

Introduction to economics:

Economics is derived from the ancient Greek word oikonomia—means the management of a family or a household.

Economics is the study of human activity both at individual and national level.

DEFINITIONS:

Admssmith is the father of Economics.

- Every activity aimed at earning or spending money is called economic activity I.e to satisfy the needs or wants like food, cloth and shelter.
- The economist of early age treated economics merely the science of wealth.
- During 18th century **Admssmith** is the father of economics define economics as the study of nature and uses of national wealth.
- **Dr. Alfred Marshall** of 19th century. He defined economics as the study of man's action in the ordinary business of life.
- According to **AC.PIGOU**

Economics is the study of economic welfare that can be brought directly and indirectly in the relationship with the role of money.

- According to **prof.LIONEL ROBBINS** he defined economics as the science which studies the human behavior as a relationship between ends and scarce mean which have alternative uses.
- **RAGNAR FRISCH** derived economics into 2 types. They are
 1. MICRO ECONOMICS
 2. MACRO ECONOMICS

MICRO ECONOMICS	MACRO ECONOMICS
1. The study of an individual or consumer or firm/organizations is known as micro economics.	1. The study of aggregate or total level of economic activity in a country is called macro economics.
2. The micro economics is also known as the theory of economics.	2. It studies the flow of economic resources or factors of production from resources owner to the business firm to the house hold is known as macro economics.
3. It deals with behavior and problems of single individual of micro organization.	3. It discuss aggregate consumption,price level, aggregate investment, national income.
4. It concerned with the application of the concepts such as price theory, law of demand and theories of market structures.	4. It concerned with the level of employment in the economy.

UNIT-1

Definition of managerial economics:

- “Managerial Economics consists of the use of economic modes of thought to analyse business situations.” - **McNair and Merriam**
- “Managerial 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 the application of economic theory and analysis to practice of business firms and other institutions.- **Hailstone and Rothwel**

NATURE AND SCOPE OF MANAGERIAL ECONOMICS:

Nature of managerial economics:

- Problem solving nature.
- It is closely relates to micro economics.
- Operates back drop of macro economics
- It includes normative statements.
- It is a pragmatic nature.
- It is having assumptions and limitations.

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

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 variations in cost estimates and choose the cost-minimising output level, taking also into consideration the degree of uncertainty in production and cost calculations. 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 and 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.

OBJECTIVES OF A FIRM:

A firm is an organization that combines and organizes resources for the purpose of producing goods and services for sale.

DEFINITION OF A FIRM:

Firm is an organization that produces and sells goods with the goal of maximizing its profits.

-Prof. S.E.Landsbury-

Objectives of firm:

There are two objectives of a firm.

1. Profit maximization and
2. Sales maximization

1. Profit Maximization:

Profit maximization

Usually, in economics, we assume firms are concerned with maximizing profit. Higher profit means:

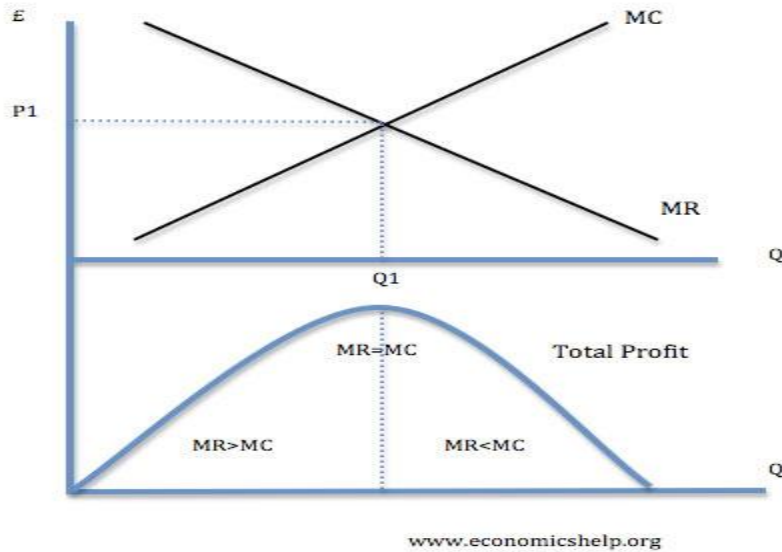
- Higher dividends for shareholders.
- More profit can be used to finance research and development.
- Higher profit makes the firm less vulnerable to takeover.
- Higher profit enables higher salaries for workers

An assumption in classical economics is that firms seek to maximize profits.

Profit = Total Revenue (TR) – Total Costs (TC). Therefore, profit maximization occurs at the biggest gap between total revenue and total costs.

