one accounting year**.**

b) **Net working capital:** In a narrow sense, the term working capital refers to the net working capital. Networking capital represents the excess of current assets over current liabilities.

B) On the basis of Time:

a) Permanent Working Capital: This type of working capital is known as Fixed Working Capital. Permanent working capital means the part of working capital which is permanently locked up in the current assets to carry out the business smoothly. The minimum amount of current assets which is required to conduct the business smoothly during the year is called permanent working capital.

For example, investments required to maintain the minimum stock of raw materials or to cash balance. The amount of permanent working capital depends upon the size and growth of company. Fixed working capital can further be divided into two categories as under:

i) Regular Working capital: Minimum amount of working capital required to keep the primary circulation. Some amount of cash is necessary for the payment of wages, salaries etc.

ii) Reserve Margin Working capital: Additional working capital may also be required for contingencies that may arise any time. The reserve working capital is the excess of capital over the needs of the regular working capital is kept aside as reserve for contingencies, such as strike, business depression etc.

b) Variable or Temporary Working Capital: The term variable working capital refers that the level of working capital is temporary and fluctuating. Variable working capital may change from one assets to another and changes with the increase or decrease in the volume of business.

The variable working capital may also be subdivided into following two sub-groups.

i) Seasonal Variable Working capital: Seasonal working capital is the additional amount which is required during the active business seasons of the year. Raw materials like raw-cotton or jute or sugarcane are purchased in particular season. The industry has to borrow funds for short period. It is particularly suited to a business of a seasonal nature. In short, seasonal working capital is required to meet the seasonal liquidity of the business.

ii) Special variable working capital: Additional working capital may also be needed to provide additional current assets to meet the unexpected events or special operations such as extensive marketing campaigns or carrying of special job etc.

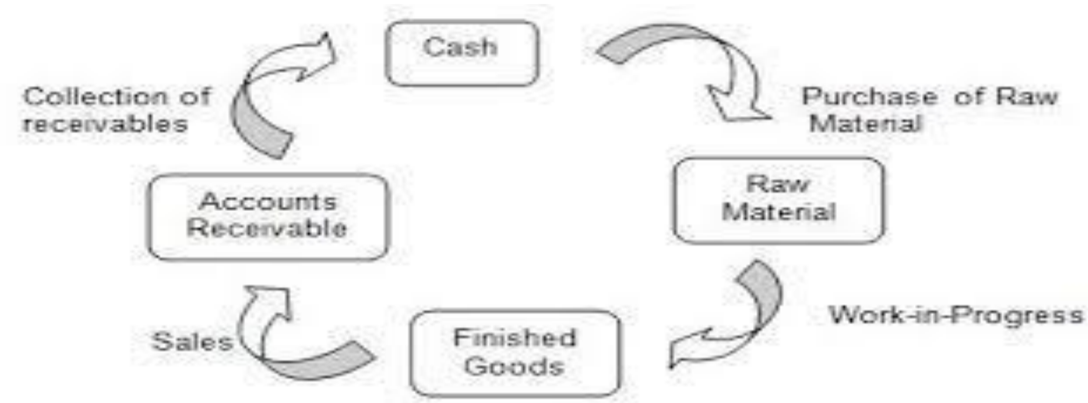
Factors determining working capital:

- **Nature or character of business**: The working capital requirements of a firm basically depend upon the nature of its business. Public utility undertakings like electricity, water supply and railways need very limited working capital as their sales are on cash and are engaged in provision of services only. On the other hand, trading firms require more investment in inventories, receivables and cash and such they need large amount of working capital. The manufacturing undertakings also require sizable working capital.
- **Size of business or scale of operations**: The working capital requirements of a concern are

directly influenced by the size of its business, which may be measured in terms of scale of operations. Greater the size of a business unit, generally, larger will be the requirements of working capital. However, in some cases, even a smaller concern may need more working capital due to high overhead charges, inefficient use of available resources and other economic disadvantages of small size.

- **Production policy**: If the demand for a given product is subject to wide fluctuations due to seasonal variations, the requirements of working capital, in such cases, depend upon the production policy. The production could be kept either steady by accumulating inventories during stack periods with a view to meet high demand during the peck season or the production could be curtailed during the slack season and increased during the peak season. If the policy is to keep the production steady by accumulating inventories it will require higher working capital.
- **Manufacturing process/Length of production cycle**: In manufacturing business, the requirements of working capital will be in direct proportion to the length of manufacturing process. Longer the process period of manufacture, larger is the amount of working capital required, as the raw materials and other supplies have to be carried for a longer period.
- **Seasonal variations:** If the raw material availability is seasonal, they have to be bought in bulk during the season to ensure an uninterrupted material for the production. A huge amount is, thus, blocked in the form of material, inventories during such season, which give rise to more working capital requirements. Generally, during the busy season, a firm requires larger working capital then in the slack season.
- **Working capital cycle**: In a manufacturing concern, the working capital cycle starts with the purchase of raw material and ends with the realization of cash from the sale of finished products. This cycle involves purchase of raw materials and stores, its conversion into stocks of finished goods through work–in progress with progressive increment of labour and service costs, conversion of finished stock into sales, debtors and receivables and ultimately realization of cash. This cycle continues again from cash to purchase of raw materials and so on. In general thelonger the operating cycle, the larger the requirement of working capital.
- **Credit policy**: The credit policy of a concern in its dealings with debtors and creditors influences considerably the requirements of working capital. A concern that purchases its requirements on credit requires lesser amount of working capital compared to the firm, which buys on cash. On the other hand, a concern allowing credit to its customers shall need larger amount of working capital compared to a firm selling only on cash.
- **Business cycles**: Business cycle refers to alternate expansion and contraction in general business activity. In a period of boom, i.e., when the business is prosperous, there is a need for larger amount of working capital due to increase in sales. On the contrary, in the times of depression, i.e., when there is a down swing of the cycle, the business contracts, sales decline, difficulties are faced in collection from debtors and firms may have to hold large amount of working capital.
- **Rate of growth of business**: The working capital requirements of a concern increase with the growth and expansion of its business activities. The retained profits may provide for a part of working capital but the fast growing concerns need larger amount of working capital than the amount of undistributed profits.

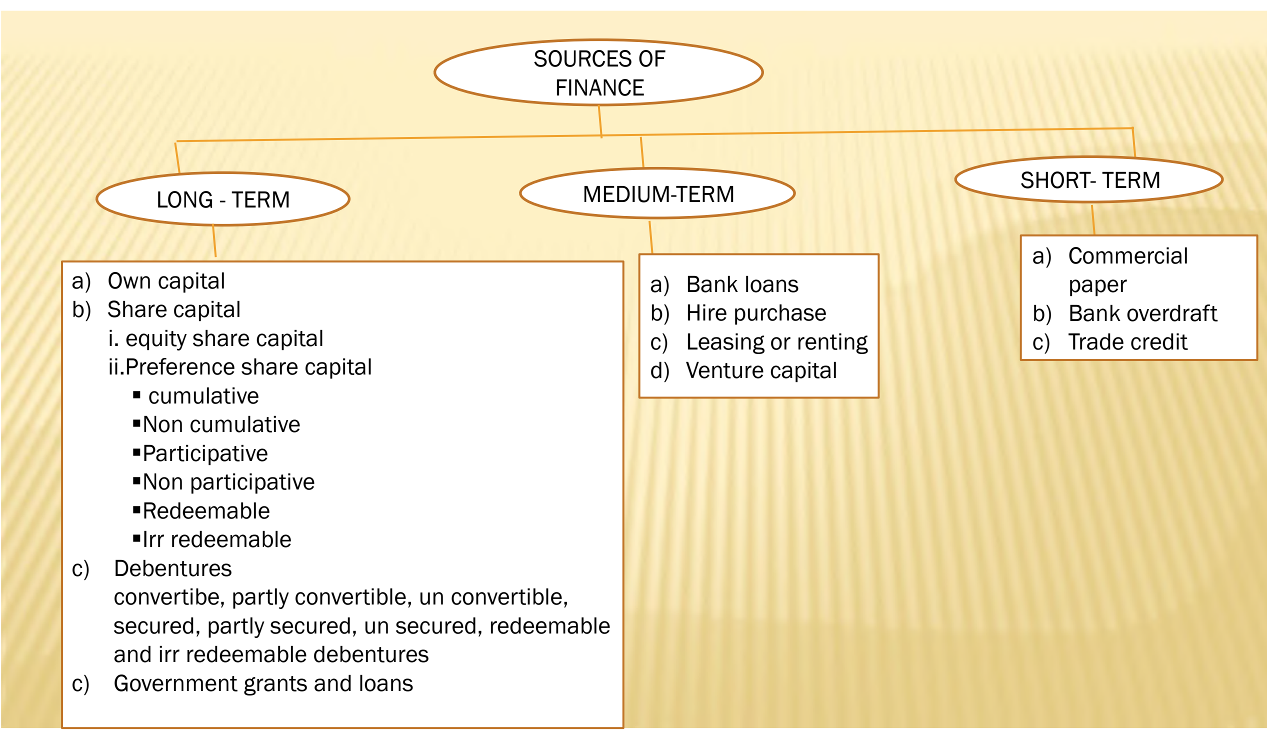
WORKING CAPITAL CYCLE



Sources of Finance:

Methods of finance

1. Long term finance
2. Medium term finance
3. Short term finance



A) Long term finance: long term finance available for a long period say five years and above. The long term methods outlined below are used to purchase fixed assets such as land and buildings, plant and so on.

a) **Own capital:** irrespective of the form of organization such as sole trader, partnership or a company, the owners of the business have to invest their own finances to start with. Money invested by the owners, partners or promoters is permanent and will stay with the business throughout the life of business.

b) **Share capital:** normally in the case of a company, the capital is raised by issue of shares. The capital so raised is called share capital. The share capital can be of two types, preference share capital and equity share capital.

   i) **Equity share capital: The capital a company raised by offering shares** is known as equity share capital or share capital. It is the money that company owners and investors direct towards a company's capital and use to develop or expand the operations of their venture.

   ii) **Preference share capital:** Preference Share Capital is **the funds generated by a company through issuing preference shares** (also known as Preference stock). Preference Shareholders have the first right to receive dividends even before equity shareholders.

