Managerial Economics

UNIT -1

Introduction

A close interrelationship between management and economics had led to the development of managerial economics. Economic analysis is required for various concepts such as demand, profit, cost, and competition. In this way, managerial economics is considered as economics applied to "problems of choice'' or alternatives and allocation of scarce resources by the firms.

Managerial economics is a discipline that combines economic theory with managerial practice. It helps in covering the gap between the problems of logic and the problems of policy. The subject offers powerful tools and techniques for managerial policy making.

Managerial economics is a stream of management studies which emphasizes solving business problems and decision-making by applying the theories and principles of microeconomics and macroeconomics. It is a specialized stream dealing with the organization's internal issues by using various economic theories.

Managerial Economics − Definitions

"Managerial Economics is economics applied in decision making. It is a special branch of economics bridging the gap between abstract theory and managerial practice." – *Haynes, Mote* and *Paul.*

"Business Economics consists of the use of economic modes of thought to analyse business situations." - *McNair* and *Meriam*

"Business Economics (Managerial Economics) is the integration of economic theory with business practice for the purpose of facilitating decision making and forward planning by management." - *Spencer* and *Seegelman.*

"Managerial economics is concerned with application of economic concepts and economic analysis to the problems of formulating rational managerial decision." – *Mansfield*

Nature of Managerial Economics:

- The primary function of management executive in a business organisation is decision making and forward planning.
- Decision making and forward planning go hand in hand with each other. Decision making means the process of selecting one action from two or more alternative courses of action. Forward planning means establishing plans for the future to carry out the decision so taken.
- The problem of choice arises because resources at the disposal of a business unit (land, labour, capital, and managerial capacity) are limited and the firm has to make the most profitable use of these resources.
- The decision making function is that of the business executive, he takes the decision which will ensure the most efficient means of attaining a desired objective, say profit maximisation. After taking the decision about the particular output, pricing, capital, raw-materials and power etc., are prepared. Forward planning and decision-making thus go on at the same time.
- A business manager's task is made difficult by the uncertainty which surrounds business decision-making. Nobody can predict the future course of business conditions. He prepares the best possible plans for the future depending on past experience and future outlook and yet he has to go on revising his plans in the light of new experience to minimise the failure. Managers are thus engaged in a continuous process of decision-making through an uncertain future and the overall problem confronting them is one of adjusting to uncertainty.
- In fulfilling the function of decision-making in an uncertainty framework, economic theory can be, pressed into service with considerable advantage as it deals with a number of concepts and principles which can be used to solve or at least throw some light upon the problems of business management. E.g. are profit, demand, cost, pricing, production, competition, business cycles, national income etc. The way economic analysis can be used towards solving business problems, constitutes the subject-matter of Managerial Economics.
- Thus in brief we can say that Managerial Economics is both a science and an art.

Scope of Managerial Economics:

The scope of managerial economics is not yet clearly laid out because it is a developing science. Even then the following fields may be said to generally fall under Managerial Economics:

1. Demand Analysis and Forecasting
2. Cost and Production Analysis
3. Pricing Decisions, Policies and Practices
4. Profit Management
5. Capital Management

These divisions of business economics constitute its subject matter.

Recently, managerial economists have started making increased use of Operation Research methods like Linear programming, inventory models, Games theory, queuing up theory etc., have also come to be regarded as part of Managerial Economics.

1.Demand Analysis and Forecasting: A business firm is an economic organisation which is engaged in transforming productive resources into goods that are to be sold in the market. A major part of managerial decision making depends on accurate estimates of demand. A forecast of future sales serves as a guide to management for preparing production schedules and employing resources. It will help management to maintain or strengthen its market position and profit base. Demand analysis also identifies a number of other factors influencing the demand for a product. Demand analysis and forecasting occupies a strategic place in Managerial Economics.

2.Cost and production analysis: A firm's profitability depends much on its cost of production. A wise manager would prepare cost estimates of a range of output, identify the factors causing are cause variations in cost estimates and choose the cost-minimising output level, taking also into consideration the degree of uncertainty in production and cost calculations. Production processes are under the charge of engineers but the business manager is supposed to carry out the production function analysis in order to avoid wastages of materials and time. Sound pricing practices depend much on cost control. The main topics discussed under cost and production analysis are: Cost concepts, cost-output relationships, Economics and Diseconomies of scale and cost control.

3.Pricing decisions, policies and practices: Pricing is a very important area of Managerial Economics. In fact, price is the genesis of the revenue of a firm ad as such the success of a business firm largely depends on the correctness of the price decisions taken by it. The important aspects dealt with this area are: Price determination in various market forms, pricing methods, differential pricing, product-line pricing and price forecasting.

4.Profit management: Business firms are generally organized for earning profit and in the long period, it is profit which provides the chief measure of success of a firm. Economics tells us that profits are the reward for uncertainty bearing and risk taking. A successful business manager is one who can form more or less correct estimates of costs and revenues likely to accrue to the firm at different levels of output. The more successful a manager is in reducing uncertainty, the higher are the profits earned by him. In fact, profit-planning and profit measurement constitute the most challenging area of Managerial Economics.

5.Capital management: The problems relating to firm's capital investments are perhaps the most complex and troublesome. Capital management implies planning and control of capital expenditure because it involves a large sum and moreover the problems in disposing the capital assets off are so complex that they require considerable time and labour. The main topics dealt with under capital management are cost of capital, rate of return and selection of projects.

Conclusion: The various aspects outlined above represent the major uncertainties which a business firm has to reckon with, viz., demand uncertainty, cost uncertainty, price uncertainty, profit uncertainty, and capital uncertainty. We can, therefore, conclude that the subject-matter of Managerial Economics consists of applying economic principles and concepts towards adjusting with various uncertainties faced by a business firm.

Application of Managerial Economics

Setting business goals: Forecasting from marketing models are used to set revenue and profit goals. These objectives can often become metrics for performance evaluations of employees and managers.

Creating a pricing strategy: Managerial economics uses supply/demand curves to predict how consumers will react to price changes.

Deciding how much product to produce: Depending on the projections from sales forecasts, managers have to decide how much of each product to produce and at what price points.

Creating an internet strategy: Developing an effective internet strategy is about understanding SEO, driving traffic and monetizing a website. Economics gets applied to define the demographics of the visitors to the site and creating a content marketing strategy to develop those consumers.

Hiring policies needed to attract labour: Workers want to receive reasonable pay and benefits and have some assurance of long-term stability in their jobs. Managers must balance the marginal cost of labour with the incremental revenues received from product expansions or introductions of new products.

Evaluating investments and capital budgets: Long-term investments in plant and equipment are typically assessed and prioritized using a type of discounted cash flow technique.

Marketing and promotional strategies: Marketing strategies rely on the level of consumer demand for goods and services. Marketing managers try to estimate the size of the market for existing or new products. However, the market size depends on non-economic and economic factors which are represented by the price/demand curves for a product. Managerial economics applies income and price elasticity to make projections of demand.

Introducing new products: Managers use statistical forecasting and supply/demand curves to gauge the potential success of launching a new product. Discounted cash flow projections analyze future cash expenditures for the cost of a new plant and equipment and cash inflows from revenues.

Planning production schedules: Sales forecasts from marketing must be translated into production schedules, inventory quantities and number of workers needed on a production line. Managerial economics analyzes labour performance and provides insights into labor productivity and effects of the law of diminishing returns.

Financial applications: Decisions for purchases of capital equipment and budgeting decisions use economics to quantify and understand the variables of time and uncertainty. Financial managers use economic techniques to make estimates of future cash flows from investments in new plants and equipment. Managers will often have to make choices of how to allocate cash resources. Do they spend more money on advertising or invest in new plants for expansions of product lines?

Forecasting procedures: Managers need forecasts to set goals for sales staff, allocate funds for expansion, create production schedules and hire sufficient manpower. Economics techniques for forecasting include market surveys, regressions analyses of indicators, analyses of moving averages of past performances and diffusion indices.

Managers develop strategies to reach their long-term economic objectives. They apply the theories and methods of managerial economics to the implementation and execution of their strategies and estimate the probability of success. Managerial economics is used to analyze the risks of business decisions and as a method to identify and quantify the uncertainties in a situation.

Managers use some form of economic principles in making day-to-day decisions. They may not state the principles in a formal sense or even be aware of the applications, but they will, nevertheless, intuitively use the techniques.

Role of managerial economist

A managerial economist's main role is to improve the quality of policy making as it affects short term operation and long range planning. He has a significant role to play in assisting the management of a firm in decision making and forward planning by using specialised skills and techniques.

A managerial economist helps the management by using his analytical skills and highly developed techniques in solving complex issues of successful decision-making and future advanced planning.

The role of managerial economist can be summarized as follows:

1. He studies the economic patterns at macro-level and analysis it’s significance to the specific firm he is working in.
2. He has to consistently examine the probabilities of transforming an ever-changing economic environment into profitable business avenues.
3. He assists the business planning process of a firm.
4. He also carries cost-benefit analysis.

5. He assists the management in the decisions pertaining to internal functioning of a firm such as changes in price, investment plans, type of goods /services to be produced, inputs to be used, techniques of production to be employed, expansion/ contraction of firm, allocation of capital, location of new plants, quantity of output to be produced, replacement of plant equipment, sales forecasting, inventory forecasting, etc.
6. In addition, a managerial economist has to analyze changes in macro- economic indicators such as national income, population, business cycles, and their possible effect on the firm's functioning.
7. He is also involved in advising the management on public relations, foreign exchange, and trade. He guides the firm on the likely impact of changes in monetary and fiscal policy on the firm's functioning.
8. He also makes an economic analysis of the firms in competition. He has to collect economic data and examine all crucial information about the environment in which the firm operates.
9. The most significant function of a managerial economist is to conduct a detailed research on industrial market.
10. In order to perform all these roles, a managerial economist has to conduct an elaborate statistical analysis.
11. He must be vigilant and must have ability to cope up with the pressures.
12. He also provides management with economic information such as tax rates, competitor's price and product, etc. They give their valuable advice to government authorities as well.
13. At times, a managerial economist has to prepare speeches for top management.

Demand Analysis

1. Meaning of Demand
2. Types of Demand
3. Changes in demand
4. Income Demand
5. Cross Demand
6. Demand of Determinants

Meaning of Demand

The demand for a commodity is its quantity which consumers are able and willing to buy at various prices during a given period of time. So, for a commodity to have demand, the consumer must possess willingness to buy it, the ability or means to buy it, and it must be related to per unit of time i.e. per day, per week, per month or per year.

According to Prof. Bober, "By demand we mean the various quantities of a given commodity or service which consumers would buy in one market in a given period of time at various prices or at various incomes or at various prices of related goods."

Demand Functions:

The demand function is an algebraic expression of the relationship between demand for a commodity and its various determinants that affect this quantity.

There are two types of demand functions:

(i) Individual Demand Function. An individual's demand function refers to the quantities of a commodity demanded at various prices, given his income, prices of related goods and tastes. It is expressed as

D=f (P)

(ii)Market Demand Function:

An individual demand function is the basis of demand theory. But it is the market demand function that is main interest to managers. It refers to the total demand for a good or service of all the buyers taken together. The market demand function may be expressed mathematically thus

Dx = f (Px, Py, M, T, A, U)

Where

Dx = Quantity demanded for commodity x

f = functional relation

Px = Price of commodity x

Pr = Prices of related commodities i.e. substitutes and complementariness

M = The money income of the consumer

T = The taste of the consumer

A = The advertisement effect

U = Unknown variables

By demand function, economists mean the entire functional relationship. This means the whole range of price quantity relationship and not just the quantity demanded at a given price per unit of time. The demand function expressed above is really just a listing of variables that affect the demand.

The demand function must be made explicit and clear for use in managerial decision making. The industry must have reasonably good knowledge and information about its demand function to formulate effective long run planning decisions and short run operating decisions.

The basic assumption in demand schedule and demand curve has been the relationship between price and quantity of a commodity signifying a change in price to bring a change in quantity demanded with all other variables assumed constant and unchanged. In demand function this assumption is relaxed and it is held emphatically that besides change in price there are other variables which influence the demand for a particular commodity.
Classical economists were aware of the fact that the price is not the only factor which determines sales but that other factors, too, have an important effect on them. These other factors are the income of the consumer, their tastes, habits, preferences, etc. When these factors influence the demand the demand is said to shift. But their price-demand relationship is not as important to the management as the shift in demand, which constitutes the demand function. Shifting of demand curve renders the demand analysis difficult.

Therefore, demand function makes use of mathematical formulation to arrive at correct results. Recently more sophisticated methods have been developed for the study like simultaneous equation and mathematical programming which helps in arriving at precise results.