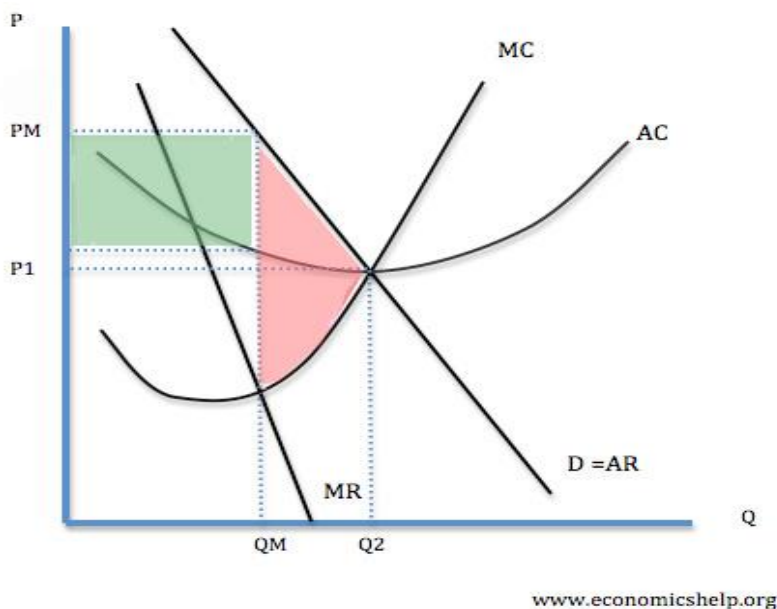
A firm can maximize profits if it produces at an output where marginal revenue (MR) = marginal cost (MC)

MANAGERIAL ECONOMICS



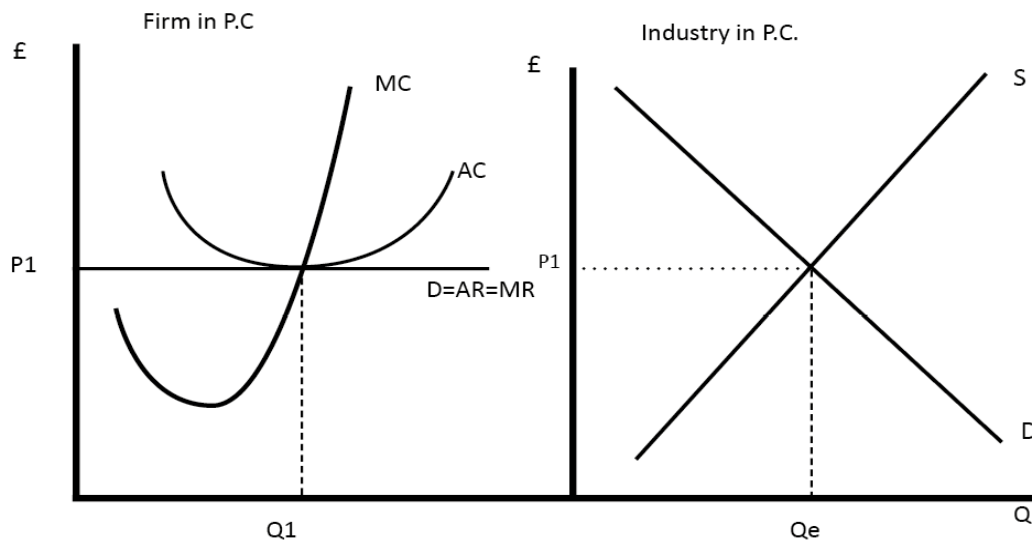
- To understand this principle look at the above diagram.
- If the firm produces less than Q_1 , MR is greater than MC . Therefore, for this extra output, the firm is gaining more revenue than it is paying in costs, and total profit will increase.
- Close to Q_1 , MR is only just greater than MC ; therefore, there is only a small increase in profit, but profit is still rising.
- However, after Q_1 , the marginal cost of the output is greater than the marginal revenue. This means the firm will see a fall in its profit level because the cost of these extra units is greater than revenue.

Profit maximization for a monopoly



- In this diagram, the monopoly maximizes profit where $MR=MC$ – at Q_m .
- This enables the firm to make supernormal profits (green area).
Note the firm could produce more and still make normal profit. But, to maximize profit, it involves setting higher price and lower quantity than a competitive market.
- Note the firm could produce more and still make a normal profit. But, to maximize profit, it involves setting a higher price and lower quantity than a competitive market.
- Therefore, in a monopoly profit maximization involves selling a lower quantity and at a higher price.

Profit Maximization in Perfect Competition



In perfect competition, the same rule for profit maximization still applies. The firm maximizes profit where $MR=MC$ (at Q_1).

For a firm in perfect competition, demand is perfectly elastic, therefore $MR=AR=D$.

This gives a firm normal profit because at Q_1 $AR=AC$.

2. SALES MAXIMIZATION:

Firms often seek to increase their market share – even if it means less profit. This could occur for various reasons:

- Increased market share increases monopoly power and may enable the firm to put up prices and make more profit in the long run.
- Managers prefer to work for bigger companies as it leads to greater prestige and higher salaries.

- Increasing market share may force rivals out of business. E.g. the growth of supermarkets has lead to the demise of many local shops. Some firms may actually engage in predatory pricing which involves making a loss to force a rival out of business.

The theory is based on the following assumptions:

1. There is a single period time horizon of the firm.
2. The firm aims at maximizing its total sales revenue in the long run subject to a profit constraint.
3. The firm's minimum profit constraint is set competitively in terms of the current market value of its shares.
4. The firm is oligopolistic whose cost curves are U-shaped and the demand curve is downward sloping. Its total cost and revenue curves are also of the conventional type.

UNIT-2

DEMAND ANALYSIS:

Demand is the amount of goods that consumers or buyers are willing and capable to buy for a specific price in a specific time period while everything else remains the same.

Demand is an **economic principle** that describes the willingness and desire of consumers to purchase specific goods or services at a specific **Ceteris Paribus** (all other things being unchanged or constant).