   - **Cumulative preference share capital:** A cumulative preference share holder gets his right to the arrears of dividend cumulated over a period of time. If the company is not in a position to pay dividends during a particular year due to paucity of profits, it has to pay the same to the cumulative preference share holders when it makes profits. The holders of cumulative preference shares enjoy the right to receive, when profits permit, the dividend missed in the years when the profits were nil or inadequate.
   - **Non-Cumulative Preference share capital:** The holders of these shares do not enjoy any right over the arrears of dividend. Hence the unpaid dividend in arrears cannot be claimed in future.
   - **Participative Preference share capital:** The holders of these shares enjoys the dividend two times. They get their normal fixed rate of dividend as per their entitlement. They participate again along with the equity share holders in the distribution of profits.
   - **Redeemable Preference share capital:** These shares are repaid all the end of q given period. The period of repayment is stipulated on each share.
   - **Non - redeemable Preference share capital:** These shares continue as long as the company continues. They are repaid only at the end of the life time of the company

c) **Debentures:** debentures are the loans taken by the company. It is a certificate or letter by the company under its common seal acknowledging the receipt of loan. A debenture holder is the creditor of the company. A debenture holder is entitled to a fixed rate of interest on the debenture amount.

   Debentures can be classified as a

   - **Convertible debentures:** Those debentures that can be converted in to equity shares after a specified period of time.
   - **Fully convertible debentures:** When the whole amount of a debenture is convertible in to equity shares of equivalent amount, then these debentures are called fully convertible debentures. There is no need to maintain debenture redemption reserves for such debentures.
   - **Partly convertible debentures:** When only a part of the amount of a debenture is converted in to equity shares, then these debentures are called partly convertible debentures.

- **Non- convertible debentures:** These debentures cannot converted into equity shares. They continue as loan till the date of payment.
- **Secured debentures:** Those debentures which are secured by a charge on the fixed or floating assets of the company are called secured or mortgaged debentures. In India all issued debentures should be secured compulsorily.
- **Partly Secured debentures:** These debentures are partly covered by the security. In other words, the security value is lesser than the face value of the debentures issued.
- **Un Secured debentures:** There is no security for these debentures. Normally, the companies having a good financial record issue unsecured debentures
- **Redeemable debentures:** These debentures are repaid on a specified date.
- **Non - Redeemable debentures:** these are repaid only at the end of the company.

d) **Government grants and loans**: government may provide long term finance directly to the business houses or by indirectly subscribing to the shares of the companies. The government gives loans only if the project satisfies certain conditions, such as setting up a project in a notified area, or ventures into projects which are beneficial for the society as a whole.

B) **Medium term finance:**

a) **Bank loans ;** bank loans are extended at a fixed rate of interest. Repayment of the loan and interest are scheduled at the beginning and are usually directly debited to the current account of the borrower. These are secured loans.

b) **Hire purchase:** it is a facility to buy a fixed asset while paying the price over a long period of time. In other words , the possession of the asset can be taken by making a down payment of a part of the price and the balance will be repaid with a fixed rate of interest in agreed number of installments.

c) **Leasing or renting:** where there is a need for fixed assets, the asset need not be purchased. It can be taken on lease or rent for specified number of years. The company who owns the assets is called lessor and the company which takes the asset on lease is called lessee. The agreement between the lessor and lessee is called a lease agreement.

d) **Venture capital:** this form of finance is available only for limited companies. Venture capital is normally provided in such projects where there is relatively a higher degree of risk. For such projects, finance through the conventional sources may not be available. Many banks offer such finance through their merchant banking divisions, or specialist banks which offer advice and financial assistance. The financial assistance may take form of loans and venture capital.

C) **SHORT TERM FINANCE**

a) **Commercial paper:** it is new money market instrument introduced in India in recent times. Cps are issued in large denominations by the leading, nationally reputed, highly rated and credit worthy, large manufacturing and finance companies in the public and private sector. The proceeds of the issue of commercial paper are used to finance current transactions and seasonal and interim needs for funds.

b) **Bank overdraft:** this is special arrangement with the banker where the customer can draw more than what he has in his saving/ current account subject to a maximum limit. interest is chargedon a day to day basis on the actual amount overdrawn .

c) **Trade credit:** this is short term credit facility extended by the creditors to the debtors, normally, it is common for the traders to buy the materials and other supplies from the suppliers on credit basis. After selling the stocks the traders pay the cash and buy fresh stocks again on credit. Sometimes , the suppliers may insist on the buyer to sign a bill.

CAPITAL BUDGETING

Capital budgeting is the process of making investment decision in long-term assets or courses of action. Capital expenditure incurred today is expected to bring its benefits over a period of time. These expenditures are related to the acquisition & improvement of fixes assets.

Concept of Capital Budgeting:

Capital budgeting is a planning process that is used to determine the worth of long-term investments of an organization. The long- term investments of the organization can be made in purchasing a new machinery, plant, and technology.

In other words, capital budgeting is a method of identifying, evaluating, and selecting long-term investments. The concept of capital budgeting has a great importance in project selection as it helps in planning capital required for completing long-term projects. Selection of a project is a major investment decision for an organization.

Therefore, capital budgeting decisions are included in the selection of a project. In addition, capital budgeting helps in estimating costs and benefits involved in a particular project. A project is not worth investing, if it does not yield adequate return on invested capital.

Capital budgeting is the planning of expenditure and the benefit, which spread over a number of years. It is the process of deciding whether or not to invest in a particular project, as the investment possibilities may not be rewarding. The manager has to choose a project, which gives a rate of return, which is more than the cost of financing the project. For this the manager has to evaluate the worth of the projects in-terms of cost and benefits. The benefits are the expected cash inflows from the project, which are discounted against a standard, generally the cost of capital.

Significance of Capital Budgeting:

a) **Long-term Applications:** Implies that capital budgeting decisions are helpful for an organization in the long run as these decisions have a direct impact on the cost structure and future prospects of the organization. In addition, these decisions affect the organization's growth rate.

   Therefore, an organization needs to be careful while making capital decisions as any wrong decision can prove to be fatal for the organization. For example, over-investment in various assets can cause shortage of capital to the organization, whereas insufficient investments may hamper the growth of the organization.

b) **Competitive Position of an Organization:** Refers to the fact that an organization can plan its investment in various fixed assets through capital budgeting. In addition, capital investment decisions help the organization to determine its profits in future. All these decisions of the organization have a major impact on the competitive position of an organization.

c) **Cash Forecasting:** Implies that an organization needs a large amount of funds for its investment decisions. With the help of capital budgeting, an organization is aware of the required amount of cash, thus, ensures the availability of cash at the right time. This further helps the organization to achieve its long-term goals without any difficulty.

d) **Maximization of Wealth:** Refers to the fact that the long-term investment decisions of an organization helps in safeguarding the interest of shareholders in the organization. If an organization has invested in a planned manner, shareholders would also be keen to invest in the organization. This helps in maximizing the wealth of the organization. Capital budgeting helps an organization in many ways. Thus, an organization needs to take into consideration various aspects.

Features of Capital Budgeting

Capital Budgeting is characterized by the following features:

- There is a long duration between the initial investments and the expected returns.
- The organizations usually estimate large profits.
- The process involves high risks.
- It is a fixed investment over the long run.
- Investments made in a project determine the future financial condition of an organization.
- All projects require significant amounts of funding.
- The amount of investment made in the project determines the profitability of a company.

Process of Capital budgeting

a) **To Identify Investment Opportunities :** The first step is to explore the available investment opportunities. Next, the organization's capital budgeting committee is required to identify the expected sales shortly. After that, they recognize the investment opportunities keeping in mind the sales target set up by them.
b) **Gathering of the Investment Proposals:** After identifying the investment opportunities, the second process in capital budgeting is to collect investment proposals. Before reaching the committee of the capital budgeting process, these proposals are seen by various authorized persons in the organization to check whether the bids given are according to the requirements.
c) **Decision Making Process in Capital Budgeting:** Decision-making is the third step. In the stage of decision making, the executives will have to decide which investment needs to be made from the investment opportunities available, keeping in mind the sanctioning power open to them.
d) **Capital Budget Preparations and Appropriations:** After the decision-making step, the next step is to classify the investment outlays into the higher value and the smaller value investment.
e) **Implementation:** After completing all the above steps, the investment proposal under consideration is

implemented, i.e., put into a concrete project. For the implementation at a reasonable cost and expeditiously, the following things could be helpful: –

i) **Formulation of the project adequately:** Inadequate formulation is one of the main reasons for the project's delay.
ii) **Use of responsibility accounting principle:** For the expeditious execution of the various tasks and the cost control, one should assign specific responsibilities to the project managers, i.e., the timely completion of the project within the specified cost limits.
iii) **Network technique use:** Several network techniques like the Critical Path Method (CPM) and Program Evaluation and Review Technique (PERT) are available for project planning and control, which will help monitor the projects properly and efficiently.

f) **Review of Performance:** Review of performance is the last step in capital budgeting. First, the management must compare the actual results with the projected results. The correct time to make this comparison is when the operations get stabilized.