2. Types of Demand

Managerial decisions require the knowledge of various types of demand. We explain below a few important types.

Demand for Consumers' Goods and Producers' Goods:

Consumers' goods are those final goods which directly satisfy the wants of consumers. Such goods are bread, milk, pen, clothes, furniture, etc. Producers' goods are those goods which

help in the production of other goods that satisfy the wants of the consumers directly or indirectly, such as machines, plants, agricultural and industrial raw material, etc. The demand for consumers' goods is known as direct or autonomous demand. The demand for producers' goods is derived demand because they are demanded not for final consumption but for the production of other goods.

Joel Dean gives the following reasons of the demand for producers' goods:

(1) Buyers are professionals, and hence more expert, price-wise and sensitive to substitutes.

(2) Their motives are purely economic: products are bought, not for themselves alone, but for their profit prospects.

(3) Demand, being derived from consumption demand, fluctuates differently and generally more violently.

The distinction between consumer's goods and producers goods is based on the uses to which these goods are put. There are many goods such as electricity, coal, etc. which are used both as consumers' goods and producers' goods. Still, this distinction is useful for the appropriate demand analysis.

Demand for Perishable and Durable Goods:

Consumers' and producer's goods have been classified further into perishable and durable goods. In economics, perishable goods are the goods which are used up in a single act of consumption while durable goods are the goods which can be used time and again for a considerable period of time.

In other words, perishable goods are consumed automatically while only services of durable goods are consumed. Thus, perishable goods include all types of services, foodstuffs, raw materials, etc. On the other hand, durable goods consist of buildings, machines, furniture's, etc.

This distinction has great importance because in the demand analysis durable goods create more complex problems than nondurable goods. Non-durable goods are often sold to meet the current demand which is based on existing conditions. On the other hand, the sale of durable goods increases the stock of available goods whose services are consumed over a period of time.

The demand for perishable goods is more elastic while the demand for non-durable goods is less elastic in the short-run and their demand tends to be more elastic in the long run. According to J. Dean, the demand for durable goods is more unstable in relation to the business conditions. Postponement, replacement, storage and expansions are inter-related problems which are included in the determination of demand for durable goods.

I. Derived and Autonomous Demand:

When the demand for a particular product is dependent upon the demand for some other goods, it is called derived demand. In many cases, derived demand of a product is due to its being a component part of the parent product. For example, demand for cement is dependent upon the demand for houses.

The inputs or commodities demanded for further production have derived demand. The demand for raw materials, machines, etc. do not fulfil any direct consumption need of the buyer but they are needed for the production of goods having direct demand. Therefore, they fall in the category of derived demand. If demand for final product increases, the derived demand for related product also increases. If demand for the former falls, the demand for the latter also decreases.

On the other hand, when demand for a particular product is independent of the demand for other products, such a demand is called autonomous demand. The demand for consumer goods is autonomous. It is the one where a commodity is demanded because it is needed for direct consumption. For example, T.V., furniture, etc.

To distinguish between derived demand and autonomous demand is not an easy job. There is a thin line of demarcation between the two. In fact, mostly demand is derived demand. For example, even the demand for a car by a household is derived from the demand for transport service. Thus, the distinction between the two is rather arbitrary and a matter of degree.

Derived demand is generally less price elastic that the autonomous demand. In the case of derived demand, the impact of price on demand gets diluted by other components in production whose prices are sticky.

II. Industry and Company Demand:

Industry demand refers to the total demand for the products of a particular industry, that is, the total demand for paper in the country On the other hand, company demand denotes the demand for the products of a particular company (firm), that is, the demand for paper produced by Bellarpur Paper Mills. Industry demand covers the demand of all firms producing similar products which are close substitutes to each other irrespective of differences in trade names, such as Close-up, Colgate, Pepsodent, etc.

Industry demand is less price elastic than company demand.

The structure of the market decides the degree of price-demand relationship of the company demand:

(i) In the case of perfect competition the degree of substitutability being perfect, the company demand for the product tends to be perfectly elastic.

(ii) In monopoly market, there is only one firm and the firm is itself an industry. In such a case, the company demand curve is the same as that of the industry demand curve.

(iii) In homogeneous oligopoly, business is highly transferable among rivals. The company demand curve remains uncertain because it depends upon what its rivals do. Usually, the sellers charge the same price to stay in the market.

(vi) In differentiated oligopoly, the company demand is less closely related to the industry demand. Sellers try to differentiate their products from each other. Hence, the price competition is lower than the homogeneous oligopoly market.

(v) If there is monopolistic competition, the company demand curve is more price elastic than the industry demand curve.

III. Short-run Demand and Long-run Demand:

In the case of perishable commodities such as vegetables, fruit, milk, etc., the change in quantity demanded to a change in price occurs quickly. For such commodities, there is a single demand curve with the usual negative slope. But in the case of durable commodities such as equipment's, machines, clothes, and others, a change in price will not have its ultimate effect on the quantity demanded until the existing stock of the commodity is adjusted which may take a long time.

A short-run demand curve shows the change in quantity demanded to a change in price, given the existing stock of the durable commodity and the supplies of its substitutes. On the other hand, the long-run demand curve shows the change in quantity demanded to a change in price after all adjustments have been made in the long-run.

According to Joel Dean, "Short-run demand refers to existing demand with its immediate reaction to price changes, income fluctuation, etc., whereas long-run demand is that which will ultimately exist as a result of the changes in pricing, promotion or product improvement, after enough time is allowed to let the market adjust itself to the new situation."

IV. Joint Demand and Composite Demand:

When two or more goods are jointly demanded at the same time to satisfy a single want it is called joint or complementary demand. Joint demand refers to the relationship between two or more commodities or services when they are demanded together. There is joint demand for cars and petrol, pens and ink, tea and sugar, etc.

Jointly demanded goods are complementary. A rise in the price of one leads to a fall in the demand for the other and vice-versa. For example, a rise in the price of care will bring a fall in their demand together with the demand for petrol and lower its price, if the supply of petrol remains unchanged.

On the contrary, a fall in the price of cars, as a result of a fall in the cost of production of cars, will increase their demand, and therefore increase the demand for petrol and raise its price, if available supplies of petrol are unchanged. A commodity is said to have composite demand when it can be put to several alternative uses.

This is not only peculiar to commodities like leather, steel, coal, paper, etc. but also to factors of production like land, labour and capital. For example, coal is demanded by railways, by factories, by households, etc. There is competition among the different uses of a commodity in composite demand. Hence, each use of the commodity is the rival of the other uses. So it is also called rival demand. Any change in the demand for a commodity by a user will affect the supply of the other users which will change their prices.

3. Changes in Demand

Changes in demand take place in two ways:

(a) Increase and decrease in demand; and
(b) Extension and contraction in demand.

(a) Increase and Decrease in Demand:

An individual's demand curve is drawn on the assumption that factors such as prices of other commodities, income and tastes influencing his demand remain constant. What happens to an individual's demand curve if there is a change in any one of the factors affecting his demand, the other factors remaining constant?

When any one of the factors changes, the entire demand curve shifts either to the right or to the left when the consumer buys more of the commodity at the same price, it is increase in demand. When his money income rises, other factors remaining constant, demand curve for a commodity will shift to the right.

(b) Extension and Contraction in Demand:

A movement along a demand curve takes place when there is a change in the quantity demanded due to a change in the commodity's own price and not due to any other factor. This is known as extension in demand.

4. Income Demand

We have so far studied price demand in its various aspects, keeping other things constant. Let us now study income demand which indicates the relationship between income and the quantity of commodity demanded. It relates to the various quantities of a commodity or service that will be bought by the consumer at various levels of income in a given period of time, other things being equal.

Things that are assumed to remain equal are the price of the commodity in question, the prices of related commodities, and the tastes, preferences and habits of the consumer for it. The income-demand function for a commodity is written as D = f(y). The income-demand relationship is usually direct.

The demand for the commodity increases with the rise in income and decreases with the fall in income

5. Cross Demand

Let us now take the case of related goods and how the change in the price of one affects the demand of the other. This is known as cross demand and is written as D =f (pr). Related goods are of two types, substitutes and complementary. In the case of substitute or competitive goods, a rise in the price of one good A raises the demand for the other good B, the price of B remaining the same. The opposite holds in the case of a fall in the price of A when the demand for B falls.

If, however, the two goods are independent, a change in the price of A will have no effect on the demand for B. We seldom study the relation between two unrelated goods like wheat and chairs. Mostly as consumers, we are concerned with the price-demand relation of substitutes and complementary goods.

6. Demand of Determinants

The demand for the product is mainly the attitude of consumers towards the product. The attitude of consumers gives vise to actions in buying different products at different prices. The demand for a product is determined by different factors. The main demand determinants are price, income, price of related goods and advertising. Therefore, demand is a multivariate relationship, i.e. it is determined by many factors simultaneously.

(A) Determinants of Individual Demand:

Let us discuss the variables which influence the individual demand.

1. Price of the Commodity:

This is the basic factor influencing the demand. There is a close relationship between the quantity demanded and the price of the product. Normally a larger quantity is demanded at a lower price that at a higher price. There is inverse relationship between the price and quantity demanded. This is called the law of demand.

2. Income of the Consumer:

The income of the consumer is another important variable which influences demand. The ability to buy a commodity depends upon the income of the consumer. When the income of the consumers increases, they buy more and when income falls they buy less. A rich consumer demands more and more goods because his purchasing power is high.

3. Tastes and Preferences:

The demand for a product depends upon tastes and preferences of the consumers. If the consumers develop taste for a commodity they buy whatever may be the price. A favourable change in consumer preference will cause the demand to increase. Likewise an un-favourable change in consumer preferences will cause the demand to decrease.

4. Prices of Related Goods:

The related goods are generally substitutes and complementary goods. The demand for a product is also influenced by the prices of substitutes and complements. When a want can be satisfied by alternative similar goods they are called substitutes, such as coffee and tea. Whenever the price of one good and the demand for another are inversely related then the goods are said to be complementary, such as car and petrol.

5. Advertisement and Sales Propaganda:

In modem times, the preferences of consumers can be altered by advertisement and sales propaganda. Advertisement helps in increasing demand by informing the potential consumers about the availability of the product, by showing the superiority of the product, and by influencing consumer choice against the rival products. The demand for products like detergents and cosmetics is mainly caused by advertisement.

6. Consumer's Expectation:

A consumer s expectation about the future changes in price and income may also affect his demand. If a consumer expects a rise in prices he may buy large quantities of that particular commodity. Similarly, if he expects its prices to fall in future, he will tend to buy less at

present. Similarly, expectation of rising income may induce him to increase his current consumption.

(B) Determinants of Market Demand:

Market demand for a product refers to the total demand of all the buyers taken together. How much quantity the consumers in general would buy at a given period of time constitutes the total market demand for the product.

The following factors affect the market demand pattern of a commodity:

1. Price of the Product:

The law of demand states that if other things remain the same when price falls, demand increases and vice-versa.

2. Standard of Living and Spending Habits:

When people are accustomed to high standard of living their spending on comforts and luxuries also increase, that automatically increase the demand.

3. Distribution of Income Pattern:

If the distribution pattern of income is fair and equal the market demand for essential items tends to be greater.

4. The Scale of Preferences:

The market demand for a product is also affected by the scale of preference of buyers. If there is a shift in consumers' preference from x to y, the demand for y tends to increase.

5. The Growth of Population:

The growth of population is also another important factor that affects the market demand. With the increase in population, people naturally demand more goods for their survival.

6. Social Customs and Ceremonies:

Social customs and ceremonies are usually celebrated collectively. They involve extra expenditure on certain items and thereby increase the demand.

7. Future Expectation:

People are not sure about their future, because future is uncertain. If the consumers expect a rise in prices of products, they buy more at present and preserve the same for the future, thereby the market demand would be affected.

8. Tax Rate:

The tax rate also affects the demand. High tax rate would generally mean a low demand for the goods. At certain times the government restricts the consumption of a commodity and uses the tax as a weapon. A highly taxed commodity will have a lower demand.

9. Inventions and Innovations:

Inventions and innovations introduce new goods in the market. The consumers will have a strong tendency to purchase the new product. The preference over the new goods adversely affects the demand for the existing goods in the market.

10. Weather Conditions:

Seasonal factors also affect the demand. The demand for certain items purely depends on climatic and weather conditions. For example, the growing demand for cold drinks during the summer season and the demand for sweaters during the winter season.

11. Availability of Credit:

The purchasing power is influenced by the availability of credit. If there is availability of cheap credit, the consumers try to spend more on consumer durables thereby the demand for certain products increase.