Demand analysis is used to identify who wants to buy a given product, how much they are likely to pay.

Objectives of demand analysis:

There are 5 objectives.

1. Demand forecasting
2. Production planning
3. Sales forecasting
4. Control of business
5. Inventory control

1. Demand forecasting

Forecasting of demand is the art of predicting demand for a product or a service at some future date on the basis of certain present and past behavior patterns of some related events.

2. Production planning

Production planning of a business firm, Expansion of output of the output of the firm should be based on the estimates likely demand, there may be over production and consequent losses may have to be faced.

3. Sales forecasting

Sales forecasting is based on the demand analysis. Promotional efforts of the firm should be based on sales forecasting.

4. Control of business

For controlling the business on a sound footing, it is essential to have a well convinced budgeting of costs and profits that is based on the estimation of annual demand/sales and prices.

5. Inventory control

A satisfactory control of business inventories, raw materials, intermediate goods, semi-finished products, finished product, spare parts etc., requires satisfactory estimates of the future requirements which can be traced through demand analysis.

DEMAND THEORY:

- Demand theory is a theory relating to the relationship between consumer demand for goods and services and their prices.
- Demand theory forms the basis for the demand curve, which relates consumer desire to the amount of goods available.
- As more of a good or service is available, demand drops and therefore so does the equilibrium price.

BREAKING DOWN 'Demand Theory'

- Demand theory is one of the core theories of microeconomics.
- It aims to answer basic questions about how badly people want things, and how demand is impacted by income levels and satisfaction (utility).
- Based on the perceived utility of goods and services by consumers, companies adjust the supply available and the prices charged.

DEMAND FUNCTION:

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

There are 2 types of demand functions:

1. Individual demand function
2. Market demand function

1. Individual demand function

An individual demand function refers to the quantities of a commodity demand at various prices, given his income, prices of related goods and tastes.

It is expressed as:

$$D=f(p)$$

2. Market demand function

Market demand function refers to the functional relationship between market demand and the factors affecting market demand. As mentioned before, market demand is affected by all factors affecting individual demand. In addition, it is also affected by size and composition of population, season and weather and distribution of income.

$$D_x = f(P_x, P_r, M, T, A, U)$$

Where

D_x = Market demand of commodity x;

P_x = Price of given commodity x;

P_r = Prices of Related Goods;

T = Tastes and Preferences;

F = Expectation of Change in Price in future;

M = money income of the consumer

A = Advertisement effect

U = Unknown variables

Meaning of Elasticity of Demand:

Elasticity means sensitiveness or responsiveness of demand to the change in price.

Demand extends or contracts respectively with a fall or rise in price. This quality of demand by virtue of which it changes (increases or decreases) when price changes (decreases or increases) is called Elasticity of Demand.

DEFINITION:

The degree to which demand for a good or service varies with its price. Normally, sales increase with drop in prices and decrease with rise in prices. As a general rule, appliances, cars, confectionary and other non-essentials show elasticity of demand whereas most necessities (food, medicine, basic clothing) show inelasticity of demand (do not sell significantly more or less with changes in price).

1. PRICE ELASTICITY OF DEMAND:

Price elasticity of demand (PED) shows the relationship between price and quantity demanded and provides a precise calculation of the effect of a change in price on quantity demanded.

$$\frac{\% \text{ change in quantity demanded}}{\% \text{ change in price}}$$

$$PEOD = \frac{(Q_2 - Q_1)/Q_1}{(P_2 - P_1)/P_1}$$

PEOD= Price elasticity of demand

Q1=quantity demand before price change

Q2= quantity demand after price change

P1= price before change

P2= price after change

TYPES OF PRICE ELASTICITY OF DEMAND

1. Perfectly Elastic Demand:

When a small change in price of a product causes a major change in its demand, it is said to be perfectly elastic demand. In perfectly elastic demand, a small rise in price results in fall in demand to zero, while a small fall in price causes increase in demand to infinity.

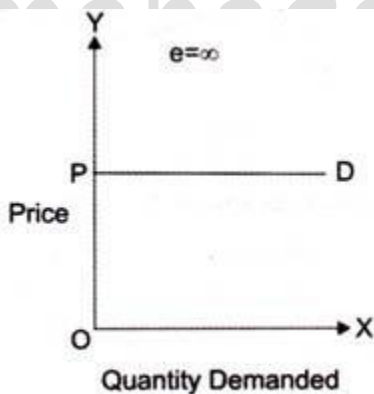


Figure-2: Perfectly Elastic Demand

2. Perfectly Inelastic Demand:

A perfectly inelastic demand is one when there is no change price leads to little are no change in quantity demand.

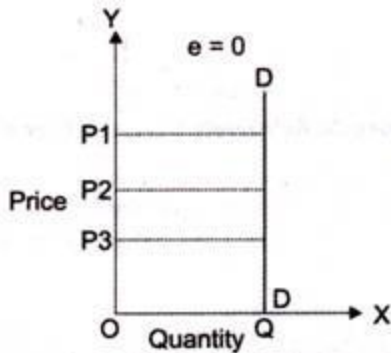


Figure-3: Perfectly Inelastic Demand

3. Unitary elastic demand:

When the proportionate change in demand produces the same change in the price of the product, the demand is referred as unitary elastic demand. The numerical value for unitary elastic demand is equal to one.