Importance of Capital Budgeting

The Following are the points describing the importance of Capital Budgeting:

a) **Calculation of future cash flows:** Capital Budgeting process takes into account the expected future cash inflows and the expected future cash outflows of the project by taking into account the discounted rate of return and following the various techniques like calculation of net present value, considering the internal rate of return, payback period, profitability index, and accounting rate of return Thus, the organization get the idea about present investment's future total value and the net profitability by using the process of capital budgeting.
b) **Helps in the long term goals of the organization:** Capital Budgeting process helps the organization for the long term decision making as well as in making the long term goals as it provides the idea of future costs and growth taking into account the expected future cash flows. The making of long term goals is the most important and sensitive area for any organization and any wrong decision taken in this area can adversely affect the long term profitability of the organization.
c) **Control of Expenditure:** The capital budgeting process gives the idea of the expected future cash inflows as well as expected future cash outflows. It takes into account the investment cost for the project considering the other related expenditures like Research & Development costs, running costs of the project, etc. So, with this information, the organization can monitor the total costs and have control of its future costs. The proper management and control of the total costs is a very important factor for the growth and efficiency perspective of the company.
d) **Helps in Permanent Decision Making:** Generally, the Capital related decisions are the permanent decisions taken by the organization as it involves the large amount of investments and funds. Such decisions cannot be reversed back in the future once they are taken. Hence, the process of capital budgeting helps in effective decision making for such permanent decisions of the organization.
e) **Wealth Maximization:** The interest and the investment decisions of the shareholders in the company depend on its long term investment decisions. If the investments in the capital or other long term investments are done by the company in the proper and planned manner, the confidence of the shareholders gets boost up and thus they become more interested in investing in the company thus resulting in the company's wealth maximization.
f) **Flow of information within the departments:** The entire process of capital budgeting involves numerous steps and ideas and a number of decisions are taken by the different levels of the company.

This allows the flow and exchange of information within the various departments and thus increases the connectivity between them.

g) **Protection to the large funds involved:** As discussed above, there involves a large amount of funds by the company in the acquisition of the capital assets. Thus with the process of capital budgeting, that large financial investment or a large amount of funds invested by the company gets protected to a certain extent against any uncertainty in future.

h) **Protection against future risks:** There are various risks that are associated with capital acquisitions by the company as they all are related to some future events and uncertainty. Thus, the capital budgeting process helps the organization in the advance assessment of those risks involved, and the management of the company plans for the protection of such risks well in advance to minimize its impact.

i) **New Opportunities in the market:** With the introduction of the new project in the market, there arises many job opportunities for the new employees as well as the existing ones. This gives rise to the economic growth of the country along with boosting up the morale of personals.

j) **Understanding the Complications of the projects:** With the help of the Capital budgeting process, the management of the company can have the idea of different types of complications or Complexities that can be faced or arise during the development of the project. Hence, the management can have ready and advance strategies for dealing with such future complexities arising from the project.

Advantages and Disadvantages of Capital Budgeting:

Advantages of Capital Budgeting:

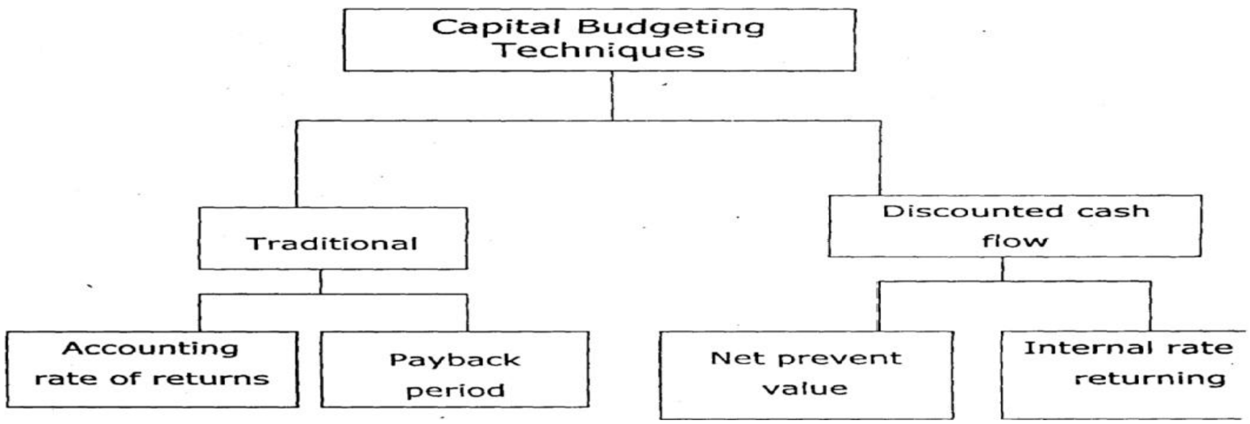
a) **Evaluates Investment Plans:** Capital budgeting is a key tool used by management for the evaluation of investment projects. It assists in taking decisions regarding long term investments by properly analyzing investment opportunities. Using the capital budgeting techniques-risk, return and investment amount of each project is examined.
b) **Identify Risk :** It enables in identifying the risk associated with investment plans. Capital budgeting examines the project from different aspects to find out all possible losses and risks. It studies how these risks affect the return and growth of the business which are helpful in making an appropriate decision.
c) **Chooses Investment Wisely :**Capital budgeting plays an effective role in selecting a profitable investment project for the business. It is the one that decides whether a particular project is beneficial to take or not. This technique considers cash flows of investment proposal during its entire life for finding out its profitability. Companies are able to choose investment wisely by analyzing different factors in a competitive market using capital budgeting techniques.
d) **Avoid Over And Under Investment :** Managers use capital budgeting techniques to determine the appropriate investment amount for the business. The right amount of investment is a must for every business for earning better returns and avoiding losses. Capital budgeting analyses the firm capability and objectives for determining the right investment accordingly.
e) **Maximize Shareholder's Wealth:** Capital budgeting assists in maximizing the overall value of shareholders. It is a tool that enables companies to deploy their funds in the most effective way possible thereby earning huge profits. Companies are able to select investments with higher returns and lower costs which eventually raises the shareholder's wealth.
f) **Control Project Expenditure:** Capital budgeting focuses on minimizing the expenditure of investment projects. While examining the investment proposals, it ensures that the project has an adequate amount of inflows for meeting out its expenses and provide an anticipated return. The selection of effective investment projects helps companies in controlling their expenditure and earning better profits.

Disadvantages of Capital Budgeting:

a) **Irreversible Decisions:** The major limitation with capital budgeting is that the decisions taken through this process are long-term and irreversible in nature. Decisions have an impact on the long term durability of the company and require the utmost care while taking them. Any wrong capital budgeting decision would have an adverse effect on profitability and continuity of business.
b) **Rely On Assumptions And Estimations:** Capital budgeting techniques rely on different assumptions and estimations for analyzing investment projects. Annual cash flow and life of project estimated is not always true and may increase or decrease than the anticipated values. Decisions taken on the basis of these untrue estimations may lead businesses to losses.
c) **Higher Risk:** Capital budgeting decisions are riskier in nature as it involves a large amount of capital expenditure. These decisions require the utmost care as it affects the success or failure of every business. Any wrong decisions regarding allotment of funds may lead the business to substantial losses or eventually cause a complete shutdown.
d) **Uncertainty:** This process is dependent upon futuristic data which is uncertain for analyzing the investment proposals. Capital budgeting anticipates the future cash inflows and outflows of the project for determining its profitability. The future is always uncertain and data may prove untrue which leads to wrong decisions.
e) **Ignores Non-Financial Aspects:** Capital budgeting technique considers only financial aspects and ignores all non-financial aspects while analyzing the investment plans. Non-financial factors have an efficient role in the success and profitability of the project. The real profitability of the project cannot be determined by ignoring these factors.

Capital Budgeting Methods:

The capital budgeting appraisal methods are techniques of evaluation of investment proposal will help the company to decide upon the desirability of an investment proposal depending upon their; relative income generating capacity and rank them in order of their desirability. These methods provide the company a set of norms on the basis of which either it has to accept or reject the investment proposal. The most widely accepted techniques used in estimating the cost-returns of investment projects can be grouped under two categories.



They are :

I. Traditional method
II. Discounted cash flow methods

I. **Traditional Method:** These methods are based on the principles to determine the desirability of an investment project on the basis of its useful life and expected returns. These methods depend upon the accounting information available from the books of accounts of the company. These will not take into account the concept of 'time value of money', which is a significant factor to determine the desirability of a project in terms of present value.

a) Pay – Back Period: It is the most popular and widely recognized traditional method of evaluating the investment proposals. It can be defined, as 'the number of years required to recover the original cash out lay invested in a project'.

According to Weston & Brigham, "The payback period is the number of years it takes the firm to recover its original investment by net returns before depreciation, but after taxes".

According to James. C. Vanhorne, "The payback period is the number of years required to recover initial cash investment.

Payback Period=Cost of Investment ÷Average Annual Cash in Flows

Merits:

- It is one of the earliest methods of evaluating the investment projects.
- It is simple to understand and to compute.
- It does not involve any cost for computation of the payback period.
- It is one of the widely used methods in small scale industry sector.
- It can be computed on the basis of accounting information available from the books.

De merits:

- This method fails to take into account the cash flows received by the company after the payback period.

- It doesn't take into account the interest factor involved in an investment outlay.
- It doesn't take into account the interest factor involved in an investment outlay.
- It is not consistent with the objective of maximizing the market value of the company's share.
- It fails to consider the pattern of cash inflows i. e., the magnitude and timing of cash inflows.

b) **Accounting Rate of Return (ARR):** It is an accounting method, which uses the accounting information repeated by the financial statements to measure the probability of an investment proposal. It can be determined by dividing the average income after taxes by the average investment i.e., the average book value after depreciation.

According to 'Soloman', accounting rate of return on an investment can be calculated as the ratio of accounting net income to the initial investment, i.e.,

$$\text{ARR} = \frac{\textit{Average net income after taxes}}{\textit{average investment}} \times 100$$

$$\text{Average income after taxes} = \frac{\textit{Total income after taxes}}{\textit{no.of years}}$$

$$\text{Average investment} = \frac{\textit{total investment}}{2}$$

On the basis of this method, the company can select all those projects who's ARR is higher than the minimum rate established by the company. It can reject the projects with an ARR lower than the expected rate of return. This method can also help the management to rank the proposal on the basis of ARR. A highest rank will be given to a project with highest ARR, where as a lowest rank to a project with lowest ARR.

Merits:

- It is very simple to understand and calculate.
- It can be readily computed with the help of the available accounting data.
- It uses the entire stream of earning to calculate the ARR.