12. Pattern of Saving:

Demand is also influenced by the pattern of saving. If people begin to save more, their demand will decrease. It means the disposable income will be less to purchase the goods and services. On the contrary, if saving is less their demand will increase.

13. Demonstration Effect:

Demonstration effect helps to increase human wants. In underdeveloped countries, there is a desire in the minds of the people to imitate other people for conspicuous consumption and that is why they are not able to save. This change in the saving habits of the people is due to "contact effect". The demonstration effect has a positive effect on the demand for comforts and luxury goods.

14. Circulation of Money:

An expansion or a contraction in the quantity of money will affect demand. When more money circulates among the people, more of a thing is demanded by the people because they have more purchasing power, and vice versa.

Demand Forecasting

Demand forecasting is a combination of two words; the first one is Demand and another forecasting. Demand means outside requirements of a product or service. In general, forecasting means making estimation in the present for a future occurring event. Here we are going to discuss demand forecasting and its usefulness.

It is a technique for estimation of probable demand for a product or services in the future. It is based on the analysis of past demand for that product or service in the present market condition. Demand forecasting should be done on a scientific basis and facts and events related to forecasting should be considered.

Therefore, in simple words, we can say that after gathering information about various aspect of the market and demand based on the past, an attempt may be made to estimate future demand. This concept is called forecasting of demand.

Usefulness of Demand Forecasting

Demand plays a vital role in the decision making of a business. In competitive market conditions, there is a need to take correct decision and make planning for future events related to business like a sale, production, etc. The effectiveness of a decision taken by business managers depends upon the accuracy of the decision taken by them.

Demand is the most important aspect for business for achieving its objectives. Many decisions of business depend on demand like production, sales, staff requirement, etc. Forecasting is the necessity of business at an international level as well as domestic level.

Demand forecasting reduces risk related to business activities and helps it to take efficient decisions. For firms having production at the mass level, the importance of forecasting had increased more. A good forecasting helps a firm in better planning related to business goals.

There is a huge role of forecasting in functional areas of accounting. Good forecast helps in appropriate production planning, process selection, capacity planning, facility layout planning, and inventory management, etc.

Demand forecasting provides reasonable data for the organization's capital investment and expansion decision. It also provides a way for the formulation of suitable pricing and advertisement strategies.

Following is the significance of Demand Forecasting:

- Fulfilling objectives of the business
- Preparing the budget
- Taking management decision
- Evaluating performance etc.

Moreover, forecasting is not completely full of proof and correct. It thus helps in evaluating various factors which affect demand and enables management staff to know about various forces relevant to the study of demand behaviour.

The Scope of Demand Forecasting

The scope of demand forecasting depends upon the operated area of the firm, present as well as what is proposed in the future. Forecasting can be at an international level if the area of operation is international. If the firm supplies its products and services in the local market then forecasting will be at local level.

The scope should be decided considering the time and cost involved in relation to the benefit of the information acquired through the study of demand. Cost of forecasting and benefit flows from such forecasting should be in a balanced manner.

V. **Types of Forecasting**

There are two types of forecasting:

- Based on Economy
- Based on the time period

1. Based on Economy

There are three types of forecasting based on the economy:

i. **Macro-level forecasting:** It deals with the general economic environment relating to the economy as measured by the Index of Industrial Production(IIP), national income and general level of employment, etc.

ii. **Industry level forecasting:** Industry level forecasting deals with the demand for the industry's products as a whole. For example demand for cement in India, demand for clothes in India, etc.

iii. **Firm-level forecasting:** It means forecasting the demand for a particular firm's product. For example, demand for Birla cement, demand for Raymond clothes, etc.

2. Based on the Time Period

Forecasting based on time may be short-term forecasting and long-term forecasting

i. **Short-term forecasting:** It covers a short period of time, depending upon the nature of the industry. It is done generally for six months or less than one year. Short-term forecasting is generally useful in tactical decisions.

ii. **Long-term forecasting casting:** Long-term forecasts are for a longer period of time say, two to five years or more. It gives information for major strategic decisions of the firm. For example, expansion of plant capacity, opening a new unit of business, etc.

Methods of Demand Forecasting

Demand forecasting is the art as well as the science of predicting the likely demand for a product or service in the future. This prediction is based on past behaviour patterns and the continuing trends in the present. Hence, it is not simply guessing the future demand but is estimating the demand scientifically and objectively. Thus, there are various methods of demand forecasting which we will discuss here.

Methods of Demand Forecasting

There is no easy or simple formula to forecast the demand. Proper judgment along with the scientific formula is needed to correctly predict the future demand for a product or service. Some methods of demand forecasting are discussed below:

1] Survey of Buyer's Choice

When the demand needs to be forecasted in the short run, say a year, then the most feasible method is to ask the customers directly that what are they intending to buy in the forthcoming time period. Thus, under this method, potential customers are directly interviewed. This survey can be done in any of the following ways:

a. **Complete Enumeration Method:** Under this method, nearly all the potential buyers are asked about their future purchase plans.

b. **Sample Survey Method:** Under this method, a sample of potential buyers are chosen scientifically and only those chosen are interviewed.

c. **End-use Method:** It is especially used for forecasting the demand of the inputs. Under this method, the final users i.e. the consuming industries and other sectors are identified.

The desirable norms of consumption of the product are fixed, the targeted output levels are estimated and these norms are applied to forecast the future demand of the inputs.

Hence, it can be said that under this method the burden of demand forecasting is on the buyer. However, the judgments of the buyers are not completely reliable and so the seller should take decisions in the light of his judgment also.

The customer may misjudge their demands and may also change their decisions in the future which in turn may mislead the survey. This method is suitable when goods are supplied in bulk to industries but not in the case of household customers.

2] Collective Opinion Method

Under this method, the salesperson of a firm predicts the estimated future sales in their region. The individual estimates are aggregated to calculate the total estimated future sales. These estimates are reviewed in the light of factors like future changes in the selling price, product designs, changes in competition, advertisement campaigns, the purchasing power of the consumers, employment opportunities, population, etc.

The principle underlying this method is that as the salesmen are closest to the consumers they are more likely to understand the changes in their needs and demands. They can also easily find out the reasons behind the change in their tastes.

Therefore, a firm having good sales personnel can utilize their experience to predict the demands. Hence, this method is also known as Sales force opinion or Grassroots approach method. However, this method depends on the personal opinions of the sales personnel and is not purely scientific.

3] Barometric Method

This method is based on the past demands of the product and tries to project the past into the future. The economic indicators are used to predict the future trends of the business. Based on future trends, the demand for the product is forecasted. An index of economic indicators is formed. There are three types of economic indicators, viz. leading indicators, lagging indicators, and coincidental indicators.

The leading indicators are those that move up or down ahead of some other series. The lagging indicators are those that follow a change after some time lag. The coincidental indicators are those that move up and down simultaneously with the level of economic activities.

4]. Market Experiment Method

Another one of the methods of demand forecasting is the market experiment method. Under this method, the demand is forecasted by conducting market studies and experiments on consumer behaviour under actual but controlled, market conditions.

Certain determinants of demand that can be varied are changed and the experiments are done keeping other factors constant. However, this method is very expensive and time-consuming.

5] Expert Opinion Method

Usually, market experts have explicit knowledge about the factors affecting demand. Their opinion can help in demand forecasting. The Delphi technique, developed by Olaf Helmer is one such method.

Under this method, experts are given a series of carefully designed questionnaires and are asked to forecast the demand. They are also required to give the suitable reasons. The opinions are shared with the experts to arrive at a conclusion. This is a fast and cheap technique.

6] Statistical Methods

The statistical method is one of the important methods of demand forecasting. Statistical methods are scientific, reliable and free from biases. The major statistical methods used for demand forecasting are:

a. **Trend Projection Method:** This method is useful where the organization has a sufficient amount of accumulated past data of the sales. This date is arranged chronologically to obtain a time series. Thus, the time series depicts the past trend and on the basis of it, the future market trend can be predicted. It is assumed that the past trend will continue in the future. Thus, on the basis of the predicted future trend, the demand for a product or service is forecasted.

b. **Regression Analysis:** This method establishes a relationship between the dependent variable and the independent variables. In our case, the quantity demanded is the dependent variable and income, the price of goods, the price of related goods, the price of substitute goods, etc. are independent variables. The regression equation is derived assuming the relationship to be linear. Regression Equation: $Y = a + bX$. Where Y is the forecasted demand for a product or service.

Fitting trend equation or Least Square Method is based on the assumption that the past trend will continue in the future. This method is a procedure for fitting a line to a set of observed data points mathematically so that the sum of the squared differences between the calculated and observed value is minimized. A trend that best fits the data is found out and demand is forecasted accordingly.

UNIT – II

PRODUCTION FUNCTION

The production process is the creative endeavor at the heart of every successful organization. The corporate landscape is littered with examples of firms that once introduced innovative products only to see their early lead and dominant position eroded by more efficient rivals. A number of firms have also fallen prey to the mistake of succeeding at being the low-cost producer in a vanishing market. Productive efficiency is not simply about *what* or *how* to produce; it is about *both*.

Production function: Relates physical output of a production process to physical inputs or factors of production.

Definition of Production Function

The technological relationship between inputs and output of a firm is generally referred to as the production function. The production function shows the functional relationship between the physical inputs and the physical output of a firm in the process of production.

According to Samuelson, "The production function is the Technical relationship telling the maximum amount of output capable of being produced by each and every set of specified inputs. It is defined for a given set of technical knowledge."

According to Stigler, "The production function is the name given to the relationship between the rates of input of productive services and the rate of output of product. It is the economist's summary of technical knowledge.

In fact the production function shows the maximum quantity of output. Q, that can be produced as a function of the quantities of inputs X_1, X_2, $X_3 \ldots X_n$.

In equation form the production function can be presented as :

$Q = f(X_1, X_2, X_3 \ldots X_n, T)$

Where:

- Q: Stands for the physical quantity of output produced.
- f: represents the functional relationship.
- X_1, X_2, X_3…Xn: indicate the quantities used of factors X_1, X_2, X_3…X_n
- T stands for a given State of Technology; Technology held constant.

Production function, thus expresses the technological functional relationship between inputs and output. It shows that output is the function of several inputs. Besides, the Production function must be considered with reference to a particular period of time and for a given state of technology.

It may be remembered that the Production function shows only the physical relationship between inputs and the output. It is basically an engineering concept; whereas selecting an optimal input combination is an economic decision which requires additional information with respect to prices of the factor inputs and the market demand for the output.

Properties of Production Functions

A **production function** specifies the maximum output that can be produced for a given amount of input. Alternatively, a production function shows the minimum quantity of input necessary to produce a given level of output. Production functions are determined by the technology available for effectively using plant, equipment, labor, materials, and so on. Any improvement in technology, such as better equipment or a training program that enhances worker productivity, results in a new production function.

Basic properties of production functions can be illustrated by examining a simple two-input, one-output system. Consider a production process in which various quantities of two inputs, *X* and *Y*, can be used to produce a product, *Q*. Inputs *X* and *Y* might represent resources such as labor and capital or energy and raw materials. The product *Q* could be physical goods such as television sets, baseball gloves, or breakfast cereal; *Q* could also represent services such as medical care, education, or banking.

The production function for such a system can be written

Q=f[X,Y]

The important production functions are: 1. Linear Homogeneous Production Function, 2. Cobb-Douglas Production Function 3. Constant Elasticity of Substitution Production Function and 4. Variable Elasticity Substitution Production Function.

Short-Run versus Long-Run Production Function

The short run and the long run have no calendrical specificity. These are only functional and analytical period-wise classification. The Short-run is that period of time in which at least one of the factors of production remains fixed. Whereas, the Long-run is that period of time in which all factors are variable. The major determinant of the short-run or long-run time periods is the existence or non-existence of fixed input. When one or more inputs remain constant we consider that period of time as short period; whereas when all inputs are capable of being varied that period is regarded as the long-period.

If we consider a simple production function with two inputs labour (l) and capital (k) and only one output (Q) then we can summarize the short-run production function as:

Q = f (*l*,k) or Q = f (l, *k*)

The *k* or *l* shows that the amount of that input is fixed.

The long-run production function may be summarized as

Q = f (l, k)

Where both labour and capital are variable inputs. Since in short-run, not all inputs can be varied simultaneously, the proportions in which inputs are combined go on varying.

Therefore the analysis of input-output relation depicted by the short-run production function is called the Returns to Variable Proportions. It takes shape in the Laws of Returns. Whereas the long-run production function gives the input-output relationship when all inputs are varied. In fact economists are particularly interested in finding out as to what happens to the output when all inputs are varied proportionately. This analysis of relationship between proportionate change in inputs and the resulting output gives rise to proportionate change in inputs and the resulting output gives rise to Returns to Scale.