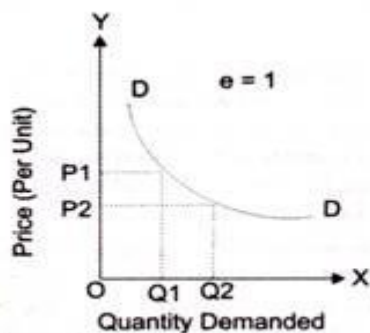


Figure-6: Unitary Elastic Demand

4. Demand elasticity or Elasticity of demand:

$E = \text{percentage change in } X / \text{percentage change in } Y$

Elasticity represents the responsiveness one variable to the variations in another variable the elasticity of X with respect to Y is defined as elasticity

INCOME ELASTICITY OF DEMAND:

“Income elasticity of demand means the ratio of the percentage change in the quantity demanded to the percentage in income”...

Measurement of Income Elasticity of Demand:

The income elasticity of demand (e_y) can be measured by the following formula:

e_y = Percentage change in quantity demanded/Percentage change in income

Percentage change in quantity demanded = New quantity demanded (ΔQ)/Original quantity demanded (Q)

Percentage change in income = New income (ΔY)/original income (Y)

Therefore, the income elasticity of demand can be symbolically represented as:

$$e_y = \Delta Q/Q : \Delta Y/Y$$

$$e_y = \Delta Q/Q * Y/\Delta Y$$

$$e_y = \Delta Q/\Delta Y * Y/Q$$

Types of Income Elasticity of Demand:

1. high Income Elasticity of Demand:

Refers to a situation when the demand for a product increases with increase in consumer's income and decreases with decrease in consumer's income. The income elasticity of demand is positive for normal goods.

2. Unitary Income Elasticity of Demand:

Implies that positive income elasticity of demand would be unitary when the proportionate change in the quantity demanded is equal to proportionate change in income.

3. low Income Elasticity of Demand:

Implies that positive income elasticity of demand would be less than unitary when the proportionate change in, the quantity demanded is less than proportionate change in income.

4. Zero Income Elasticity of Demand:

Refers to the income elasticity of demand whose numerical value is zero. This is because there is no effect of increase in consumer's income on the demand of product. The income elasticity of demand is zero ($e_y = 0$) in case of essential goods.

5. Negative Income Elasticity of Demand:

Refers to a kind of income elasticity of demand in which the demand for a product decreases with increase in consumer's income. The income elasticity of demand is negative for inferior goods, also known as Giffen goods.

3. CROSS ELASTICITY OF DEMAND:

Cross elasticity of demand is an economic concept that measures the responsiveness in the quantity demand of one good when a change in price takes place in another good.

Also called cross price elasticity of demand, this measurement is calculated by taking the percentage change in the quantity demanded of one good and dividing it by the percentage change in price of the other good.

EC=percentage change in quantity demand for good A/ percentage change in price of good B

$$ECOD = \frac{(Q2-Q1)/Q1}{(P2Y-P1Y)/P1Y}$$

Q1=quantity demand before change

Q2= quantity demand after change

P1Y= price before change

P2Y= price after change

Types of Cross Elasticity of Demand:

1. Substitute Goods

The cross elasticity of demand for substitute goods is always positive because the demand for one good increases if the price for the other good increases.

2. Complimentary Goods

Alternatively, the cross elasticity of demand for complimentary goods is negative. As the price for one goods increases, an item closely associated with that item and necessary for its consumption decreases because the demand for the main good has also dropped.

3. Independent Goods:

A zero or near-zero cross elasticity suggests that the two products being considered and unrelated or independent goods.

4. PROMOTIONAL ELASTICITY OF DEMAND:

The promotional elasticity of demand is a measure of the responsiveness of demand for a commodity change in outlay on advertisements and other promotional efforts.

Percentage in demand

EP= _____

Percentage change in expenditure on advertisement

$$EDA/AEOD = \frac{(Q2-Q1)/Q1}{(A2-A1)/A1}$$

Where

Q1=quantity demand before change

Q2= quantity demand after change

P1Y=Advertisement before change

P2Y= Advertisement after change.

- It refers to increase in sales revenue because of change in the advertising expenditure.
- In other words there is a direct relationship between the amount of money spent on advertisement and its impact on sales.
- Advertising capacity is always(+ve).

FORECASTING SOURCES OF DATA:

The main challenge to forecast demand is to select an effective technique.

There is no particular method that enables organizations to anticipate risks and uncertainties in future.

Generally, there are two approaches to demand forecasting.

The first approach involves forecasting demand by collecting information regarding the buying behavior of consumers from experts or through conducting surveys. On the other hand, the second method is to forecast demand by using the past data through statistical techniques.

These two approaches are shown in Figure

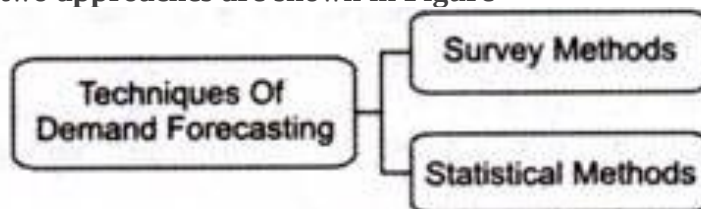


Figure-10: Demand Forecasting Techniques

Survey Method:

Survey method is one of the most common and direct methods of forecasting demand in the short term. This method encompasses the future purchase plans of consumers and their intentions. In this method, an organization conducts surveys with consumers to determine the demand for their existing products and services and anticipate the future demand accordingly.