Demerits:

- It is not based on cash flows generated by a project.
- This method does not consider the objective of wealth maximization.
- IT ignores the length of the projects useful life.
- It does not take into account the fact that the profits can be re-invested.

II. **Discounted cash flow methods:** The traditional method does not take into consideration the time value of money. They give equal weight age to the present and future flow of incomes. The DCF methods are based on the concept that a rupee earned today is more worth than a rupee earned tomorrow. These methods take into consideration the profitability and also time value of money.

a) **Net present value method (NPV) :** The NPV takes into consideration the time value of money. The cash flows of different years and valued differently and made comparable in terms of present values for this the net cash inflows of various period are discounted using required rate of return which is predetermined.

According to Ezra Solomon, "It is a present value of future returns, discounted at the required rate of return minus the present value of the cost of the investment."

NPV is the difference between the present value of cash inflows of a project and the initial cost of the project

According the NPV technique, only one project will be selected whose NPV is positive or above zero. If a project(s) NPV is less than 'Zero'. It gives negative NPV hence. It must be rejected. If there are more than one project with positive NPV's the project is selected whose NPV is the highest.

The formula for NPV is
NPV= Present value of cash inflows – investment.

$$PV\ Factor = \frac{1}{(1+r)^n}$$

$$r = rate\ of\ return$$
$$n = number\ of\ periods$$

Merits:

- It recognizes the time value of money.
- It is based on the entire cash flows generated during the useful life of the asset.
- It is consistent with the objective of maximization of wealth of the owners.
- The ranking of projects is independent of the discount rate used for determining the present value.

Demerits:

- It is different to understand and use.
- The NPV is calculated by using the cost of capital as a discount rate But the concept of cost of capital. If self is difficult to understood and determine.
- It does not give solutions when the comparable projects are involved in different amounts of investment.
- It does not give correct answer to a question whether alternative projects or limited funds are available with unequal lines.

b) **Internal Rate of Return (IRR) :** The IRR for an investment proposal is that discount rate which equates the present value of cash inflows with the present value of cash out flows of an investment. The IRR is also known as cutoff or handle rate. It is usually the concern's cost of capital.

According to Weston and Brigham "The internal rate is the interest rate that equates the present value of the expected future receipts to the cost of the investment outlay.
The IRR is not a predetermine rate, rather it is to be trial and error method. It implies that one has to start with a discounting rate to calculate the present value of cash inflows. If the obtained present value is higher than the initial cost of the project one has to try with a higher rate. Likewise if the present value of expected cash inflows obtained is lower than the present value of cash flow. Lower rate is to be taken up. The process is continued till the net present value becomes Zero. As this discount rate is determined internally, this method is called internal rate of return method.

$$IRR = NPV = \sum_{t=1}^{t} \frac{C_t}{(1+r)^t} - C_0 = 0$$

Where:
Ct = net cash inflow during the period t
C0 = total initial investment cost
r = discount rate

t = number of time periods

IRR Formula:

$$Internal\ Rate\ of\ Return = LR + \frac{LNPV\ *(HR-LR)}{(LNPV - HNPV)}$$

Where

Lower discount rate	=	LR
Higher discount rate	=	HR
Higher Net Present Value	=	HNPV
Lower Net Present Value	=	LNPV

Merits:

- It consider the time value of money.
- It takes into account the cash flows over the entire useful life of the asset.
- It has a psychological appear to the user because when the highest rate of return projects are selected, it satisfies the investors in terms of the rate of return on capital.
- It always suggests accepting to projects with maximum rate of return.
- It is inconformity with the firm's objective of maximum owner's welfare.

Demerits:

- It is very difficult to understand and use.
- It involves a very complicated computational work.
- It may not give unique answer in all situations.

UNIT – V

INTRODUCTION TO FINANCIAL ACCOUNTING CONCEPTS

1. INTRODUCITON

As you are aware, every trader generally starts business for purpose of earning profit. While establishing business, he brings own capital, borrows money from relatives, friends, outsiders or financial institutions. Then he purchases machinery, plant , furniture, raw materials and other assets. He starts buying and selling of goods, paying for salaries, rent and other expenses, depositing and withdrawing cash from bank. Like this he undertakes innumerable transactions in business. Observe the following transactions of small trader for one week during the month of July, 1998.

1998		Rs.
July 24	Purchase of goods from Sree Ram	12,000
July 25	Goods sold for cash	5,000
July 25	Sold gods to Syam on credit	8,000
July 26	Advertising expenses	5,200
July 27	Stationary expenses	600
July 27	Withdrawal for personal use	2,500
July 28	Rent paid through cheque	1,000
July 31	Salaries paid	9,000
July 31	Received cash from Syam	5,000

The number of transactions in an organization depends upon the size of the organization. In small organizations, the transactions generally will be in thousand and in big organizations they may be in lakhs. As such it is humanly impossible to remember all these transactions. Further, it may not by possible to find out the final result of the business without recording and analyzing these transactions.

Accounting came into practice as an aid to human memory by maintaining a systematic record of business transactions.

History of Accounting:

Accounting is as old as civilization itself. From the ancient relics of Babylon, it can be will proved that accounting did exist as long as 2600 B.C. However, in modern form accounting based on the principles of Double Entry System came into existence in 17th Century. Fra Luka Paciolo, a Fransiscan monk and mathematician published a book *De computic et scripturies* in 1494 at Venice in Italyl. This book was translated into English in 1543. In this book he covered a brief section on ‘book-keeping’.

Origin of Accounting in India:

Accounting was practiced in India thousand years ago and there is a clear evidence for this. In his famous book *Arthashastra* Kautilya dealt with not only politics and economics but also the art of proper keeping of accounts. However, the accounting on modern lines was introduced in India after 1850 with the formation joint stock companies in India.
Accounting in India is now a fast developing discipline. The two premier Accounting Institutes in India viz., chartered Accountants of India and the Institute of Cost and Works Accountants of India are making continuous and substantial contributions. The international Accounts Standards Committee (IASC) was established as on 29th June. In India the ‘Accounting Standards Board (ASB) is formulating ‘Accounting Standards’ on the lines of standards framed by International Accounting Standards Committee.

2. BOOK-KEEPING AND ACCOUNTING

According to G.A. Lee the accounting system has two stages.
1. The making of routine records in the prescribed from and according to set rules of all events with affect the financial state of the organization; and
2. The summarization from time to time of the information contained in the records, its presentation in a significant form to interested parties and its interpretation as an aid to decision making by these parties.

First stage is called Book-Keeping and the second one is Accounting.

Book – Keeping: Book – Keeping involves the chronological recording of financial transactions in a set of books in a systematic manner.
Accounting: Accounting is concerned with the maintenance of accounts giving stress to the design of the system of records, the preparation of reports based on the recorded date and the interpretation of the reports.

Distinction between Book – Keeping and Accountancy

Thus, the terms, book-keeping and accounting are very closely related, through there is a subtle difference as mentioned below.
1. Object : The object of book-keeping is to prepare original books of Accounts. It is restricted to journal, subsidiary book and ledge accounts only. On the other hand, the main object of accounting is to record analyse and interpret the business transactions.
2. Level of Work: Book-keeping is restricted to level of work. Clerical work is mainly involved in it. Accountancy on the other hand, is concerned with all level of management.
3. Principles of Accountancy: In Book-keeping Accounting concepts and conventions will be followed by all without any difference. On the other hand, various firms follow various methods of reporting and interpretation in accounting.
3. Final Result: In Book-Keeping it is not possible to know the final result of business every year,

Meaning of Accounting

Thus, book-keeping is an art of recording the business transactions in the books of original entry and the ledges. Accountancy begins where Book-keeping ends. Accountancy means the compiliation of accounts in such a way that one is in a position to know the state of affairs of the business. The work of an accountant is to analyse, interpret and review the accounts and draw conclusion with a view to guide the management in chalking out the future policy of the business.

Definition of Accounting:

Smith and Ashburne: "Accounting is a means of measuring and reporting the results of economic activities."

R.N. Anthony: "Accounting system is a means of collecting summarizing, analyzing and reporting in monetary terms, the information about the business.

American Institute of Certified Public Accountants (AICPA): "The art of recording, classifying and summarizing in a significant manner and in terms of money transactions and events, which are in part at least, of a financial character and interpreting the results thereof."

Thus, accounting is an art of identifying, recording, summarizing and interpreting business transactions of financial nature. Hence accounting is the **Language of Business**.

Branches of Accounting:

The important branches of accounting are:

1. **Financial Accounting:** The purpose of Accounting is to ascertain the financial results i.e. profit or loass in the operations during a specific period. It is also aimed at knowing the financial position, i.e. assets, liabilities and equity position at the end of the period. It also provides other relevant information to the management as a basic for decision-making for planning and controlling the operations of the business.
2. **Cost Accounting:** The purpose of this branch of accounting is to ascertain the cost of a product / operation / project and the costs incurred for carrying out various activities. It also assist the management in controlling the costs. The necessary data and information are gatherr4ed form financial and other sources.
3. **Management Accounting :** Its aim to assist the management in taking correct policy decision and to evaluate the impact of its decisions and actions. The data required for this purpose are drawn accounting and cost-accounting.
4. **Inflation Accounting :** It is concerned with the adjustment in the values of assest and of profit in light of changes in the price level. In a way it is concerned with the overcoming of limitations that arise in financial statements on account of the cost assumption (i.e recording of the assets at their historical or original cost) and the assumption of stable monetary unit.
5. **Human Resource Accounting :** It is a branch of accounting which seeks to report and emphasize the importance of human resources in a company's earning process and total assets. It is concerned with the process of identifying and measuring data about human resources and communicating this information to interested parties. In simple words, it is accounting for people as organizational resources.