Example of Common Production Functions

One very simple example of a production function might be Q=K+L, where Q is the quantity of output, K is the amount of capital, and L is the amount of labour used in production. This production function says that a firm can produce one unit of output for every unit of capital or labour it employs. From this production function we can see that this industry has constant returns to scale – that is, the amount of output will increase proportionally to any increase in the amount of inputs.

KEY POINTS:

- The production function describes a boundary or frontier representing the limit of output obtainable from each feasible combination of inputs.
- Firms use the production function to determine how much output they should produce given the price of a good, and what combination of inputs they should use to produce given the price of capital and labor.
- The production function also gives information about increasing or decreasing returns to scale and the marginal products of labor and capital.

Returns to scale

This refers to the rate by which output changes if all inputs are changed by the same factor. Constant returns to scale: a k-fold change in all inputs leads to a k-fold change in output.

This term referring to changes in output resulting from a proportional change in all inputs (where all inputs increase by a constant factor).

Returns to scale are technical properties of the production function, $y = ï½¦(x_1, x_2, ..., x_n)$. If we increase the quantity of *all* factors employed by the same (proportional) amount, output will increase. The question of interest is whether the resulting output will increase by the same proportion, more than proportionally, or less than proportionally. In other words, when we double *all* inputs, does output double, more than double or less than double? These three basic outcomes can be identified respectively as *increasing returns to scale* (doubling inputs more than doubles output), *constant returns to scale* (doubling inputs doubles output) and *decreasing returns to scale* (doubling inputs less than doubles output).

The term "returns to scale" refers to how well a business or company is producing its products. It tries to pinpoint increased production in relation to factors that contribute to production over a period of time.

There are three **kinds of returns to scale**:

Constant **returns to scale** (CRS),
Increasing **returns to scale** (IRS), and
Decreasing **returns to scale** (DRS).

A constant **returns to scale** is when an increase in input results in a proportional increase in output.

Most production functions include both labour and capital as factors. How can you tell if a function is increasing returns to scale, decreasing returns to scale, or having no effect on returns to scale? The three definitions below explain what happens when you increase all production inputs by a multiplier.

Multipliers

For illustrative purposes, we'll call the multiplier *m*. Suppose our inputs are capital and labor, and we double each of these ($m = 2$). We want to know if our output will more than double, less than double, or exactly double. This leads to the following definitions:

- **Increasing Returns to Scale:** When our inputs are increased by *m*, our output increases by more than *m*.
- **Constant Returns to Scale:** When our inputs are increased by *m*, our output increases by exactly *m*.
- **Decreasing Returns to Scale:** When our inputs are increased by *m*, our output increases by less than *m*.

The multiplier must always be positive and greater than one because our goal is to look at what happens when we increase production. An *m* of 1.1 indicates that we've increased our inputs by 0.10 or 10 percent. An *m* of 3 indicates that we've tripled the inputs.

Three Examples of Economic Scale

Now let's look at a few production functions and see if we have increasing, decreasing, or constant returns to scale. Some textbooks use *Q* for quantity in the production function, and

others use *Y* for output. These differences don't change the analysis, so use whichever your professor requires.

1. **Q = 2K + 3L:** To determine the returns to scale, we will begin by increasing both K and L by *m.* Then we will create a new production function Q'. We will compare Q' to Q.Q' = 2(K*m) + 3(L*m) = 2*K*m + 3*L*m = m(2*K + 3*L) = m*Q
    1. After factoring, we can replace (2*K + 3*L) with Q, as we were given that from the start. Since Q' = m*Q we note that by increasing all of our inputs by the multiplier *m* we've increased production by exactly *m*. As a result, we have **constant returns to scale.**
2. **Q=.5KL:** Again, we increase both K and L by *m* and create a new production function. Q' = .5(K*m)*(L*m) = .5*K*L*m^2 = Q * m^2
    1. Since m > 1, then m^2 > m. Our new production has increased by more than *m*, so we have **increasing returns to scale**.
3. **Q=$K^{0.3}L^{0.2:}$** Again, we increase both K and L by *m* and create a new production function. Q' = $(K*m)^{0.3}(L*m)^{0.2}$ = $K^{0.3}L^{0.2}m^{0.5}$ = Q* $m^{0.5}$
    1. Because m > 1, then $m^{0.5}$ < m, our new production has increased by less than *m*, so we have **decreasing returns to scale**.

Although there are other ways to determine whether a production function is increasing returns to scale, decreasing returns to scale, or generating constant returns to scale, this way is the fastest and easiest. By using the *m* multiplier and simple algebra, we can quickly solve economic scale questions.

Remember that even though people often think about returns to scale and economies of scale as interchangeable, they are different. Returns to scale only consider production efficiency, while economies of scale explicitly consider cost.

ECONOMIES OF SIZE

Economies of size result from spreading fixed costs over a large number of units of production. Because fixed costs remain the same regardless of the number of units produced, as the number of units produced increases, the fixed cost per unit declines. As a result of declining fixed cost per unit, total cost per unit also declines.

Examples of fixed costs include depreciation on machinery or a processing facility, administrative overhead, interest payments on real estate or capital assets, and other costs that don't change with the level of production.

The two concepts economies of scale and economies of size describe what happens to production or costs when the size of the firm changes (increases). Economies of scale describe how much production increases when the firm increases its scale of production, i.e. increases all (both fixed and variable) inputs by a common proportionality factor. Economies of size describe what happens to cost per unit of output when production increases in a cost minimizing way.

Capacity Utilization

Capacity utilization refers to the manufacturing and production capabilities that are being utilized by a nation or enterprise at any given time. It is the relationship between the output produced with the given resources and the potential output that can be produced if capacity was fully used.

Capacity utilization can also be defined as the metric used to calculate the rate at which the prospective levels of output are being met or used. The rate is displayed as a percentage and provides an insight into the total utilization of resources and how a company can increase its output without increasing the costs associated with production. The capacity utilization rate is also called the operating rate.

Formula for Capacity Utilization

The mathematical formula for calculating capacity utilization is:

$$\text{CAPACITY UTILIZATION} = \frac{\text{ACTUAL LEVEL OF OUTPUT}}{\text{MAXIMUM LEVEL OF OUTPUT}} \text{ X } 100$$

Example of Capacity Utilization

Suppose XYZ Company is producing 20,000 and it is determined that the company can produce 40,000 units. The company's capacity utilization rate is 50% [(20,000/40,000) * 100]. If all the resources are utilized in production, the capacity rate is 100%, indicating full capacity. If the rate is low, it signifies a situation of "excess capacity" or "surplus capacity."

It is unlikely that an economy or company will function at a 100% capacity rate as there are always hurdles in the production process (such as the malfunction of equipment or unequal distribution of resources). A rate of 85% is considered the optimal rate for most companies.

The capacity utilization rate is used by companies that manufacture physical products and not services because it is easier to quantify goods than services.

Economic Significance of Capacity Utilization

If demand in the market increases, it will raise the capacity utilization rate, but if demand decreases, the rate will fall. Economists use the rate as an indicator of inflation pressures. A low capacity utilization rate will result in a decrease in price because there are excess capacity and insufficient demands for the output produced.

Economies with a capacity ratio of much less than 100% can significantly boost production without affecting the associated costs.

Many capitalist economies face high excess capacity rates, and economists use the rate as an argument against capitalism, stating that resources are not as well allocated as they could be. However, regardless of economic conditions, there will never be full capacity utilization as inefficiencies in resource allocation always exist in an economy.

Corporate Capacity

The capacity utilization rate is an important indicator for companies because it can be used to assess operating efficiency and provides an insight into cost structure. It can be used to determine the level at which costs per unit go up or fall. When there is a rise in output, the average cost of production will decrease. This means that the higher the capacity utilization, the lower the cost per unit, allowing a business to gain an edge over its competitors. This is why many large companies aim to produce as close to the full capacity rate (100%) as possible.

Although attaining a full capacity rate is not possible, there are ways companies can increase their current utilization rate, including:

- Employing more staff and encouraging overtime to ensure that all production targets are being met
- Spending less time on the maintenance of equipment so that more time can be spent on the production of goods
- Subcontracting some of the production activities

Effects of Low Utilization

Low capacity utilization is a problem for fiscal and monetary policymakers who use such policies to stimulate the economy. In 2015 and 2016, many European economies such as France and Spain struggled with the consequences of low capacity utilization. Despite the governments' intervention through historically low interest rates, inflation remained significantly low with a threat of deflation.

The low capacity utilization led to high unemployment that created slack in the economy, making it hard for prices to react to monetary stimulus. With excess capacity, an increase in the production of goods did not require a significant investment in capital.

When a company faces an increase in demand for its goods, it is often able to meet the demand without raising the cost per unit. The company can optimize its output level with no additional cost for investment in better infrastructure.

Summary

The capacity utilization rate is useful to companies as it provides an insight into the value of production and the resources being utilized at any given time. It determines the company's ability to cope with a rise in the production of output without increasing costs.

A reduction in the rate indicates an economic slowdown while an increase signifies economic expansion.

Concept of Cost Function:

The relationship between output and costs is expressed in terms of cost function. By incorporating prices of inputs into the production function, one obtains the cost function since cost function is derived from production function. However, the nature of cost function depends on the time horizon. In microeconomic theory, we deal with short run and long run time.

Short Run vs. Long Run Costs

Long run costs have no fixed factors of production, while short run costs have fixed factors and variables that impact production.

Long Run Costs

Long run costs are accumulated when firms change production levels over time in response to expected economic profits or losses. In the long run there are no fixed factors of production. The land, labour, capital goods, and entrepreneurship all vary to reach the the long run cost of producing a good or service. The long run is a planning and implementation stage for producers. They analyze the current and projected state of the market in order to make production decisions. Efficient long run costs are sustained when the combination of outputs that a firm produces results in the desired quantity of the goods at the lowest possible cost. Examples of long run decisions that impact a firm's costs include changing the quantity of production, decreasing or expanding a company, and entering or leaving a market.

Short Run Costs

Short run costs are accumulated in real time throughout the production process. Fixed costs have no impact of short run costs, only variable costs and revenues affect the short run production. Variable costs change with the output. Examples of variable costs include employee wages and costs of raw materials. The short run costs increase or decrease based on variable cost as well as the rate of production. If a firm manages its short run costs well over time, it will be more likely to succeed in reaching the desired long run costs and goals.

Differences

The main difference between long run and short run costs is that there are no fixed factors in the long run; there are both fixed and variable factors in the short run . In the long run the general price level, contractual wages, and expectations adjust fully to the state of the economy. In the short run these variables do not always adjust due to the condensed time period. In order to be successful a firm must set realistic long run cost expectations. How the short run costs are handled determines whether the firm will meet its future production and financial goals.

Our analysis of production and cost begins with a period economists call the short run. The short run in this microeconomic context is a planning period over which the managers of a firm must consider one or more of their factors of production as fixed in quantity. For

example, a restaurant may regard its building as a fixed factor over a period of at least the next year. It would take at least that much time to find a new building or to expand or reduce the size of its present facility. Decisions concerning the operation of the restaurant during the next year must assume the building will remain unchanged. Other factors of production could be changed during the year, but the size of the building must be regarded as a constant.

When the quantity of a factor of production cannot be changed during a particular period, it is called a fixed factor of production. For the restaurant, its building is a fixed factor of production for at least a year. A factor of production whose quantity can be changed during a particular period is called a variable factor of production; factors such as labor and food are examples.

While the managers of the restaurant are making choices concerning its operation over the next year, they are also planning for longer periods. Over those periods, managers may contemplate alternatives such as modifying the building, building a new facility, or selling the building and leaving the restaurant business. The planning period over which a firm can consider *all* factors of production as variable is called the long run.

At any one time, a firm will be making both short-run and long-run choices. The managers may be planning what to do for the next few weeks and for the next few years. Their decisions over the next few weeks are likely to be short-run choices. Decisions that will affect operations over the next few years may be long-run choices, in which managers can consider changing every aspect of their operations.

UNIT – III

PRICE POLICIES

A **pricing policy** is a standing answer to recurring question. A systematic approach to **pricing** requires the decision that an individual **pricing** situation be generalized and codified into a **policy** coverage of all the principal **pricing** problems. **Policies** can and should be tailored to various competitive situations.

The following considerations involve in formulating the pricing policy:

(i) Competitive Situation:

Pricing policy is to be set in the light of competitive situation in the market. We have to know whether the firm is facing perfect competition or imperfect competition. In perfect competition, the producers have no control over the price. Pricing policy has special significance only under imperfect competition.