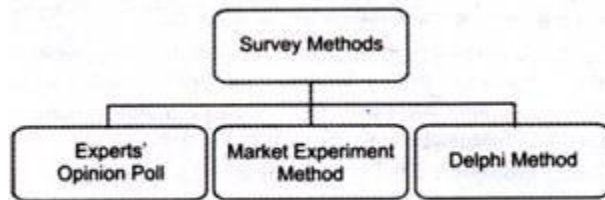


Figure-11: Survey Methods

i. Experts' Opinion Poll:

Refers to a method in which experts are requested to provide their opinion about the product. Generally, in an organization, sales representatives act as experts who can assess the demand for the product in different areas, regions, or cities.

ii. Delphi Method:

Refers to a group decision-making technique of forecasting demand. In this method, questions are individually asked from a group of experts to obtain their opinions on demand for products in future. These questions are repeatedly asked until a consensus is obtained.

In addition, in this method, each expert is provided information regarding the estimates made by other experts in the group, so that he/she can revise his/her estimates with respect to others' estimates. In this way, the forecasts are cross checked among experts to reach more accurate decision making.

The main advantage of this method is that it is time and cost effective as a number of experts are approached in a short time without spending on other resources.

iii. Market Experiment Method:

Involves collecting necessary information regarding the current and future demand for a product. This method carries out the studies and experiments on consumer behavior under actual market conditions. In this method, some areas of markets are selected with similar features, such as population, income levels, cultural background, and tastes of consumers.

The market experiments are carried out with the help of changing prices and expenditure, so that the resultant changes in the demand are recorded. These results help in forecasting future demand.

Statistical Methods:

Statistical methods are complex set of methods of demand forecasting. These methods are used to forecast demand in the long term. In this method, demand is forecasted on the basis of historical data and cross-sectional data.

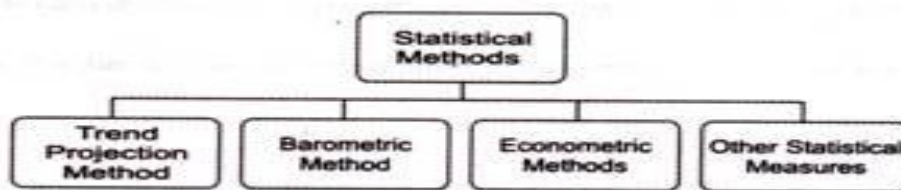


Figure-12: Statistical Methods

1. Trend Projection Method:

Trend projection or least square method is the classical method of business forecasting. In this method, a large amount of reliable data is required for forecasting demand. In addition, this method assumes that the factors, such as sales and demand, responsible for past trends would remain the same in future.

In this method, sales forecasts are made through analysis of past data taken from previous year's books of accounts. In case of new organizations, sales data is taken from organizations already existing in the same industry. This method uses time-series data on sales for forecasting the demand of a product.

2. Barometric Method:

This method was introduced by Harvard Economic Service in 1920 and further revised by National Bureau of Economic Research

In barometric method, demand is predicted on the basis of past events or key variables occurring in the present. This method is also used to predict various economic indicators, such as saving, investment, and income.

This technique helps in determining the general trend of business activities. The main advantage of this method is that it is applicable even in the absence of past data. However, this method is not applicable in case of new products. In addition, it loses its applicability when there is no time lag between economic indicator and demand.

3. Econometric Methods:

Econometric methods combine statistical tools with economic theories for forecasting. The forecasts made by this method are very reliable than any other method. An econometric model consists of two types of methods namely, regression model and simultaneous equations model.

i. Regression Methods:

Refer to the most popular method of demand forecasting. In regression method, the demand function for a product is estimated where demand is dependent variable and variables that determine the demand are independent variable.

ii. Exogenous Variables:

Refer to inputs of the model. Examples are time, government spending, and weather conditions. These variables are determined outside the model.

For developing a complete model, endogenous and exogenous variables are determined first. After that, necessary data on both exogenous and endogenous variables are collected. Sometimes, data is not available in required form, thus, it needs to be adjusted into the model.

4. Other Statistical Measures:

Apart from statistical methods, there are other methods for demand forecasting. These measures are very specific and used for only particular datasets. Therefore, their usage cannot be generalized for all types of research.

UNIT-3

COST ANALYSIS:

1. The act of breaking down a cost summary into its constituents and studying and reporting on each factor.
2. The comparison of costs for the purpose of disclosing and reporting on conditions subject to improvement.

Definition

The process of developing and analyzing cost data from separate business elements and estimating incremental and total resources needed to support current and future business strategies.

PRODUCTION FUNCTION:

In simple words, production function refers to the functional relationship between the quantity of a good produced (output) and factors of production (inputs).

“The production function is purely a technical relation which connects factor inputs and output.”
Prof. Koutsoyiannis

Definitions:

“The production function is a technical or engineering relation between input and output. As long as the natural laws of technology remain unchanged, the production function remains unchanged.”
-Prof. L.R. Klein

“Production function is the relationship between inputs of productive services per unit of time and outputs of product per unit of time.”
-Prof. George J. Stigler

Features of Production Function:

1. Substitutability:

The factors of production or inputs are substitutes of one another which make it possible to vary the total output by changing the quantity of one or a few inputs, while the quantities of all other inputs are held constant.