3. FUNCTIONS OF AN ACCOUNTANT

The job of an accountant involves the following types of accounting works :

1. **Designing Work :** It includes the designing of the accounting system, basis for identification and classification of financial transactions and events, forms, methods, procedures, etc.
2. **Recording Work :** The financial transactions are identified, classified and recorded in appropriate books of accounts according to principles. This is "Book Keeping". The recording of transactions tends to be mechanical and repetitive.
3. **Summarizing Work :** The recorded transactions are summarized into significant form according to generally accepted accounting principles. The work includes the preparation of profit and loss account, balance sheet. This phase is called 'preparation of final accounts'
4. **Analysis and Interpretation Work:** The financial statements are analysed by using ratio analysis, break-even analysis, funds flow and cash flow analysis.
5. **Reporting Work:** The summarized statements along with analysis and interpretation are communicated to the interested parties or whoever has the right to receive them. For Ex. Share holders.

In addition, the accou8nting departments has to prepare and send regular reports so as to assist the management in decision making. This is ‘Reporting’.

6. **Preparation of Budget :** The management must be able to reasonably estimate the future requirements and opportunities. As an aid to this process, the accountant has to prepare budgets, like cash budget, capital budget, purchase budget, sales budget etc. this is ‘Budgeting’.

7. **Taxation Work :** The accountant has to prepare various statements and returns pertaining to income-tax, sales-tax, excise or customs duties etc., and file the returns with the authorities concerned.

8. **Auditing :** It involves a critical review and verification of the books of accounts statements and reports with a view to verifying their accuracy. This is ‘Auditing’

This is what the accountant or the accounting department does. A person may be placed in any part of Accounting Department or MIS (Management Information System) Department or in small organization, the same person may have to attend to all this work.

4. USERS OF ACCOUNTING INFORMATION

Different categories of users need different kinds of information for making decisions. The users of accounting can be divided in two board groups (1). Internal users and (2). External users.

Internal Users:

Managers : These are the persons who manage the business, i.e. management at he top, middle and lower levels. Their requirements of information are different because they make different types of decisions.

Accounting reports are important to managers for evaluating the results of their decisions. In additions to external financial statements, managers need detailed internal reports either branch division or department or product-wise. Accounting reports for managers are prepared much more frequently than external reports.

Accounting information also helps the managers in appraising the performance of subordinates. As such Accounting is termed as “ the eyes and ears of management.”

External Users :

1. **Investors :** Those who are interested in buying the shares of company are naturally interested in the financial statements to know how safe the investment already made is and how safe the proposed investments will be.

2. **Creditors :** Lenders are interested to know whether their load, principal and interest, will be paid when due. Suppliers and other creditors are also interested to know the ability of the firm to pay their dues in time.

3. **Workers :** In our country, workers are entitled to payment of bonus which depends on the size of profit earned. Hence, they would like to be satisfied that he bonus being paid to them is correct. This knowledge also helps them in conducting negotiations for wages.

4. **Customers :** They are also concerned with the stability and profitability of the enterprise. They may be interested in knowing the financial strength of the company to rent it for further decisions relating to purchase of goods.

5. **Government:** Governments all over the world are using financial statements for compiling statistics concerning business which, in turn, helps in compiling national accounts. The financial statements are useful for tax authorities for calculating taxes.

6. **Public :** The public at large interested in the functioning of the enterprises because it may make

a substantial contribution to the local economy in many ways including the number of people employed and their patronage to local suppliers.

7. Researchers: The financial statements, being a mirror of business conditions, is of great interest to scholars undertaking research in accounting theory as well as business affairs and practices.

5. ADVANTAGES FROM ACCOUNTING

The role of accounting has changed from that of a mere record keeping during the 1st decade of 20th century of the present stage, which it is accepted as information system and decision making activity. The following are the advantages of accounting.

1. **Provides for systematic records:** Since all the financial transactions are recorded in the books, one need not rely on memory. Any information required is readily available from these records.
2. **Facilitates the preparation of financial statements:** Profit and loss accountant and balance sheet can be easily prepared with the help of the information in the records. This enables the trader to know the net result of business operations (i.e. profit / loss) during the accounting period and the financial position of the business at the end of the accounting period.
3. **Provides control over assets:** Book-keeping provides information regarding cash in had, cash at bank, stock of goods, accounts receivables from various parties and the amounts invested in various other assets. As the trader knows the values of the assets he will have control over them.
4. **Provides the required information:** Interested parties such as owners, lenders, creditors etc., get necessary information at frequent intervals.
5. **Comparative study:** One can compare the present performance of the organization with that of its past. This enables the managers to draw useful conclusion and make proper decisions.
6. **Less Scope for fraud or theft:** It is difficult to conceal fraud or theft etc., because of the balancing of the books of accounts periodically. As the work is divided among many persons, there will be check and counter check.
7. **Tax matters:** Properly maintained book-keeping records will help in the settlement of all tax matters with the tax authorities.
8. **Ascertaining Value of Business:** The accounting records will help in ascertaining the correct value of the business. This helps in the event of sale or purchase of a business.
9. **Documentary evidence:** Accounting records can also be used as an evidence in the court to substantiate the claim of the business. These records are based on documentary proof. Every entry is supported by authentic vouchers. As such, Courts accept these records as evidence.
10. **Helpful to management:** Accounting is useful to the management in various ways. It enables the management to asses the achievement of its performance. The weakness of the business can be identified and corrective measures can be applied to remove them with the helps accounting.

6. LIMITATIONS OF ACCOUNTING

The following are the limitations of accounting.

1. **Does not record all events:** Only the transactions of a financial character will be recorded under book-keeping. So it does not reveal a complete picture about the quality of human resources, locational advantage, business contacts etc.
2. **Does not reflect current values:** The data available under book-keeping is historical in nature. So they do not reflect current values. For instance, we record the value of stock at cost price or market price, which ever is less. In case of, building, machinery etc., we adopt historical cost as the basis.

Infact, the current values of buildings, plant and machinery may be much more than what is recorded in the balance sheet.

3. Estimates based on Personal Judgment: The estimate used for determining the values of various items may not be correct. For example, debtor are estimated in terms of collectibility, inventories are based on marketability, and fixed assets are based on useful working life. These estimates are based on personal judgment and hence sometimes may not be correct.

4. Inadequate information on costs and Profits: Book-keeping only provides information about the overall profitability of the business. No information is given about the cost and profitability of different activities of products or divisions.

BASIC ACCOUNTING CONCEPTS

Accounting is a system evolved to achieve a set of objectives. In order to achieve the goals, we need a set of rules or guidelines. These guidelines are termed here as "BASIC ACCOUNTING ONCEPTS". The term concept means an idea or thought. Basic accounting concepts are the fundamental ideas or basic assumptions underlying the theory and profit of FINANCIAL ACCOUNTING. These concepts help in bringing about uniformity in the practice of accounting. In accountancy following concepts are quite popular.

1. *BUSINESS ENTITY CONEPT*: In this concept "Business is treated as separate from the proprietor". All the
Transactions recorded in the book of Business and not in the books of proprietor. The proprietor is also treated as a creditor for the Business.

2. *GOING CONCERN CONCEPT*: This concept relates with the long life of Business. The assumption is that business will continue to exist for unlimited period unless it is dissolved due to some reasons or the other.

3. *MONEY MEASUREMENT CONCEPT*: In this concept "Only those transactions are recorded in accounting which can be expressed in terms of money, those transactions which can not be expressed in terms of money are not recorded in the books of accounting".

4. *COST CONCEPT*: Accounting to this concept, can asset is recorded at its cost in the books of account. i.e., the price, which is paid at the time of acquiring it. In balance sheet, these assets appear not at cost price every year, but depreciation is deducted and they appear at the amount, which is cost, less classification.

5. *ACCOUNTING PERIOD CONCEPT*: every Businessman wants to know the result of his investment and efforts after a certain period. Usually one-year period is regarded as an ideal for this purpose. This period is called Accounting Period. It depends on the nature of the business and object of the proprietor of business.

6. *DUAL ASCEPT CONCEPT*: According to this concept "Every business transactions has two aspects", one is the receiving benefit aspect another one is giving benefit aspect. The receiving benefit aspect is termed as
"DEBIT", where as the giving benefit aspect is termed as "CREDIT". Therefore, for every debit, there will be corresponding credit.

7. *MATCHING COST CONCEPT*: According to this concept "The expenses incurred during an accounting period, e.g., if revenue is recognized on all goods sold during a period, cost of those good sole should also
Be charged to that period.

8. *REALISATION CONCEPT*: According to this concept revenue is recognized when a sale is made. Sale is
Considered to be made at the point when the property in goods posses to the buyer and he becomes legally liable to pay.

ACCOUNTING CONVENTIONS

Accounting is based on some customs or usages. Naturally accountants here to adopt that usage or custom.
They are termed as convert conventions in accounting. The following are some of the important accounting conventions.

1.*FULL DISCLOSURE*: According to this convention accounting reports should disclose fully and fairly the information. They purport to represent. They should be prepared honestly and sufficiently disclose information which is if material interest to proprietors, present and potential creditors and investors. The companies ACT, 1956 makes it compulsory to provide all the information in the prescribed form.

2.*MATERIALITY*: Under this convention the trader records important factor about the commercial activities. In the form of financial statements if any unimportant information is to be given for the sake of clarity it will be given as footnotes.

3.*CONSISTENCY*: It means that accounting method adopted should not be changed from year to year. It means that there should be consistent in the methods or principles followed. Or else the results of a year
Cannot be conveniently compared with that of another.

4. *CONSERVATISM*: This convention warns the trader not to take unrealized income in to account. That is why the practice of valuing stock at cost or market price, which ever is lower is in vague. This is the policy of "playing safe"; it takes in to consideration all prospective losses but leaves all prospective profits.

KEY WORDS IN BOOK-KEEPING

1. *TRANSACTIONS*: Any sale or purchase of goods of services is called the transaction.
Transactions are two types.
[a]. cash transaction: cash transaction is one where cash receipt or payment is involved in the exchange.
[b]. Credit transaction: Credit transaction will not have cash, either received or paid, for something given or received respectively.

2. *GOODS*: Fill those things which a firm purchases for resale are called goods.

3. *PURCHASES*: Purchases means purchase of goods, unless it is stated otherwise it also represents the Goods purchased.

4. *SALES*: Sales means sale of goods, unless it is stated otherwise it also represents these goods sold.