(ii) Goal of Profit and Sales:

The businessmen use the pricing device for the purpose of maximising profits. They should also stimulate profitable combination sales. In any case, the sales should bring more profit to the firm.

(iii) Long Range Welfare of the Firm:

Generally, businessmen are reluctant to charge a high price for the product because this might result in bringing more producers into the industry. In real life, firms want to prevent the entry of rivals. Pricing should take care of the long run welfare of the company.

(iv) Flexibility:

Pricing policies should be flexible enough to meet changes in economic conditions of various customer industries. If a firm is selling its product in a highly competitive market, it will have little scope for pricing discretion. Prices should also be flexible to take care of cyclical variations.

(v) Government Policy:

The government may prevent the firms in forming combinations to set a high price. Often the government prefers to control the prices of essential commodities with a view to prevent the exploitation of the consumers. The entry of the government into the pricing process tends to inject politics into price fixation.

(vi) Overall Goals of Business:

Pricing is not an end in itself but a means to an end. The fundamental guides to pricing, therefore, are the firms overall goals. The broadest of them is survival. On a more specific level, objectives relate to rate of growth, market share, maintenance of control and finally profit. The various objectives may not always be compatible. A pricing policy should never be established without consideration as to its impact on the other policies and practices.

(vii) Price Sensitivity:

The various factors which may generate insensitivity to price changes are variability in consumer behaviour, variation in the effectiveness of marketing effort, nature of the product, importance of service after sales, etc. Businessmen often tend to exaggerate the importance of price sensitivity and ignore many identifiable factors which tend to minimise it.

(viii) Routinisation of Pricing:

A firm may have to take many pricing decisions. If the data on demand and cost are highly conjectural, the firm has to rely on some mechanical formula. If a firm is selling its product in a highly competitive market, it will have little scope for price discretion. This will have the way for routinised pricing.

Objectives of Pricing Policy:

The pricing policy of the firm may vary from firm to firm depending on its objective. In practice, we find many prices for a product of a firm such as wholesale price, retail price, published price, quoted price, actual price and so on.

Special discounts, special offers, methods of payment, amounts bought and transportation charges, trade-in values, etc., are some sources of variations in the price of the product. For pricing decision, one has to define the price of the product very carefully.

Pricing decision of a firm in general will have considerable repercussions on its marketing strategies. This implies that when the firm makes a decision about the price, it has to consider its entire marketing efforts. Pricing decisions are usually considered a part of the general strategy for achieving a broadly defined goal.

While setting the price, the firm may aim at the following objectives:

(i) Price-Profit Satisfaction:

The firms are interested in keeping their prices stable within certain period of time irrespective of changes in demand and costs, so that they may get the expected profit.

(ii) Sales Maximisation and Growth:

A firm has to set a price which assures maximum sales of the product. Firms set a price which would enhance the sale of the entire product line. It is only then, it can achieve growth.

(iii) Making Money:

Some firms want to use their special position in the industry by selling product at a premium and make quick profit as much as possible.

(iv) Preventing Competition:

Unrestricted competition and lack of planning can result in wasteful duplication of resources. The price system in a competitive economy might not reflect society's real needs. By adopting a suitable price policy the firm can restrict the entry of rivals.

(v) Market Share:

The firm wants to secure a large share in the market by following a suitable price policy. It wants to acquire a dominating leadership position in the market. Many managers believe that revenue maximisation will lead to long run profit maximisation and market share growth.

(vi) Survival:

In these days of severe competition and business uncertainties, the firm must set a price which would safeguard the welfare of the firm. A firm is always in its survival stage. For the sake of its continued existence, it must tolerate all kinds of obstacles and challenges from the rivals.

(vii) Market Penetration:

Some companies want to maximise unit sales. They believe that a higher sales volume will lead to lower unit costs and higher long run profit. They set the lowest price, assuming the market is price sensitive. This is called market penetration pricing.

(viii) Marketing Skimming:

Many companies favour setting high prices to 'skim' the market. Dupont is a prime practitioner of market skimming pricing. With each innovation, it estimates the highest price it can charge given the comparative benefits of its new product versus the available substitutes.

(ix) Early Cash Recovery:

Some firms set a price which will create a mad rush for the product and recover cash early. They may also set a low price as a caution against uncertainty of the future.

(x) Satisfactory Rate of Return:

Many companies try to set the price that will maximise current profits. To estimate the demand and costs associated with alternative prices, they choose the price that produces maximum current profit, cash flow or rate of return on investment.

Factors Involved in Pricing Policy:

The pricing of the products involves consideration of the following factors:

(i) Cost Data.

(ii) Demand Factor.

(iii) Consumer Psychology.

(iv) Competition.

(v) Profit.

(vi) Government Policy.

(i) Cost Data in Pricing:

Cost data occupy an important place in the price setting processes. There are different types of costs incurred in the production and marketing of the product. There are production costs, promotional expenses like advertising or personal selling as well as taxation, etc.

They may necessitate an upward fixing of price. For example, the prices of petrol and gas are rising due to rise in the cost of raw materials, such as crude transportation, refining, etc. If costs go up, price rise can be quite justified. However, their relevance to the pricing decision must neither be underestimated nor exaggerated. For setting prices apart from costs, a number of other factors have to be taken into consideration. They are demand and competition.

Costs are of two types:

Fixed costs and variable costs. In the short period, that is, the period in which a firm wants to establish itself, the firm may not cover the fixed costs but it must cover the variable cost. But in the long run, all costs must be covered. If the entire costs are not covered, the producer stops production.

Subsequently, the supply is reduced which, in turn, may lead to higher prices. If costs are not covered, the producer stops production. Subsequently, the supply is reduced which, in turn, may lead to higher prices. If costs were to determine prices why do so many companies report losses?

There are marked differences in costs as between one producer and another. Yet the fact remains that the prices are very close for a somewhat similar product. This is the very best evidence of the fact that costs are not the determining factors in pricing.

In fact, pricing is like a tripod. It has three legs. In addition to costs, there are two other legs of market demand and competition. It is no more possible to say that one or another of these factors determines price than it is to assert that one leg rather than either of the other two supports a tripod.

Price decisions cannot be based merely on cost accounting data which only contribute to history while prices have to work in the future. Again it is very difficult to measure costs accurately. Costs are affected by volume, and volume is affected by price.

The management has to assume some desired price-volume relationship for determining costs. That is why, costs play even a less important role in connection with new products than with the older ones. Until the market is decided and some idea is obtained about volume, it is not possible to determine costs.

Regarding the role of costs in pricing, Nickerson observes that the cost may be regarded only as an indicator of demand and price. He further says that the cost at any given time represents a resistance point to the lowering of price. Again, costs determine profit margins at various levels of output.

Cost calculation may also help in determining whether the product whose price is determined by its demand, is to be included in the product line or not. What costs determine is not the price, but whether the production can be profitably produced or not is very important.

Relevant Costs:

The question naturally arises: “What then are the relevant costs for pricing decision? Though in the long run, all costs have to be covered, for managerial decisions in the short run, direct costs are relevant. In a single product firm, the management would try to cover all the costs.”

In a multi-product firm, problems are more complex. For pricing decision, relevant costs are those costs that are directly traceable to an individual product. Ordinarily, the selling price must cover all direct costs that are attributable to a product. In addition, it must contribute to the common cost and to the realisation of profit. If the price, in the short run, is lower than the cost, the question arises, whether this price covers the variable cost. If it covers the variable cost, the low price can be accepted.

But in the long run, the firm cannot sell at a price lower than the cost. Product pricing decision should be lower than the cost. Product pricing decision should, therefore, be made with a view to maximise company's profits in the long run.

(ii) Demand Factor in Pricing:

In pricing of a product, demand occupies a very important place. In fact, demand is more important for effective sales. The elasticity of demand is to be recognised in determining the price of the product. If the demand for the product is inelastic, the firm can fix a high price. On the other hand, if the demand is elastic, it has to fix a lower price.

In the very short term, the chief influence on price is normally demand. Manufacturers of durable goods always set a high price, even though sales are affected. If the price is too high, it may also affect the demand for the product. They wait for arrival of a rival product with competitive price. Therefore, demand for product is very sensitive to price changes.

(iii) Consumer Psychology in Pricing:

Demand for the product depends upon the psychology of the consumers. Sensitivity to price change will vary from consumer to consumer. In a particular situation, the behaviour of one individual may not be the same as that of the other. In fact, the pricing decision ought to rest on a more incisive rationale than simple elasticity. There are consumers who buy a product provided its quality is high.

Generally, product quality, product image, customer service and promotion activity influence many consumers more than the price. These factors are qualitative and ambiguous. From the point of view of consumers, prices are quantitative and unambiguous.

Price constitutes a barrier to demand when it is too low, just as much as where it is too high. Above a particular price, the product is regarded as too expensive and below another price, as constituting a risk of not giving adequate value. If the price is too low, consumers will tend to think that a product of inferior quality is being offered.

With an improvement in incomes, the average consumer becomes quality conscious. This may lead to an increase in the demand for durable goods. People of high incomes buy

products even though their prices are high. In the affluent societies, price is the indicator of quality.

Advertisement and sales promotion also contribute very much in increasing the demand for advertised products. Because the consumer thinks that the advertised products are of good quality. The income of the consumer, the standard of living and the price factor influence the demand for various products in the society.

(iv) Competition Factor in Pricing:

Market situation plays an effective role in pricing. Pricing policy has some managerial discretion where there is a considerable degree of imperfection in competition. In perfect competition, the individual producers have no discretion in pricing. They have to accept the price fixed by demand and supply.

In monopoly, the producer fixes a high price for his product. In other market situations like oligopoly and monopolistic competition, the individual producers take the prices of the rival products in determining their price. If the primary determinant of price changes in the competitive condition is the market place, the pricing policy can least be categorised as competition based pricing.

(v) Profit Factor in Pricing:

In fixing the price for products, the producers consider mainly the profit aspect. Each producer has his aim of profit maximisation. If the objective is profit maximisation, the critical rule is to select the price at which MR = MC. Generally, the pricing policy is based on the goal of obtaining a reasonable profit. Most of the businessmen want to hold the price at constant level.

They do not desire frequent price fluctuation. The profit maximisation approach to price setting is logical because it forces decision makers to focus their attention on the changes in production, cost, revenue and profit associated with any contemplated change in price. The price rigidity is the practice of many producers. Rigidity does not mean inflexibility. It means that prices are stable over a given period.

(vi) Government Policy in Pricing:

In market economy, the government generally does not interfere in the economic decisions of the economy. It is only in planned economies, the government's interference is very much. According to conventional economic theory, the buyers and sellers only determine the price. In reality, certain other parties are also involved in the pricing process. They are the competition and the government.

The government's practical regulatory price techniques are ceiling on prices, minimum prices and dual pricing. In a mixed economy like India, the government resorts to price control. The business establishments have to adopt the government's price policies to control relative prices to achieve certain targets, to prevent inflationary price rise and to prevent abnormal increase in prices.

PERFECT COMPETITION

Perfect competition describes a market structure where competition is at its greatest possible level.

Pure or perfect competition is a theoretical market structure in which the following criteria are met:

- All firms sell an identical product (the product is a "commodity" or "homogeneous").
- All firms are price takers (they cannot influence the market price of their product).
- Market share has no influence on prices.
- Buyers have complete or "perfect" information—in the past, present and future—about the product being sold and the prices charged by each firm.
- Resources for such a labor are perfectly mobile.
- Firms can enter or exit the market without cost.

Price determination in Perfect Competition

In perfect competition, the situation price is decided by the market. The market brings about a balance between the commodities that come for sale and those demanded by consumers.

Therefore, the forces of supply and demand together determine the price of the good. The price at which the supply and demand are equal is the equilibrium price.

Monopoly and **oligopoly** are economic market conditions. **Monopoly** is defined by the dominance of just one seller in the market; **oligopoly** is an economic situation where a number of sellers populate the market.

Monopoly

In terms of the number of sellers and degree of competition, monopolies lie at the opposite end of the spectrum from perfect competition. In perfect competition, there are many small companies, none of which can control prices; they simply accept the market price determined by supply and demand. In a monopoly, however, there's only one seller in the market. The market could be a geographical area, such as a city or a regional area, and doesn't necessarily have to be an entire country

Oligopoly

Oligopoly means few sellers. In an oligopolistic market, each seller supplies a large portion of all the products sold in the marketplace. In addition, because the cost of starting a business in an oligopolistic industry is usually high, the number of firms entering it is low.