2. Complementarily:

The factors of production are also complementary to one another, that is, the two or more inputs are to be used together as nothing will be produced if the quantity of either of the inputs used in the production process is zero.

3. Specificity:

The specificity may not be complete as factors may be used for production of other commodities too. This reveals that in the production process none of the factors can be ignored and in some cases ignorance to even slightest extent is not possible if the factors are perfectly specific.

LAW OF RETURNS TO SCALE:

Law of Returns to Scale : Definition, Explanation and Its Types!

In the long run all factors of production are variable. No factor is fixed. Accordingly, the scale of production can be changed by changing the quantity of all factors of production.

Definition:

“The term returns to scale refers to the changes in output as all factors change by the same proportion.” Koutsoyiannis.

“Returns to scale relates to the behavior of total output as all inputs are varied and is a long run concept”. Leibhafskey.

Returns to scale are of the following three types:

1. Increasing Returns to scale.
2. Constant Returns to Scale
3. Diminishing Returns to Scale

1. Increasing Returns to Scale:

Increasing returns to scale or diminishing cost refers to a situation when all factors of production are increased, output increases at a higher rate. It means if all inputs are doubled, output will also increase at the faster rate than double. Hence, it is said to be increasing returns to scale. This increase is due to many reasons like division external economies of scale.

2. Diminishing Returns to Scale:

Diminishing returns or increasing costs refer to that production situation, where if all the factors of production are increased in a given proportion, output increases in a smaller proportion. It means, if inputs are doubled, output will be less than doubled. If 20 percent increase in labour and capital is followed by 10 percent increase in output, then it is an instance of diminishing returns to scale. The main cause of the operation of diminishing returns to scale is that internal and external economies are less than internal and external diseconomies.

3. Constant Returns to Scale:

Constant returns to scale or constant cost refers to the production situation in which output increases exactly in the same proportion in which factors of production are increased. In simple terms, if factors of production are doubled output will also be doubled. In this case internal and external economies are exactly equal to internal and external diseconomies. This situation arises when after reaching a certain level of production, economies of scale are balanced by diseconomies of scale.

COST CONCEPTS:

Cost of production has a special meaning. It is all of the payments or expenditures necessary to obtain the factors of production of land, labor, capital and management required to produce a commodity. It represents money costs which we want to incur in order to acquire the factors of production.

Cost concepts:

The cost concepts have been explained by the following concepts.

1. opportunity cost and actual cost
2. Direct cost and indirect cost
3. Explicit cost and Implicit cost
4. Fixed cost and variable cost
5. Total, Average and marginal cost
6. Short run cost and long run cost
7. Accounting cost and economic cost

1. OPPORTUNITY COST AND ACTUAL COST:

Opportunity cost refers to the loss of earnings due to opportunities foregone due to scarcity of resources. The opportunity cost may be defined as the expected returns from the second best use of the resources foregone due to the scarcity of resources. The opportunity cost it is also called Alternative cost.

2. DIRECT COST AND INDIRECT COST:

A direct or traceable cost is that which can be identified easily and indisputably with a unit of operation (costing unit/cost centre). Common.

Indirect costs are those that are not traceable to any plant, department or operation, or to any individual final product. To take an example, the salary of a divisional manager, when division is a costing unit, will be a Direct Cost.

3. EXPLICIT COST AND IMPLICIT COST:

Explicit costs refer to those which fall under actual or business costs entered in the books of accounts. The payments for wages and salaries, materials, license fee, insurance premium, depreciation charges are the examples of explicit costs. These costs involve cash payments and are recorded in normal accounting practices.

Implicit costs may be defined as the earning expected from the second best alternative use of resources. For instance, suppose an entrepreneur does not utilize his services in his own business and works as a manager in some other firm on a salary basis.

4. FIXED COST AND VARIABLE COST:

Fixed costs are those costs which are fixed in volume for a certain given output. Fixed cost does not vary with variation in the output between zero and certain level of output. The costs that do not vary for a certain level of output are known as fixed cost.

(i) Cost of managerial and administrative staff.

(ii) Depreciation of machinery, building and other Fixed assets, and

(iii) Maintenance of land, etc. The concept of fixed cost is associated with short-run.

Variable costs are those which vary with the variation in the total output. They are a function of output. Variable costs include cost of raw materials, running cost on fixed capital, such as fuel, repairs, routine maintenance expenditure, direct labor charges associated with the level of output, and the costs of all other inputs that vary with output.

5. TOTAL, AVERAGE AND MARGINAL COST:

Total cost represents the value of the total resource requirement for the production of goods and services. It refers to the total outlays of money expenditure, both explicit and implicit, on the resources used to produce a given level of output. It includes both fixed and variable costs. The total cost for a given output is given by the cost function.

Average cost:

Average cost (AC) is of statistical nature, it is not actual cost. It is obtained by dividing the total cost (TC) by the total output (Q), i.e.

$$AC = TC / Q = \text{average cost}$$

Marginal cost:

Marginal cost is the addition to the total cost on account of producing an additional unit of the product. Or, marginal cost is the cost of marginal unit produced. Given the cost function, it may be defined as

$$MC = TC / Q$$

6. SHORT RUN COST AND LONG RUN COST:

Short-run costs are the costs which vary with the variation in output, the size of the firm remaining the same. In other words, short-run costs are the same as variable costs.