5. *EXPENSES*: Payments for the purchase of goods as services are known as expenses.

6. *REVENUE*: Revenue is the amount realized or receivable from the sale of goods or services.

7. *ASSETS*: The valuable things owned by the business are known as assets. These are the properties Owned by the business.

8. *LIABILITIES*: Liabilities are the obligations or debts payable by the enterprise in future in the term Of money or goods.

9. *DEBTORS*: Debtors means a person who owes money to the trader.

10. *CREDITORS*: A creditor is a person to whom something is owned by the business.

11. *DRAWINGS*: cash or goods withdrawn by the proprietor from the Business for his personal or Household is termed to as "drawing".

12. *RESERVE*: An amount set aside out of profits or other surplus and designed to meet contingencies.

13. *ACCOUNT*: A summarized statements of transactions relating to a particular person, thing, Expense or income.

14. *DISCOUNT*: There are two types of discounts..

a. cash discount: An allowable made to encourage frame payment or before the expiration of the period allowed for credit.

b. Trade discount: A deduction from the gross or catalogue price allowed to traders who buys them for resale.

CLASSIFICATION OF BUSINESS TRANSACTIONS

All business transactions are classified into three categories:

1.Those relating to persons
2.Those relating to property(Assets)
3.Those relating to income & expenses

Thus, three classes of accounts are maintained for recording all business transactions. They are:

1.Personal accounts
2.Real accounts
3.Nominal accounts

1.*Personal Accounts* :Accounts which are transactions with persons are called "Personal Accounts" . A separate account is kept on the name of each person for recording the benefits received from ,or given to the person in the course of dealings with him.

E.g.: Krishna's A/C, Gopal's A/C, SBI A/C, Nagarjuna Finanace Ltd.A/C, ObulReddy & Sons A/C , HMT Ltd. A/C, Capital A/C, Drawings A/C etc.

2.*Real Accounts*: The accounts relating to properties or assets are known as "Real Accounts" .Every business needs assets such as machinery , furniture etc, for running its activities .A separate account is maintained for each asset owned by the business .
E.g.: cash A/C, furniture A/C, building A/C, machinery A/C etc.

3.*NominalAccounts*:Accounts relating to expenses, losses, incomes and gains are known as "Nominal Accounts". A separate account is maintained for each item of expenses, losses, income or gain.
E.g.: Salaries A/C, stationery A/C, wages A/C, postage A/C, commission A/C, interest A/C, purchases A/C, rent A/C, discount A/C, commission received A/C, interest received A/C, rent received A/C, discount received A/C.

Before recording a transaction, it is necessary to find out which of the accounts is to be debited and which is to be credited. The following three different rules have been laid down for the three classes of accounts….

1.*Personal Accounts*: The account of the person receiving benefit (receiver) is to be debited and the account of the person giving the benefit (given) is to be credited.

Rule: "Debit----The Receiver
Credit -- The Giver"

2.*Real Accounts*: When an asset is coming into the business, account of that asset is to be debited .When an asset is going out of the business, the account of that asset is to be credited.

Rule: "Debit----What comes in
Credit --What goes out"

3. *Nominal Accounts*: When an expense is incurred or loss encountered, the account representing the expense or loss is to be debited . When any income is earned or gain made, the account representing the income of gain is to be credited.

Rule: "Debit----All expenses and losses
Credit -- All incomes and gains"

JOURNAL

The first step in accounting therefore is the record of all the transactions in the books of original entry viz., Journal and then posting into ledges.

JOURNAL: The word Journal is derived from the Latin word 'journ' which means a day. Therefore, journal means a 'day Book' in day-to-day business transactions are recorded in chronological order.

Journal is treated as the book of original entry or first entry or prime entry. All the business transactions are recorded in this book before they are posted in the ledges. The journal is a complete and chronological(in order of dates) record of business transactions. It is recorded in a systematic manner. The process of recording a transaction in the journal is called “JOURNALISING”. The entries made in the book are called “Journal Entries”.

The proforma of Journal is given below.

DateDate	Particulars	L.F. no	Debit RS.	Credit RS.
1998 Jan 1	Purchases account to cash account(being goods purchased for cash)		10,000/-	10,000/-

LEDGER

All the transactions in a journal are recorded in a chronological order. After a certain period, if we want to know whether a particular account is showing a debit or credit balance it becomes very difficult. So, the ledger is designed to accommodate the various accounts maintained the trader. It contains the final or permanent record of all the transactions in duly classified form. “A ledger is a book which contains various accounts.” The process of transferring entries from journal to ledger is called “POSTING”.

Posting is the process of entering in the ledger the entries given in the journal. Posting into ledger is done periodically, may be weekly or fortnightly as per the convenience of the business. The following are the guidelines for posting transactions in the ledger.

1. After the completion of Journal entries only posting is to be made in the ledger.
2. For each item in the Journal a separate account is to be opened. Further, for each new item a new account is to be opened.
3. Depending upon the number of transactions space for each account is to be determined in the ledger.
4. For each account there must be a name. This should be written in the top of the table. At the end of the name, the word “Account” is to be added.
5. The debit side of the Journal entry is to be posted on the debit side of the account, by starting with “TO”.
6. The credit side of the Journal entry is to be posted on the debit side of the account, by starting with “BY”.

<u>Proforma for ledger</u>:

Particulars account

Date	Particulars	Lfno	Amount	Date	Particulars	Lfno	amount

TRAIL BALANCE

The first step in the preparation of final accounts is the preparation of trail balance. In the double entry system of book keeping, there will be credit for every debit and there will not be any debit without credit. When this principle is followed in writing journal entries, the total amount of all debits is equal to the total amount all credits.

A trail balance is a statement of debit and credit balances. It is prepared on a particular date with the object of checking the accuracy of the books of accounts. It indicates that all the transactions for a particular period have been duly entered in the book, properly posted and balanced. The trail balance doesn't include stock in hand at the end of the period. All adjustments required to be done at the end of the period including closing stock are generally given under the trail balance.

DEFINITIONS: *SPICER AND POGLAR :* A trail balance is a list of all the balances standing on the ledger accounts and cash book of a concern at any given date.
J.R.BATLIBOI:

A trail balance is a statement of debit and credit balances extracted from the ledger with a view to test the arithmetical accuracy of the books.
Thus a trail balance is a list of balances of the ledger accounts' and cash book of a business concern at any given date.

PROFORMA FOR TRAIL BALANCE:
Trail balance for MR…………………………………… as on …………

NO	NAME OF ACCOUNT (PARTICULARS)	DEBIT AMOUNT(RS.)	CREDIT AMOUNT(RS.)

Specimen of trial balance

1	Capital	Credit	Loan
2	Opening stock	Debit	Asset
3	Purchases	Debit	Expense
4	Sales	Credit	Gain
5	Returns inwards	Debit	Loss
6	Returns outwards	Debit	Gain
7	Wages	Debit	Expense
8	Freight	Debit	Expense
9	Transport expenses	Debit	Expense
10	Royalities on production	Debit	Expense
11	Gas, fuel	Debit	Expense
12	Discount received	Credit	Revenue
13	Discount allowed	Debit	Loss
14	Bas debts	Debit	Loss
15	Dab debts reserve	Credit	Gain
16	Commission received	Credit	Revenue
17	Repairs	Debit	Expense
18	Rent	Debit	Expense

19	Salaries	Debit	Expense
20	Loan Taken	Credit	Loan
21	Interest received	Credit	Revenue
22	Interest paid	Debit	Expense
23	Insurance	Debit	Expense
24	Carriage outwards	Debit	Expense
25	Advertisements	Debit	Expense
26	Petty expenses	Debit	Expense
27	Trade expenses	Debit	Expense
28	Petty receipts	Credit	Revenue
29	Income tax	Debit	Drawings
30	Office expenses	Debit	Expense
31	Customs duty	Debit	Expense
32	Sales tax	Debit	Expense
33	Provision for discount on debtors	Debit	Liability
34	Provision for discount on creditors	Debit	Asset
35	Debtors	Debit	Asset
36	Creditors	Credit	Liability
37	Goodwill	Debit	Asset
38	Plant, machinery	Debit	Asset
39	Land, buildings	Debit	Asset
40	Furniture, fittings	Debit	Asset
41	Investments	Debit	Asset
42	Cash in hand	Debit	Asset
43	Cash at bank	Debit	Asset
44	Reserve fund	Credit	Liability
45	Loan advances	Debit	Asset
46	Horse, carts	Debit	Asset
47	Excise duty	Debit	Expense
48	General reserve	Credit	Liability
49	Provision for depreciation	Credit	Liability
50	Bills receivable	Debit	Asset
51	Bills payable	Credit	Liability
52	Depreciation	Debit	Loss
53	Bank overdraft	Credit	Liability
54	Outstanding salaries	Credit	Liability
55	Prepaid insurance	Debit	Asset
56	Bad debt reserve	Credit	Revenue
57	Patents & Trademarks	Debit	Asset
58	Motor vehicle	Debit	Asset
59	Outstanding rent	Credit	Revenue

FINAL ACCOUNTS

In every business, the business man is interested in knowing whether the business has resulted in profit or loss and what the financial position of the business is at a given time. In brief, he wants to know (i)The profitability of the business and (ii) The soundness of the business.
The trader can ascertain this by preparing the final accounts. The final accounts are prepared from the trial balance. Hence the trial balance is said to be the link between the ledger accounts and the final accounts. The final accounts of a firm can be divided into two stages. The first stage is preparing the trading and profit and loss account and the second stage is preparing the balance sheet.