The pricing of products under four time periods:

Market period, short period, long period, and secular period.

a) *Period # 1. Market Period Price:*

Market period is a very short period in which supply being fixed, price is determined by demand. The time period is of a few days or weeks in which the supply of a commodity can be increased out of a given stock to match the demand. This is possible for durable goods.

The time period for perishable commodities is only a day. For instance, if the demand for a vegetable increases, its supply cannot be increased on the same day. Therefore, the supply of vegetable being fixed, its price is determined by demand on that day.

The price prevailing in the market is called the market price which changes with the nature of the commodity many times within a day or a week or a month. Marshall explained the market price thus: **"The market value… is often influenced by passing events and causes whose action is fitful and short-lived than by those which work persistently."**
In reality, market price is that price which is determined by the forces of demand and supply in the market at a point of time. The determination of market price is explained separately for perishable and durable commodities.

Pricing of Perishable Commodities:

The price of a perishable commodity like milk, vegetables, fish, etc., is primarily influenced by its demand. Supply has no influence on price because it is fixed. Therefore, the price of a perishable commodity rises with the increase in its demand, and falls with the decrease in its demand.

Pricing - Durable Commodities:

Most commodities are durable which can be kept in stock. When the price of a durable commodity increases with the increase in its demand, its supply can be increased out of the given stock. Such commodities are cloth, wheat, tea, etc.

They have two price levels. First, a minimum price below which a seller will not sell his commodity. This is also known as the reserve price. Second, a minimum price at which the seller will be prepared to sell the entire quantity of his commodity.

While fixing the reserve price for his commodity, any seller would take into consideration the following factors, They are

(i) Durability of the Commodity:
The reserve price depends on the durability of the commodity. The more durable a commodity is, the higher will be its reserve price.

(ii) Prices in Future:

The reserve price depends on future changes in price. If the seller expects prices to increase in future, he will fix a high reserve price, and vice versa.

(iii) Future Cost of Production:

The reserve price also depends on the future cost of production of the commodity. If the sellers expect cost to rise in future, they will fix a high reserve price, and vice versa.

(iv) Expenses on Storage:

The reserve price also depends on the time and expense involved in the storage of the commodity. The greater the time and expense in storing the commodity, the lower will be the reserve price because the seller would like to dispose of his commodity at the earliest so as to avoid the expenses of storage, and vice versa.

(v) Liquidity Preference:

The reserve price depends on the liquidity preference of the sellers. The higher the liquidity preference, the lower will be the reserve because the seller would try to sell his commodity at the earliest in order to have cash in hand. On the contrary, if the liquidity preference is low the reserve price will be high.

(vi) Demand in Future:

The reserve price also depends on the future demand. If the seller expects the demand to rise in future, he will fix a high reserve price, and vice versa.

Thus there being two price levels, the seller will not sell any quantity of his commodity at the reserve price, whereas he would be prepared to sell the entire quantity at the maximum price.

As the price of the commodity increases with the rise in its demand, the seller will continue to sell larger quantity of his commodity till the demand rises to the level of the maximum price where he will dispose of his entire stock of the product. After this, it is not possible to increase the supply to match any increase in demand. This also explains the vertical shape of the supply curve for a durable commodity.

PRICING AS A TOOL OF COMPETITION

There are three types of competitive pricing a company should consider:

1. Low Price

   The products or services you offer are lower than your competitors. A low pricing strategy is generally adopted when you benefit from economies of scale, and you're able to bulk produce products, which in return reduces the cost of production.

2. High Price

   The prices of the products or services you offer are higher in comparison to your competitors. This pricing strategy is suitable for a business who provide added features and benefits that your competitors lack. This type of pricing occurs in the market where the brand is reputable, and consumers buy based on quality rather than price, e.g. luxury goods.

3. Matched Price

   The prices of the products or services match the price that's offered by your competitors. The product features are the same or very similar, which is why producers focus on trying to differentiate or offer a unique buying experience. So, if your product or service is the same price as your competitor - but the quality is better-quality - then customers will be more inclined to choose you.

Read on to discover several benefits on why competitive pricing is important for your business:

Benefits of Competitive Pricing Strategy

- Higher rate of success

Implementing a competitive pricing strategy for your business can help the business grow. The results of a competitive pricing strategy are usually evident after a short amount of time. Assessing the long term implications requires the business owner to have the ability to effectively understand the overarching trend, and their position in the industry.

Enriching your knowledge about your industry and relevant competitors can allow you to make a better business-related decision, which in the long run, can increase your chances of success in the business world.

In some cases, some business owners don't achieve their goals as they have incorrectly conducted and utilised their competitive pricing strategy. Thus, to save you from unfortunate results, using a **leading competitor monitoring tool** can optimise your competitive pricing strategy.

The tool provides you with global insights on your competitor, as well as tracking your competitor's products or services range and prices over time, for on-going analysis. With this tool you can monitor, control and make changes to the prices accordingly.

- Prevent market loss

Competitive pricing analysis allows the business to regulate the competition by preventing the loss of customers and market share to the competitors. By making the prices the same as your competitors or even cheaper, consumers will be less inclined to move from your brand or choose your competitors products/services over yours, thus enabling you to maintain your market share. Competitor price monitoring allows you to respond to every move your competitors make, which can further help in the better positioning of your business.

- Improve profit margin

The strategy of competitive pricing does not always mean that one should be cutting their prices, or be pricing at the lowest point in the market. Sometimes, pricing in the middle of the range, relative to competitors, works just as effectively and does not significantly impact your bottom line.

Another factor to consider is whether your product or service is price elastic; this means that the price change will have a significant impact on demand as consumers are more price sensitive. This knowledge can give you better insight into whether you should increase or decrease your prices to stay competitive while competing in a price war.

- Dynamic Pricing

Dynamic pricing stands at the top of the competitive pricing analysis methods. With the help of dynamic pricing, information on competitors' pricing strategy can be frequently obtained. This further improves your ability to compete in the market and also maximises profit. This is one of the most sophisticated and useful competitive pricing approaches, which can be used as a triggering, factor to update your own prices, and can take business growth to the next level.

- Efficiency

A competitive pricing strategy can be made more efficient if it is combined with several other strategies of pricing. If one wants to hold any profitability through this type of strategy, investing in a price comparison tool is essential. Using price tracking tools will provide you with efficient access to intelligence that your competitors would find difficult to gather manually.

UNIT - IV

National income

National income measures the monetary value of the flow of output of goods and services produced in an economy over a period of time.

1. Marshall's Definition:

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

The term net refers to deductions from total gross produce in respect of depreciation and wearing out of the plant and equipments plus additions of net income from abroad. This may be construed as national dividend as a flow of goods and services but not a fund. In Marshall's words, "the national dividend is at once the aggregate net product of and the sole source of payment for all agents of production within the country." Thus, what is produced in an economy is distributed among the various factors of production.

2. Pigou's Definition:

According to A.C. Pigou; "National income is that part of the objective income of the community, including, of course, income derived from abroad which can be measured in money." This definition is rather narrow as it does not include unmarketed goods and services for which no money payment is involved. This definition involves certain paradoxes. He argues that if a man marries his maid-servant the national income is reduced since he is not supposed to pay any remuneration or wages to his housewife who was paid before marriage. Anyway, Pigou's definition is narrow.

Prof. Cairncross says; "The national income is, in fact, simply the output upside down. What we produce flows into a reservoir; what are consumed is drawn from the same reservoir, from the joint output of the community."

What is clear from the above discussion is that Marshall's definition seems to be more comprehensive.

3. Modern Definition:

National income is a money measure of the value of all goods and services produced in a year by a nation. The National Sample Survey defines national income as "money measures of the net aggregates of all commodities and services accruing to the inhabitants of a community during a specific period." According to the National Income Committee of India" A national income estimate measures the volume of commodities and services turned out- during a given period, counted with duplication."

Profs Lipsey and Chrystral say that national income, in general, is "the value of the nation's total output and the value of the income generated by the production of that output."

According to Froyen; "National income is the sum of all factor earnings from current production of goods and services. Factor earnings are incomes of factors of production." In the same vein, Gardner Ackley defines "National income is the sum of all (a) wages, salaries, commissions, bonuses and other form of incomes, (b) net income from rentals and royalties, (c) interest, (d) profit."

The concept 'national income' has been interpreted by economists usually in three ways. These are:

(i) National product,

(ii) National expenditure, and

(iii) National dividend. It is to be kept in mind that these are not different concepts.

As these three imply the same thing, these will be used interchangeably in the following pages. Using these three concepts , national income is "the total flow of wealth produced, distributed and consumed."

The uses of national income statistics

Measuring the level and rate of growth of national income (Y) is important for seeing:

- The rate of **economic growth**
- Changes to average **living standards**
- Changes to the **distribution of income**

Circular Flow of Income

What is the circular flow?

The **circular flow** of income and spending shows connections between different sectors of an economy

- It shows flows of goods and services and factors of production between firms and households
- The circular flow shows how national income or Gross Domestic Product is calculated

Businesses produce goods and services and in the process of doing so, **incomes are generated** for factors of production (land, labour, capital and enterprise) – for example wages and salaries going to people in work.

Leakages (withdrawals) from the circular flow

Not all income will flow from households to businesses directly. The circular flow shows that some part of household income will be:

- 1.Put aside for future spending, i.e. **savings** (S) in banks accounts and other types of deposit
- 2.Paid to the government in **taxation** (T) e.g. income tax and national insurance
- 3.Spent on foreign-made goods and services, i.e. **imports** (M) which flow into the economy

Withdrawals are increases in savings, taxes or imports so reducing the circular flow of income and leading to a multiplied contraction of production (output)

Injections into the circular flow are additions to investment, government spending or exports so boosting the circular flow of income leading to a multiplied expansion of output.

1. Capital spending by firms, i.e. investment expenditure (I) e.g. on new technology
2. The government, i.e. government expenditure (G) e.g. on the NHS or defence

3. Overseas consumers buying UK goods and service, i.e. UK export expenditure (X)

An economy is in **equilibrium** when the **rate of injections = the rate of withdrawals** from the circular flow.

> The circular flow means the unending flows of production of goods and services, income and expenditure in an economy. It shows the redistribution of income in a circular manner between the production unit and households.
>
> These are **Land, Labour, Capital** and **Entrepreneurship**

- The contribution made by fixed natural resources (called **'land'**), payment for which is called **'rent'**
- The contribution made by a human worker **(labour)**, payment for which is called **'wage'.**
- The contribution made by **capital**, payment for which is called **'interest'.**
- The contribution made by **entrepreneurship**, payment for which is **'profit'.**

The **circular flow of income** or **circular flow** is a model of the economy in which the major exchanges are represented as flows of money, goods and services, etc. between economic agents. The flows of money and goods exchanged in a closed circuit correspond in value, but run in the opposite direction. The circular flow analysis is the basis of national accounts and hence of macroeconomics.

A circular flow of income model is a simplified representation of an economy.

Two-sector model

In the basic two-sector circular flow of income model, the economy consists of two sectors: (1) households and (2) firms. (Some sources refer to households as "individuals"or the "public" and to firms as "businesses" or the "productive sector.") The model assumes that there is no financial sector, no government sector, and no foreign sector. In addition, the model assumes that (a) through their expenditures, households spend all of their income on goods and services or consumption and (b) through their expenditures, households purchase all output produced by firms. This means that all household expenditures become income for firms. The firms then spend all of this income on factors of

production such as labor, capital and raw materials, "transferring" all of their income to the factor owners (which are households). The factor owners (households), in turn, spend all of their income on goods, which leads to a circular flow of income.

Three-sector model

The three-sector model adds the government sector to the two-sector model. Thus, the three-sector model includes (1) households, (2) firms, and (3) government. It excludes the financial sector and the foreign sector. The government sector consists of the economic activities of local, state and federal governments. Flows from households and firms to government are in the form of taxes. The income the government receives flows to firms and households in the form of subsidies, transfers, and purchases of goods and services. Every payment has a corresponding receipt; that is, every flow of money has a corresponding flow of goods in the opposite direction. As a result, the aggregate expenditure of the economy is identical to its aggregate income, making a circular flow.

Four-sector model

The four-sector model adds the foreign sector to the three-sector model. (The foreign sector is also known as the "external sector," the "overseas sector," or the "rest of the world.") Thus, the four-sector model includes (1) households, (2) firms, (3) government, and (4) the rest of the world. It excludes the financial sector. The foreign sector comprises (a) foreign trade (imports and exports of goods and services) and (b) inflow and outflow of capital (foreign exchange). Again, each flow of money has a corresponding flow of goods (or services) in the opposite direction. Each of the four sectors receives some payments from the other in lieu of goods and services which makes a regular flow of goods and physical services. The addition of the foreign sector transforms the model from a closed economy to an open economy!