Long-run costs are, by implication, the same as fixed costs. In the long-run, however, even the fixed costs become variable costs as the size of the firm or scale of production increases.

7. ACCOUNTING COST AND ECONOMIC COST:

Accounting cost is based upon accounting records in the books of accounts, costs are recorded in the books of accounts, when they are actually incurred. Accounting follows accrual concept, Accounting records based upon legal sanctity of the business transaction. Accounting costs are explicit costs and must be paid. Assets as part of accounting cost are valued at book value.

Economic costs consist of both explicit and implicit costs. In other words, economic costs include both recorded and unrecorded costs. Assets are valued at replacement cost, i.e., market value in case of economic cost.

COST CURVES:**Meaning of Short-run and Long-run:**

In Economics, distinction is often made between the short-run and long-run. By short-run is meant that period of time within which a firm can vary its output by varying only the amount of variable factors, such as labour and raw material.

In the short-run period, the fixed factors such as capital equipment, management personnel, the factory buildings, etc., cannot be altered.

Short-run Fixed and Variable Costs:

We have already drawn a distinction between prime (or variable) costs and supplementary (or fixed) costs. During the short period, only the prime costs relating to labour and raw materials can be varied, whereas the fixed costs remain the same. But, during the long period, even the fixed costs relating to plant and machinery, staff salaries, etc., can be varied. That is, in the long run, all costs are variable, and no costs are fixed.

Short-run Cost Curves:

We may repeat that, in the short-run, a firm will adjust output to demand by varying the variable factors. If all the factors of production can be used in varying proportions, it means that the scale of operations of the firm can be changed. Each time, the scale of operations is changed, a new short-run cost curve will have to be drawn for the firm such as SAC' , SAC'' and SAC''' in the next diagram.

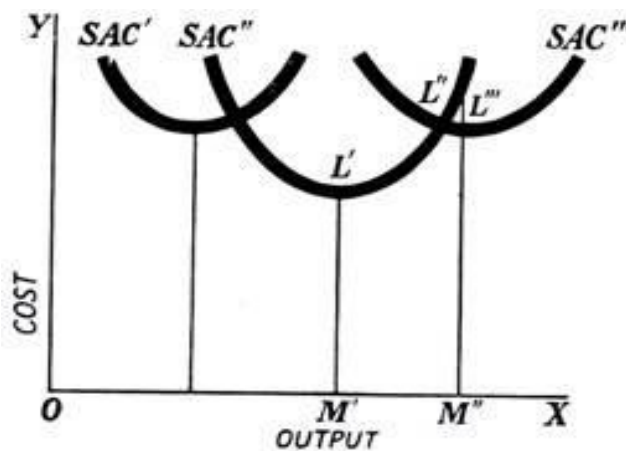
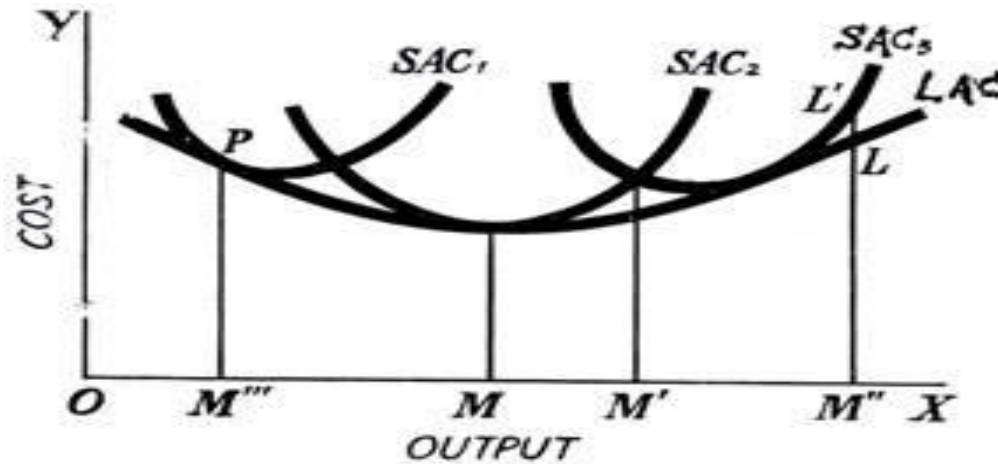


Fig. 23.5

Long-run Average Cost Curve:

In the diagram (Fig. 23.6), SAC_1 , SAC_2 , and SAC_3 are the short-run cost curves corresponding to the different scales of operations. In each case, the firm in question will be producing the desired output at the lowest cost. For example, OM''' output is produced at PM''' in the scale of operations represented by the curve SAC_1 , and so on.