TRADING ACCOUNT

The first step in the preparation of final account is the preparation of trading account. The main purpose of preparing the trading account is to ascertain gross profit or gross loss as a result of buying and selling the goods.
Trading account of MR…………………… for the year ended ……………………

Particulars	Amount	Particulars	Amount
To opening stock	Xxxx	By sales xxxx	
To purchases xxxx		Less: returns xxx	Xxxx
Less: returns xx	Xxxx	By closing stock	Xxxx
To carriage inwards	Xxxx		
To wages	Xxxx		
To freight	Xxxx		
To customs duty, octroi	Xxxx		
To gas, fuel, coal,			
Water	Xxxx		
To factory expenses			
To other man. Expenses	Xxxx		
To productive expenses	Xxxx		
To gross profit c/d			
	Xxxx		
	Xxxx		
			Xxxx
	Xxxx		

Finally, a ledger may be defined as a summary statement of all the transactions relating to a person , asset, expense or income which have taken place during a given period of time. The up-to-date state of any account can be easily known by referring to the ledger.

PROFIT AND LOSS ACCOUNT

The business man is always interested in knowing his net income or net profit.Net profit represents the excess of gross profit plus the other revenue incomes over administrative, sales, Financial and other expenses. The debit side of profit and loss account shows the expenses and the credit side the incomes. If the total of the credit side is more, it will be the net profit. And if the debit side is more, it will be net loss.

PROFIT AND LOSS A/C OF MR……………………FOR THE YEAR ENDED………..

PARTICULARS	AMOUNT	PARTICULARS	AMOUNT
TO office salaries	Xxxxxx	By gross profit b/d	Xxxxx
TO rent,rates,taxes	Xxxxx	Interest received	Xxxxx
TO Printing and stationery	Xxxxx	Discount received	Xxxx
TO Legal charges		Commission received	Xxxxx
Audit fee	Xxxx	Income from	
TO Insurance	Xxxx	investments Dividend	
TO General expenses	Xxxx	on shares	Xxxx
TO Advertisements	Xxxxx	Miscellaneous	Xxxx
TO Bad debts	Xxxx	investments	
TO Carriage outwards	Xxxx	Rent received	xxxx
TO Repairs	Xxxx		
TO Depreciation	Xxxxx		
TO interest paid	Xxxxx		
TO Interest on capital	Xxxxx		
TO Interest on loans	Xxxx		
TO Discount allowed	Xxxxx		
TO Commission	Xxxxx		
TO Net profit -------→ (transferred to capital a/c)	Xxxxx		
	xxxxxx		Xxxxxx

BALANCE SHEET

The second point of final accounts is the preparation of balance sheet. It is prepared often in the trading and profit, loss accounts have been compiled and closed. A balance sheet may be considered as a statement of the financial position of the concern at a given date.

DEFINITION: A balance sheet is an item wise list of assets, liabilities and proprietorship of a business at a certain state.

J.R.botliboi: A balance sheet is a statement with a view to measure exact financial position of a business at a particular date.

Thus, Balance sheet is defined as a statement which sets out the assets and liabilities of a business firm and which serves to as certain the financial position of the same on any particular date. On the left-hand side of this statement, the liabilities and the capital are shown. On the right-hand side all the assets are shown. Therefore, the two sides of the balance sheet should be equal. Otherwise, there is an error somewhere.

BALANCE SHEET OF ………………………… AS ON ……………………………………

Liabilities and capital	Amount	Assets	Amount
Creditors	Xxxx	Cash in hand	Xxxx
Bills payable	Xxxx	Cash at bank	Xxxx
Bank overdraft	Xxxx	Bills receivable	Xxxx
Loans	Xxxx	Debtors	Xxxx
Mortgage	Xxxx	Closing stock	Xxxx
Reserve fund	Xxxx	Investments	Xxxx
Capital xxxxxx		Furniture and fittings	Xxxx
<u>Add</u>:		Plats&machinery	
Net Profit xxxx		Land & buildings	Xxxx
-------		Patents, tm ,copyrights	Xxxx
xxxxxxx		Goodwill	Xxxx
--------		Prepaid expenses	
		Outstanding incomes	Xxxx
<u>Less</u>:			Xxxx
Drawings xxxx	Xxxx		Xxxx
---------	XXXX		XXXX

<u>Advantages</u>: The following are the advantages of final balance .

1. It helps in checking the arithmetical accuracy of books of accounts.
2. It helps in the preparation of financial statements.
3. It helps in detecting errors.
4. It serves as an instrument for carrying out the job of rectification of entries.
5. It is possible to find out the balances of various accounts at one place.

FINAL ACCOUNTS -- ADJUSTMENTS

We know that business is a going concern. It has to be carried on indefinitely. At the end of every accounting year. The trader prepares the trading and profit and loss account and balance sheet. While preparing these financial statements, sometimes the trader may come across certain problems .The expenses of the current year may be still payable or the expenses of the next year have been prepaid during the current year. In the same way, the income of the current year still receivable and the income of the next year have been received during the current year. Without these adjustments, the profit figures arrived at or the financial position of the concern may not be correct. As such these adjustments are to be made while preparing the final accounts.

The adjustments to be made to final accounts will be given under the Trial Balance. While making the adjustment in the final accounts, the student should remember that "every adjustment is to be made in the final accounts twice i.e. once in trading, profit and loss account and later in balance sheet generally". The following are some of the important adjustments to be made at the time of preparing of final accounts:-

1. *CLOSING STOCK* :-

(i) *If closing stock is given in Trail Balance*: It should be shown only in the balance sheet "Assets Side".

(ii) *If closing stock is given as adjustment* :

1. First, it should be posted at the credit side of "Trading Account".
2. Next, shown at the asset side of the "Balance Sheet".

2. *OUTSTANDING EXPENSES* :-

(i) *If outstanding expenses given in Trail Balance*: It should be only on the liability side of Balance Sheet.

(ii) *If outstanding expenses given as adjustment* :

1. First, it should be added to the concerned expense at the debit side of profit and loss account or Trading Account.
2. Next, it should be added at the liabilities side of the Balance Sheet.

3. *PREAPID EXPENSES* :-

(i) *If prepaid expenses given in Trial Balance*: It should be shown only in assets side of the Balance Sheet.

(ii) *If prepaid expense given as adjustment* :

1. First, it should be deducted from the concerned expenses at the debit side of profit and loss account or Trading Account.
2. Next, it should be shown at the assets side of the Balance Sheet.

4.*INCOME EARNED BUT NOT RECEIVED [OR] OUTSTANDING INCOME [OR] ACCURED INCOME* :-

(i) *If incomes given in Trial Balance*: It should be shown only on the assets side of the Balance Sheet.

(ii) *If incomes outstanding given as adjustment*:

1. First, it should be added to the concerned income at the credit side of profit and loss account.
2. Next, it should be shown at the assets side of the Balance sheet.

5. *INCOME RECEIVED IN ADVANCE: UNEARNED INCOME*:-

(i) *If unearned incomes given in Trail Balance* : It should be shown only on the liabilities side of the Balance Sheet.

(ii) *If unearned income given as adjustment* :

1. First, it should be deducted from the concerned income in the credit side of the profit and loss account.
2. Secondly, it should be shown in the liabilities side of the Balance Sheet.

6.*DEPRECIATION*:-

(i) *If Depreciation given in Trail Balance*: It should be shown only on the debit side of the profit and loss account.

(ii) If Depreciation given as adjustment

1. First, it should be shown on the debit side of the profit and loss account.
2. Secondly, it should be deduced from the concerned asset in the Balance sheet assets side.

7.*INTEREST ON LOAN [OR] CAPITAL* :-

(i) *If interest on loan (or) capital given in Trail balance* :It should be shown only on debit side of the profit and loss account.

(ii) *If interest on loan (or)capital given as adjustment* :

1. First, it should be shown on debit side of the profit and loss account.
2. Secondly, it should added to the loan or capital in the liabilities side of the Balance Sheet.

8.*BAD DEBTS*:-

(i) *If bad debts given in Trail balance* :It should be shown on the debit side of the profit and loss account.

(ii) *If bad debts given as adjustment*:

1. First, it should be shown on the debit side of the profit and loss account.
2. Secondly, it should be deducted from debtors in the assets side of the Balance Sheet.

9. *INTEREST ON DRAWINGS* :-

(i) *If interest on drawings given in Trail balance*: It should be shown on the credit side of the profit and loss account.

(ii) *If interest on drawings given as adjustments* :

1. First, it should be shown on the credit side of the profit and loss account.
2. Secondly, it should be deducted from capital on liabilities side of the Balance Sheet.

10. *INTEREST ON INVESTMENTS* :-

(i) *If interest on the investments given in Trail balance* :It should be shown on the credit side of the profit and loss account.

(ii) *If interest on investments given as adjustments* :

1. First, it should be shown on the credit side of the profit and loss account.
2. Secondly, it should be added to the investments on assets side of the Balance Sheet.

Note: Problems to be solved on final accounts

FINANCIAL ANALYSIS THROUGH RATIOS

Ratio Analysis

Absolute figures are valuable but they standing alone convey no meaning unless compared with another. Accounting ratio show inter-relationships which exist among various accounting data. When relationships among various accounting data supplied by financial statements are worked out, they are known as accounting ratios.

Accounting ratios can be expressed in various ways such as:
1. a pure ratio says ratio of current assets to current liabilities is 2:1 or
2. a rate say current assets are two times of current liabilities or
3. a percentage say current assets are 200% of current liabilities.

Each method of expression has a distinct advantage over the other the analyst will selected that mode which will best suit his convenience and purpose.

Uses or Advantages or Importance of Ratio Analysis

Ratio Analysis stands for the process of determining and presenting the relationship of items and groups of items in the financial statements. It is an important technique of financial analysis. It is a way by which financial stability and health of a concern can be judged. The following are the main uses of Ratio analysis:

(a) Useful in financial position analysis: Accounting reveals the financial position of the concern. This helps banks, insurance companies and other financial institution in lending and making investment decisions.
(ii) Useful in simplifying accounting figures: Accounting ratios simplify, summaries and systematic the accounting figures in order to make them more understandable and in lucid form.

(iii) Useful in assessing the operational efficiency: Accounting ratios helps to have an idea of the working of a concern. The efficiency of the firm becomes evident when analysis is based on accounting ratio. This helps the management to assess financial requirements and the capabilities of various business units.

(iv) Useful in forecasting purposes: If accounting ratios are calculated for number of years, then a trend is established. This trend helps in setting up future plans and forecasting.