Five-sector model

The five-sector model adds the financial sector to the four-sector model. Thus, the five-sector model includes (1) households, (2) firms, (3) government, (4) the rest of the world, and (5) the financial sector. The financial sector includes banks and non-bank intermediaries that engage in borrowing (savings from households) and lending (investments in firms).Money

facilitates such an exchange smoothly. Residuals from each market enter the capital market as savings, which in turn are invested in firms and the government sector. Technically speaking, so long as lending is equal to borrowing (i.e., leakages are equal to injections), the circular flow will continue indefinitely. However, this job is done by financial institutions in the economy.

Alternative models

The progression from the two-sector model to the five sector model as documented above (that is, by starting with households and firms, then successively adding the government sector, the foreign sector, and the financial sector) is common. However, some authors group (1) households, (2) firms, and (3) the financial sector together as the "private sector" and subsequently add (4) the government sector, making the "domestic sector," and (5) the foreign sector.Others use the "capital market" rather than the "financial sector" to account for the flows of savings and investments; in these sources, the fully specified model has four sectors (households, firms, government, and foreign) plus the capital market, which is regarded as a market rather than a sector.

Methods of Measuring National Income

- Product Method
- Income Method
- Expenditure Method

1. Product Method

Under this method, we add the values of output produced or services rendered by the different sectors of the economy during the year in order to calculate the National Income.

In this method, we include only the value added by each firm in the production process in the output figure.

Hence, we use the value-added method. The value-added output of all the sectors of the economy is the GNP at factor cost.However, this method is unscientific as it adds the value of only those goods and services that are sold in the market or are available for sale in the market

Topics under National Income

- The concept of National Income
- The concept of Consumption, Saving, and Investment
- Economic Growth
- Economic Fluctuations

2. Income Method

Under this method, we add all the incomes from employment and ownership of assets before taxation received from all the production activities in an economy.

Thus, it is also the Factor Income method. We also need to add the undistributed profits of the private sector and the trading surplus of the public sector corporations.

However, we need to exclude items not arising from productive activities such as sickness benefits, interest on the national debt, etc.

3. Expenditure Method

This method measures the total domestic expenditure of the economy. It consists of two elements, viz. Consumption expenditure and Investment expenditure.

Consumption expenditure includes consumption expenditure of the household sector on goods and services and consumption outlays of the business sector and public authorities.

Investment expenditure refers to the expenditure on the making of fixed capital such as Plant and Machinery, buildings, etc.

Difficulties in Measurement of National Income

Following are the difficulties in estimating the National Income

- Conceptual difficulties
- Statistical difficulties

Conceptual difficulties

It is difficult to calculate the value of some of the items such as services rendered for free and goods that are to be sold but are used for self-consumption.

Sometimes, it becomes difficult to make a clear distinction between primary, intermediate and final goods.

What price to choose to determine the monetary value of a National Product is always a difficult question?

Whether to include the income of the foreign companies in the National Income or not because they emit a major part of their income outside India?

Statistical difficulties

In case of changes in the price level, we need to use the Index numbers which have their own inherent limitations.

Statistical figures are not always accurate as they are based on the sample surveys. Also, all the data are not often available.

All the countries have different methods of estimating National Income. Thus, it is not easily comparable.

The usefulness of estimating National Income is as follows:

It depicts the change in the production to output and also the effects of the Government policies on the economy.

The National Income studies the relation between the input of one industry and the output of the other.

It shows the income distribution among different economic units.

It also shows the change in the tastes and preferences of the consumers and thus, helps the producers to decide what to produce and for whom to produce.

The quantum of the National Income of a country indicates its ability to pay its share for international purposes, such as membership of IMF, World Bank or SAARC.

UNIT – V

FUNCTIONS OF MONEY

The following points highlight the top six functions of money**.**

Function # 1. A Medium of Exchange:

The only alternative to using money is to go back to the barter system. However, as a system of exchange the barter system would be highly impracticable today.

For example, if the baker who supplied the green-grocer with bread had to take payment in onions and carrots, he may either not like these foodstuff or he may have sufficient stocks of them.

The baker would, therefore, have to re-sell the product which would take time and be very inconvenient. By replacing these complicated sales by the use of money it is possible to save a lot of trouble. If the baker accepts payment in money this can be spent in whatever way the baker wishes. The use of money as a medium of exchange overcomes the drawbacks of barter.

Thus, money provides the most efficient means of satisfying wants. Each consumer has a different set of wants. Money enables him (her) to decide which wants to satisfy, rank the wants in order of urgency and capacity (income) and act accordingly.

This type of system also enables specialisation to extend. Take, for example, a person who performs only a single task in a shoe factory. He has not actually produced anything himself. So what could he exchange if a barter system were in operation? With money system the problem is removed. He can be paid in terms of money and can use that money to buy what he wants.

Function # 2. A Measure of Value:

Under the barter system, it is very difficult to measure the value of goods. For example, a horse may be valued as worth five cows or 100 quintals of wheat, or a Maruti car may be equivalent to 10 two- wheelers. Thus one of the disadvantages of the barter system is that any commodity or service has a series of exchange values.

Money is the measuring rod of everything. By acting as a common denominator it permits everything to be priced, that is, valued in terms of money. Thus, people are enabled to compare different prices and thus see the relative values of different goods and services.

This serves two basic purposes:

(1) Households (consumers) can plan their expenditure and

(2) Business people can keep records of income and costs in order to work out their profit and loss figures.

Function # 3. A Store of Value (Purchasing Power):

A major disadvantage of using commodities — such as wheat or salt or even animals like horses or cows — as money is that after a time they deteriorate and lose economic value. They are, thus, not at all satisfactory as a means of storing wealth. To realise the problems of saving in a barter economy let us consider a farmer. He wanted to save some wheat each week for future consumption. But this would be of no use to him in his old age because the 'savings' would have gone off.

Again, if a coal miner wanted to set aside a certain amount of coal each week for the same purpose, he would have problems of finding enough storage space for all his coal. By using money, such problems can be overcome and people are able to save for the future. Modern form of money (such as coins, notes and bank deposits) permit people to save their surplus income.

Thus money is used as a store of purchasing power. It can be held over a period of time and used to finance future payments. Moreover, when people save money, they get the assurance that the money saved will have value when they wish to spend it in the future. However, this statement holds only if there is no severe inflation (or deflation) in the country.

In other words, it is quite obvious that money can only act effectively as a store of value if its own value is stable. If, for example, most people feel that their savings would become worthless very soon, they would spend them at once and save nothing. For the last few years the value (or the purchasing power) of money has been falling in India. Yet in the short run—for day-to-day purposes—money has sufficient stability of value to serve quite well as a store of value.

Function # 4. The Basis of Credit:

Money facilitates loans. Borrowers can use money to obtain goods and services when they are needed most. A newly married couple, for example, would need a lot of money to

completely furnish a house at once. They are not required to wait for, say ten years, so as to be able to save enough money to buy costly items like cars, refrigerators, T.V. sets, etc.

Function # 5. A Unit of Account:

An attribute of money is that it is used as a unit of account. The implication is that money is used to measure and record financial transactions as also the value of goods or services produced in a country over time. The money value of goods and services produced in an economy in an accounting year is called gross national product. According to J. R. Hicks, gross national product is a collection of goods and services reduced to a common basis by being measured in terms of money.

Function # 6. A Standard of Postponed Payment:

This is an extension of the first function. Here again money is used as a medium of exchange, but this time the payment is spread over a period of time. Thus, when goods are bought on hire-purchase, they are given to the buyer upon payment of a deposit, and he then pays the remaining amount in a number of instalments.

Under the barter system this type of transaction could involve problems. Imagine a farmer buying a video-recorder and agreeing to pay for it in terms of a fixed amount of wheat each week for a certain number of weeks. After a few weeks the seller of the video recorder might have more than enough wheat.

Yet he will have to receive more wheat in the coming weeks. If money had been used, the seller could then use it to buy whatever he wanted, whether it is wheat or something else—now or in future. In other words, the use of money permits postponement of spending from the present to some future occasion.

In a modern economy, most transactions (buying and selling) are made on the basis of credit. For example, it is possible to purchase consumer durables such as T.V. sets or washing machines on hire-purchase; houses may be purchased by means of L.I.C. or H.D.F.C. loan; most business dealings permit payment in the future for goods delivered now; and employees wait for a month or a week to receive their wages and salaries. Thus, the use of money permits the members of society to defer their spending from the present to some future date.

We, therefore, see that a money system clearly has advantages over a barter system. But what is money? Note the first five words in our definition – “anything which is generally acceptable.” We use notes and coins to buy things but can do so only as long as shopkeepers

and traders are prepared to accept those notes and coins in payment for the goods they are selling.

If all sellers decided that they would no longer accept these notes and coins, then these would cease to be money. If they decided instead to accept chair legs as money, then we would have to use chair legs which we would have to use when buying something!

THEORIES OF MONEY SUPPLY

The quantity theory of money also assumes that the quantity of money in an economy has a large influence on its level of economic activity. So, a change in the money supply results in either a change in the price levels or a change in the supply of goods and services, or both. In addition, the theory assumes that changes in the money supply are the primary reason for changes in spending.

One implication of these assumptions is that the value of money is determined by the amount of money available in an economy. An increase in the money supply results in a decrease in the value of money because an increase in the money supply also causes the rate of inflation to increase. As inflation rises, purchasing power decreases. Purchasing power is the value of a currency expressed in terms of the amount of goods or services that one unit of currency can buy. When the purchasing power of a unit of currency decreases, it requires more units of currency to buy the same quantity of goods or services.

Throughout the 1970s and 1980s, the quantity theory of money became more relevant as a result of the rise of monetarism. In monetary economics, the chief method of achieving economic stability is through controlling the supply of money. According to monetarism and monetary theory, changes in the money supply are the main forces underpinning all economic activity, so governments should implement policies that influence the money supply as a way of fostering economic growth. Because of its emphasis on the quantity of money determining the value of money, the quantity theory of money is central to the concept of monetarism.

According to monetarists, a rapid increase in the money supply can lead to a rapid increase in inflation. This is because when money growth surpasses the growth of economic output, there is too much money backing too little production of goods and services. In order to curb a rapid rise in the inflation level, it is imperative that growth in the money supply falls below the growth in economic output.

When monetarists are considering solutions for a staggering economy in need of an increased level of production, some monetarists may recommend an increase in the money supply as a short-term boost. However, the long-term effects of monetary policy are not as predictable, so many monetarists believe that the money supply should be kept within an acceptable bandwidth so that levels of inflation can be controlled.

Instead of governments continually adjusting economic policies through government spending and taxation levels, monetarists recommend letting non-inflationary policies–like a gradual reduction of the money supply–lead an economy to full employment.

Many Keynesian economists remain critical of the basic tenets of the quantity theory of money and monetarism, and challenge the assertion that economic policies that attempt to influence the money supply are the best way to address economic growth.

Keynesian economics is a theory of economics that is primarily used to refer to the belief that the government should use activist stabilization and economic intervention policies in order to influence aggregate demand and achieve optimal economic performance.

John Maynard Keynes was a British economist who developed this theory in the 1930s as part of his research trying to understand, first and foremost, the causes of the Great Depression. At the time, Keynes advocated for a government response to the global depression that would involve the government increasing their spending and lowering their taxes in order to stimulate demand and pull the global economy out of the depression.

In the 1930s, Keynes also challenged the quantity theory of money, saying that increases in the money supply actually lead to a decrease in the velocity of circulation and that real income–the flow of money to the factors of production–increased. Therefore, the velocity of circulation could change in response to changes in the money supply. In the years since

Keynes' made this argument, other economists have proved that Keynes' contention with the quantity theory of money is, in fact, accurate.

Some of the tenets of monetarism became very popular in the 1980s in both the U.S. and the U.K. Leaders in both of these countries, such as Margaret Thatcher and Ronald Reagan, tried to apply the principles of the theory in order to achieve money growth targets for their countries' economies. However, it was revealed over time that strict adherence to a controlled money supply did not provide a solution for economic slowdowns.

ROLE OF COMMERCIAL BANK

The role of a commercial bank is discussed as under.
[INDIA AND IN ALL DEVELOPING COUNTRIES]

1. Mobilising Saving for Capital Formation:

The commercial banks help in mobilising savings through network of branch banking. People in developing countries have low incomes but the banks induce them to save by introducing variety of deposit schemes to suit the needs of individual depositors. They also mobilise idle savings of the few rich. By mobilising savings, the banks channelise them into productive investments. Thus they help in the capital formation of a developing country.