(v) Useful in locating the weak spots of the business: Accounting ratios are of great assistance in locating the weak spots in the business even through the overall performance may be efficient.

(vi) Useful in comparison of performance: Managers are usually interested to know which department performance is good and for that he compare one department with the another department of the same firm. Ratios also help him to make any change in the organisation structure.

Limitations of Ratio Analysis: These limitations should be kept in mind while making use of ratio analyses for interpreting the financial statements. The following are the main limitations of ratio analysis.

1. False results if based on incorrect accounting data: Accounting ratios can be correct only if the data (on which they are based) is correct. Sometimes, the information given in the financial statements is affected by window dressing, i. e. showing position better than what actually is.
2. No idea of probable happenings in future: Ratios are an attempt to make an analysis of the past financial statements; so they are historical documents. Now-a-days keeping in view the complexities of the business, it is important to have an idea of the probable happenings in future.
3. Variation in accounting methods: The two firms' results are comparable with the help of accounting ratios only if they follow the some accounting methods or bases. Comparison will become difficult if the two concerns follow the different methods of providing depreciation or valuing stock.
4. Price level change: Change in price levels make comparison for various years difficult.
5. Only one method of analysis: Ratio analysis is only a beginning and gives just a fraction of information needed for decision-making so, to have a comprehensive analysis of financial statements, ratios should be used along with other methods of analysis.
6. No common standards: It is very difficult to by down a common standard for comparison because circumstances differ from concern to concern and the nature of each industry is different.
7. Different meanings assigned to the some term: Different firms, in order to calculate ratio may assign different meanings. This may affect the calculation of ratio in different firms and such ratio when used for comparison may lead to wrong conclusions.
8. Ignores qualitative factors: Accounting ratios are tools of quantitative analysis only. But sometimes qualitative factors may surmount the quantitative aspects. The calculations derived from the ratio analysis under such circumstances may get distorted.
9. No use if ratios are worked out for insignificant and unrelated figure: Accounting ratios should be calculated on the basis of cause and effect relationship. One should be clear as to what cause is and what effect is before calculating a ratio between two figures.

Ratio Analysis: Ratio is an expression of one number is relation to another. It is one of the methods of analyzing financial statement. Ratio analysis facilities the presentation of the information of the financial statements in simplified and summarized from. Ratio is a measuring of two numerical positions. It expresses the relation between two numeric figures. It can be found by dividing one figure by another ratios are expressed in three ways.
1. Jines method
2. Ratio Method
3. Percentage Method

Classification of ratios: All the ratios broadly classified into four types due to the interest of different parties for different purposes. They are:

1. Profitability ratios
2. Turn over ratios
3. Financial ratios
4. Leverage ratios

1. Profitability ratios: These ratios are calculated to understand the profit positions of the business. These ratios measure the profit earning capacity of an enterprise. These ratios can be related its save or capital to a certain margin on sales or profitability of capital employ. These ratios are of interest to management. Who are responsible for success and growth of enterprise? Owners as well as financiers are interested in profitability ratios as these reflect ability of enterprises to generate return on capital employ important profitability ratios are:

Profitability ratios in relation to sales: Profitability ratios are almost importance of concern. These ratios are calculated is focus the end results of the business activities which are the sole eritesiour of overall efficiency of organisation.

1. Gross profit ratio: $\frac{\text{gross profit}}{\text{Nest sales}} \times 100$

Note: Higher the ratio the better it is

3. Net profit ratio: $\frac{\text{Net profit after interest \& Tax}}{\text{Net sales}} \text{ X } 100$

Note: Higher the ratio the better it is

4. Operating ratio (Operating expenses ratio)

$$\frac{\text{Cost of goods sold + operating exenses}}{\text{Net sales}} \text{ X } 100$$

Net: Lower the ratio the better it is

5. Operating profit ratio: $\frac{\text{Operating profit}}{\text{Net sales}} \text{ X } 100 = 100$ operating ratio

Note: Higher the ratio the better it is cost of goods sold= opening stock + purchase + wages + other direct expenses- closing stock (or) sales – gross profit.

Operating expenses:

= administration expenses + setting, distribution expenses operating profit= gross profit – operating expense.

Expenses ratio = $\frac{\text{concern expense}}{\text{Net sales}} \text{ X } 100$

Note: Lower the ratio the better it is

Profitability ratios in relation to investments:

1. Return on investments: $\frac{\text{Net profit after tax \& latest depreciation}}{\text{share holders funds}} \text{ X } 100$

Share holders funds = equity share capital + preference share capital + receives & surpluses +undistributed profits.

Note: Higher the ratio the better it is

2. Return on equity capital: $\frac{\text{Net Profit after tax \& interest - preference divident}}{\text{equity share capital}} \text{ X } 100$

Note: Higher the ratio the better it is

3. Earnings per share= $\frac{\text{Net profit after tax - preferecne divident}}{\text{No.of equity shares}}$

4. Return on capital employed = $\frac{\text{operating profit}}{\text{capital employed}} \times 100$

5. Return on total assets = $\frac{\text{N.P. after tax and interest}}{\text{Total Assets}}$

Here, capital employed = equity share capital + preference share capital + reserves & surpluses + undistributed profits + debentures+ public deposit + securities + long term loan + other long term liability – factious assets (preliminary expressed & profit & loss account debt balance)

II. Turn over ratios or activity ratios:

These ratios measure how efficiency the enterprise employees the resources of assets at its command. They indicate the performance of the business. The performance if an enterprise is judged with its save. It means ratios are also laced efficiency ratios.

These ratios are used to know the turn over position of various things in the____________. The turnover ratios are measured to help the management in taking the decisions regarding the levels maintained in the assets, and raw materials and in the funds. These ratio s are measured in ratio method.

1. Stock turnover ratio = $\frac{\text{cost of goods sold}}{\text{average stock}}$

Here,
Average stock= $\frac{\text{opening stock} + \text{closing stock}}{2}$

Note: Higher the ratio, the better it is

2. Working capital turnover ratio = $\frac{\text{sales}}{\text{working capital}}$

Note: Higher the ratio the better it is working capital = current assets – essential liabilities.

3. Fixed assets turnover ratio = $\frac{\text{sales}}{\text{fixed assets}}$

Note: Higher the ratio the better it is.

3 (i) Total assets turnover ratio is : $\frac{\text{sales}}{\text{total assets}}$

Note: Higher the ratio the better it is.

4. Capital turnover ratio= $\frac{\text{Sales}}{\text{Capital employed}}$

Note: Higher the ratio the better it is

5. Debtors turnover ratio= $\frac{\text{credits sales or sales}}{\text{average debtors}}$

5(i)= Debtors collection period= $\frac{365 \text{ (or) } 12}{\text{Turnove ratio}}$

Here,
Average debtors = $\frac{\text{opening debitors} + \text{closing bebtors}}{2}$

Debtors = debtors + bills receivable

Note: Higher the ratio the better it is.

6. Creditors turnover ratio = $\frac{\text{credit purchasers or purchases}}{\text{average credetors}}$

6 (i) creditors collection period= $\frac{365\text{ (or) }12}{\text{Creditor turnover ratio}}$

Here,

Average creditor= $\frac{\text{opening + closing credetors}}{2}$

Creditors = creditors + bills payable.

Note: lower the ratio the better it is.

3. Financial ratios or liquidity ratios:

Liquidity refers to ability of organisation to meet its current obligation. These ratios are used to measure the financial status of an organisation. These ratios help to the management to make the decisions about the maintained level of current assets & current libraries of the business. The main purpose to calculate these ratios is to know the short terms solvency of the concern. These ratios are useful to various parties having interest in the enterprise over a short period – such parties include banks. Lenders, suppliers, employees and other.

The liquidity ratios assess the capacity of the company to repay its short term liabilities. These ratios are calculated in ratio method.

Current ratio = $\frac{\text{current assets}}{\text{current liabilities}}$

Note: The ideal ratio is 2:1

i. e., current assets should be twice. The current liabilities.

Quick ratio or liquid ratio or acid test ratio: $\frac{\text{quick assets}}{\text{current liabilities}}$

Quick assets = cash in hand + cash at bank + short term investments + debtors + bills receivables short term investments are also known as marketable securities.

Here the ideal ratio is 1:1 is, quick assets should be equal to the current liabilities.

Absolute liquid ratio= $\frac{\text{absolute liquid assets}}{\text{current liabilities}}$

Here,

Absolute liquid assets=cash in hand + cash at bank + short term investments + marketable securities.

Here, the ideal ratio is 0,0:1 or 1:2 it, absolute liquid assets must be half of current liabilities.

Leverage ratio of solvency ratios: Solvency refers to the ability of a business to honour long item obligations like interest and installments associated with long term debts. Solvency ratios indicate long term stability of an enterprise. These ratios are used to understand the yield rate if the organisation.

Lenders like financial institutions, debenture, holders, banks are interested in ascertaining solvency of the enterprise. The important solvency ratios are:

$\frac{\text{outsiders funds}}{\text{share holders funds}}$ $\frac{\text{Debt}}{\text{Equity}}$

1. Debt – equity ratio= =

Here,
Outsiders funds = Debentures, public deposits, securities, long term bank loans + other long term liabilities.

Share holders funds = equity share capital + preference share capital + reserves & surpluses + undistributed projects.

The ideal ratio is 2:1

2. Preprimary ratio or equity ratio= $\frac{\text{share holder funds}}{\text{total assets}}$
The ideal ratio is 1:3 or 0.33:1

3. Capital – greasing ratio:

$$= \frac{(\text{equity share capital} + \text{reserves \& surplusses} + \text{undistributed projects})}{(\text{Outsiders funds} + \text{preference share capital})}$$

Here,

higher gearing ratio is not good for a new company or the company in which future earnings are uncertain.

11. Debt to total fund ratio= $\frac{\text{outsiders funds}}{\text{capital employed}}$

Capital employed= outsiders funds + share holders funds = debt + equity.
The ideal ratio is 0.6.7 :1 or 2:3