2. Financing Industry:

The commercial banks finance the industrial sector in a number of ways. They provide short-term, medium-term and long-term loans to industry. In India they provide short-term loans. Income of the Latin American countries like Guatemala, they advance medium-term loans for one to three years. But in Korea, the commercial banks also advance long-term loans to industry.

In India, the commercial banks undertake short-term and medium-term financing of small scale industries, and also provide hire- purchase finance. Besides, they underwrite the shares and debentures of large scale industries. Thus they not only provide finance for industry but also help in developing the capital market which is undeveloped in such countries.

3. Financing Trade:

The commercial banks help in financing both internal and external trade. The banks provide loans to retailers and wholesalers to stock goods in which they deal. They also help in the movement of goods from one place to another by providing all types of facilities such

as discounting and accepting bills of exchange, providing overdraft facilities, issuing drafts, etc. Moreover, they finance both exports and imports of developing countries by providing foreign exchange facilities to importers and exporters of goods.

4. Financing Agriculture:

The commercial banks help the large agricultural sector in developing countries in a number of ways. They provide loans to traders in agricultural commodities. They open a network of branches in rural areas to provide agricultural credit. They provide finance directly to agriculturists for the marketing of their produce, for the modernisation and mechanisation of their farms, for providing irrigation facilities, for developing land, etc.
They also provide financial assistance for animal husbandry, dairy farming, sheep breeding, poultry farming, pisciculture and horticulture. The small and marginal farmers and landless agricultural workers, artisans and petty shopkeepers in rural areas are provided financial assistance through the regional rural banks in India. These regional rural banks operate under a commercial bank. Thus the commercial banks meet the credit requirements of all types of rural people.

5. Financing Consumer Activities:

People in underdeveloped countries being poor and having low incomes do not possess sufficient financial resources to buy durable consumer goods. The commercial banks advance loans to consumers for the purchase of such items as houses, scooters, fans, refrigerators, etc. In this way, they also help in raising the standard of living of the people in developing countries by providing loans for consumptive activities.

6. Financing Employment Generating Activities:

The commercial banks finance employment generating activities in developing countries. They provide loans for the education of young person's studying in engineering, medical and other vocational institutes of higher learning. They advance loans to young entrepreneurs, medical and engineering graduates, and other technically trained persons in establishing their own business. Such loan facilities are being provided by a number of commercial banks in

India. Thus the banks not only help inhuman capital formation but also in increasing entrepreneurial activities in developing countries.

7. Help in Monetary Policy:

The commercial banks help the economic development of a country by faithfully following the monetary policy of the central bank. In fact, the central bank depends upon the commercial banks for the success of its policy of monetary management in keeping with requirements of a developing economy.

Thus the commercial banks contribute much to the growth of a developing economy by granting loans to agriculture, trade and industry, by helping in physical and human capital formation and by following the monetary policy of the country.

RESERVE BANK OF INDIA [RBI]

The Reserve Bank of India (RBI) is the central bank of India whose primary function is to manage and govern the financial system of the country. It is a statutory body established in the year 1935 under the Reserve Bank of India Act, 1934. The central bank regulates the issue and supply of the Indian rupee. It also looks after the central government's money. The central bank plays the role of the bankers' bank and regulates the banking sector. It also plays an important role in India's development story by supporting the government in its developmental projects and policies.

The head office of the RBI, in Kolkata when the bank was established, was shifted to Mumbai in 1937. Originally, the bank was privately owned. However, after Independence, it was nationalised in 1949 and is now fully owned by the Government of India.

Functions of the RBI

The preamble of the RBI says... "to regulate the issue of Bank notes and keeping of reserves with a view to securing monetary stability in India and generally to operate the currency and credit system of the country to its advantage; to have a modern monetary policy framework to

meet the challenge of an increasingly complex economy, to maintain price stability while keeping in mind the objective of growth."

Some of the basic functions of the RBI are:

1. Issuer of notes: The RBI is the only institution which has the control over printing of currency notes (except the one rupee note, which is printed by the finance ministry).

2. Banker to the government: The RBI performs banking functions for the state and central governments. It advises the government on monetary policy issues and also manages the government's public debt.

3. Banker's bank: The central bank is also known as the banker's bank because it performs functions similar to what commercial banks do for their customers.

4. Credit regulation: The RBI regulates the flow of money in the country's financial system. It controls inflation in the economy and takes necessary policy decisions from time to time to address systemic concerns.

5. Foreign reserves: The central bank buys and sells foreign currencies to keep the foreign exchange rates stable. It takes necessary steps as and when required.

6. Role in development of the country: The RBI performs various functions and takes necessary decisions to support developmental agenda of the government.

The RBI board

The board of the RBI consists of a Governor, not more than four Deputy Governors and other members who are appointed by the central government. Currently, Shaktikanta Das is the Governor of the Reserve Bank of India. There are three Deputy Governors — B P Kanungo, Mahesh Kumar Jain, and M D Patra.

VISIT RBI WEBSITE

www.rbi.org.in

IMPORTANT METHODS ADAPTED BY RBI TO CONTROL CREDIT CREATION

Methods employed by the RBI to control credit creation are:

1. Quantitative Method
2. Qualitative Method.

The various methods employed by the RBI to control credit creation power of the commercial banks can be classified in two groups, viz., quantitative controls and qualitative controls. Quantitative controls are designed to regulate the volume of credit created by the banking system qualitative measures or selective methods are designed to regulate the flow of credit in specific uses.

Quantitative or traditional methods of credit control include banks rate policy, open market operations and variable reserve ratio. Qualitative or selective methods of credit control include regulation of margin requirement, credit rationing, regulation of consumer credit and direct action.

Quantitative Method:

b) *(i) Bank Rate:*

The bank rate, also known as the discount rate, is the rate payable by commercial banks on the loans from or rediscounts of the Central Bank. A change in bank rate affects other market rates of interest. An increase in bank rate leads to an increase in other rates of interest and conversely, a decrease in bank rate results in a fall in other rates of interest.

A deliberate manipulation of the bank rate by the Central Bank to influence the flow of credit created by the commercial banks is known as bank rate policy. It does so by affecting the demand for credit the cost of the credit and the availability of the credit.

An increase in bank rate results in an increase in the cost of credit; this is expected to lead to a contraction in demand for credit. In as much as bank credit is an important component of aggregate money supply in the economy, a contraction in demand for credit consequent on an increase in the cost of credit restricts the total availability of money in the economy, and hence may prove an anti-inflationary measure of control.

Likewise, a fall in the bank rate causes other rates of interest to come down. The cost of credit falls, i. e., and credit becomes cheaper. Cheap credit may induce a higher demand both for investment and consumption purposes. More money, through increased flow of credit, comes into circulation.

A fall in bank rate may, thus, prove an anti-deflationary instrument of control. The effectiveness of bank rate as an instrument of control is, however, restricted primarily by the fact that both in inflationary and recessionary conditions, the cost of credit may not be a very significant factor influencing the investment decisions of the firms.

c) *(ii) Open Market Operations:*

Open market operations refer to the sale and purchase of securities by the Central bank to the commercial banks. A sale of securities by the Central Bank, i.e., the purchase of securities by the commercial banks, results in a fall in the total cash reserves of the latter.

A fall in the total cash reserves is leads to a cut in the credit creation power of the commercial banks. With reduced cash reserves at their command the commercial banks can only create lower volume of credit. Thus, a sale of securities by the Central Bank serves as an anti-inflationary measure of control.

Likewise, a purchase of securities by the Central Bank results in more cash flowing to the commercials banks. With increased cash in their hands, the commercial banks can create more credit, and make more finance available. Thus, purchase of securities may work as an anti-deflationary measure of control.

The Reserve Bank of India has frequently resorted to the sale of government securities to which the commercial banks have been generously contributing. Thus, open market operations in India have served, on the one hand as an instrument to make available more budgetary resources and on the other as an instrument to siphon off the excess liquidity in the system.

d) *(iii) Variable Reserve Ratios:*

Variable reserve ratios refer to that proportion of bank deposits that the commercial banks are required to keep in the form of cash to ensure liquidity for the credit created by them.

A rise in the cash reserve ratio results in a fall in the value of the deposit multiplier. Conversely, a fall in the cash reserve ratio leads to a rise in the value of the deposit multiplier.

A fall in the value of deposit multiplier amounts to a contraction in the availability of credit, and, thus, it may serve as an anti-inflationary measure.

A rise in the value of deposit multiplier, on the other hand, amounts to the fact that the commercial banks can create more credit, and make available more finance for consumption and investment expenditure. A fall in the reserve ratios may, thus, work as anti-deflationary method of monetary control.

The Reserve Bank of India is empowered to change the reserve requirements of the commercial banks.

The Reserve Bank employs two types of reserve ratio for this purpose, viz. the Statutory Liquidity Ratio (SLR) and the Cash Reserve Ratio (CRR).

The statutory liquidity ratio refers to that proportion of aggregate deposits which the commercial banks are required to keep with themselves in a liquid form. The commercial banks generally make use of this money to purchase the government securities. Thus, the statutory liquidity ratio, on the one hand is used to siphon off the excess liquidity of the banking system, and on the other it is used to mobilise revenue for the government.

The Reserve Bank of India is empowered to raise this ratio up to 40 per cent of aggregate deposits of commercial banks.

The cash reserve ratio refers to that proportion of the aggregate deposits which the commercial banks are required to keep with the Reserve Bank of India.

II. Qualitative Method:

The qualitative or selective methods of credit control are adopted by the Central Bank in its pursuit of economic stabilisation and as part of credit management.

e) *(i) Margin Requirements:*

Changes in margin requirements are designed to influence the flow of credit against specific commodities. The commercial banks generally advance loans to their customers against some security or securities offered by the borrower and acceptable to banks.

More generally, the commercial banks do not lend up to the full amount of the security but lend an amount less than its value. The margin requirements against specific securities are determined by the Central Bank. A change in margin requirements will influence the flow of credit.

A rise in the margin requirement results in a contraction in the borrowing value of the security and similarly, a fall in the margin requirement results in expansion in the borrowing value of the security.

f) *(ii) Credit Rationing:*

Rationing of credit is a method by which the Central Bank seeks to limit the maximum amount of loans and advances and, also in certain cases, fix ceiling for specific categories of loans and advances.

g) *(iii) Regulation of Consumer Credit:*

Regulation of consumer credit is designed to check the flow of credit for consumer durable goods. This can be done by regulating the total volume of credit that may be extended for purchasing specific durable goods and regulating the number of installments through which such loan can be spread. Central Bank uses this method to restrict or liberalise loan conditions accordingly to stabilise the economy.

h) *(iv) Moral Suasion:*

Moral suasion and credit monitoring arrangement are other methods of credit control. The policy of moral suasion will succeed only if the Central Bank is strong enough to influence the commercial banks.

In India, from 1949 onwards, the Reserve Bank has been successful in using the method of moral suasion to bring the commercial banks to fall in line with its policies regarding credit. Publicity is another method, whereby the Reserve Bank marks direct appeal to the public and publishes data which will have sobering effect on other banks and the commercial circles.

2) *Effectiveness of Credit Control Measures:*

The effectiveness of credit control measures in an economy depends upon a number of factors. First, there should exist a well-organised money market. Second, a large proportion of money in circulation should form part of the organised money market. Finally, the money and capital markets should be extensive in coverage and elastic in nature.

The main objectives of Monetary Policy are:

- To maintain price stability.
- To ensure adequate flow of credit to productive sectors so as to assist growth.
- Arrangement of full employment.
- Expansion of credit facility
- Equality & Justice Stability in exchange rate.
- Promotion of Fixed Deposit.
- Equitable distribution of Credit.

Monetary policy is the macroeconomic policy laid down by the central bank. It involves management of money supply and interest rate and is the demand side economic policy used by the government of a country to achieve macroeconomic objectives like inflation, consumption, growth and liquidity.

In India, monetary policy of the Reserve Bank of India is aimed at managing the quantity of money in order to meet the requirements of different sectors of the economy and to increase the pace of economic growth.

The RBI implements the monetary policy through open market operations, bank rate policy, reserve system, credit control policy, and moral persuasion and through many other instruments. Using any of these instruments will lead to changes in the interest rate, or the money supply in the economy. Monetary policy can be expansionary and contraction in nature. Increasing money supply and reducing interest rates indicate an expansionary policy. The reverse of this is a contraction monetary policy.

For instance, liquidity is important for an economy to spur growth. To maintain liquidity, the RBI is dependent on the monetary policy. By purchasing bonds through open market operations, the RBI introduces money in the system and reduces the interest rate.