LAC Curve : An Envelope

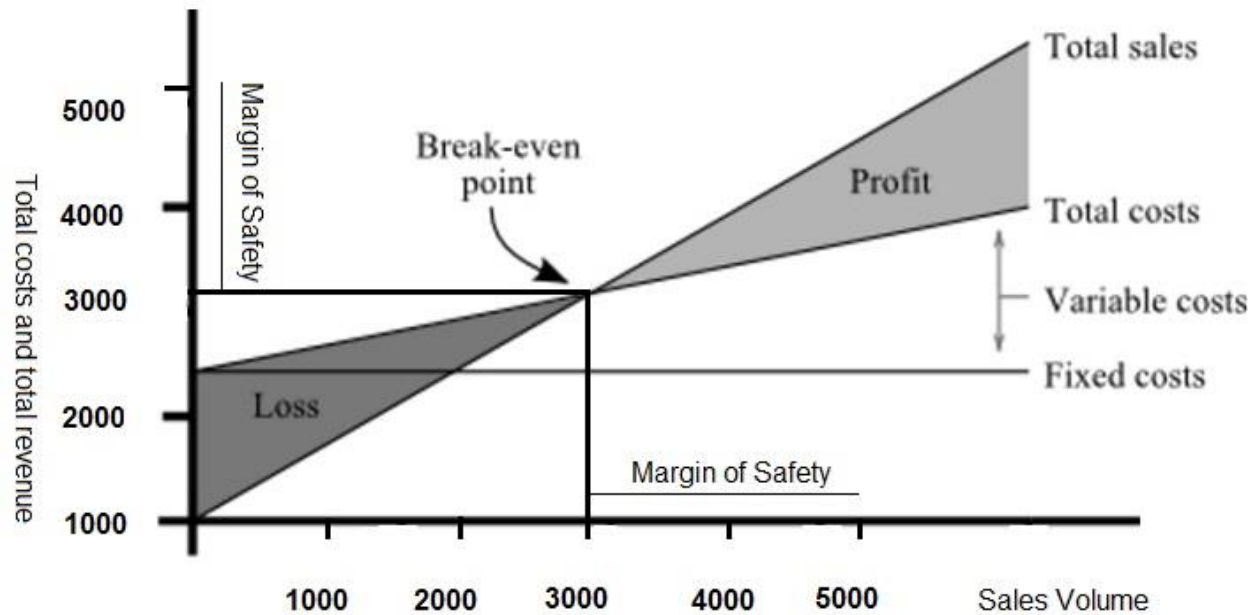
Fig. 23.6

It should be clearly understood that only in the long-run can the scale of operations be altered; in the short-run, it will be fixed, and the average cost of output above or below the optimum level will necessarily rise along the short-run cost curve in question, whether it be SAC_1 , SAC_2 and SAC_3 . A long-run average cost will show what the long-run cost of producing each output will be. It will be seen, in the Fig. 23.6 that the short-run average cost curve SAC_1 has a lower minimum point than either the curves SAC_2 and SAC_3 . The optimum output of the firm is obtained at OM .

BREAK EVEN ANALYSIS:

Break-even analyses help business owners determine when they'll begin to turn a profit and helps them price their products with that in mind. It provides a dynamic overview of the relationships among revenues, costs and profits.

However, typical variable and fixed costs differ widely among industries. This is why comparison of break-even points is generally most meaningful among companies within the same industry, and the definition of a "high" or "low" break-even point should be made within this context. A break-even analysis is a calculation of the point at which revenues equal expenses. In securities trading, the break-even point is the point at which gains equal losses.



- Break even analysis is defined as “No profit or No Loss” it denotes the minimum volume of production to be undertaken to avoid losses.
- It points out how much minimum is to be produced to see the profits.
- It is a technique for profit planning and control and therefore is considered as available marginal tool.
- Break even analysis is defined as analysis of cost and its possible impacts on revenues and value of the firm.
- A firm is said to attain BEP when its total revenue is equal to total cost.

DETERMINANTS OF BEP:

$$1. \text{Bep in units} = \frac{\text{Fixed cost}}{\text{Contribution (margin) per unit or ratio}} \quad (\text{OR}) \quad \frac{\text{Fixed cost}}{\text{selling price per unit} - \text{variable cost}}$$

Contribution margin per unit = selling price per unit – variable cost per unit.

$$2. \text{BEP in sales} = \frac{\text{Fixed cost} * \text{sales}}{\text{Sales} - \text{Variable cost}}$$

3. Total cost = fixed cost + variable cost

4. Profit = Contribution – fixed cost

5. Margin of safety (in units) = No. of units sold – Bep in units

6. BEA = P/V ratio

7. P/V ratio = $\frac{\text{Contribution}}{\text{Sales}}$

Profit

8. Margin of safety = _____

P/V ratio

Fixed cost + Targeted profit

9. Volume of sales attain profit = _____

Contribution per margin

Profit

10. Margin of safety = _____

P/V ratio

Illustration 1:

The P/V ratio of Bharat Pharmaceuticals Ltd is 50% and the margin of safety is 40%. Calculate the break-even point and the net profit if the sales volume is Rs. 1, 00,000.

Solution:

(ii) Calculation of Sales at Break-even Point.

	Rs.
Sales	1,00,000
Less margin of safety—40%	<u>40,000</u>
Sales at Break-even point	<u>60,000</u>

(iii) Calculation of Contribution at Break-even Sales

Sales at BEP × P/V ratio

∴ Rs. 60,000 × 50%

∴ Rs. 30,000.

(iv) Calculation of Fixed Costs.

	Rs.
Sales at BEP	60,000
Less contribution at BEP	<u>30,000</u>
Fixed costs	<u>30,000</u>

(v) Calculation of Profit

	Rs.
Contribution on total sales	50,000
Less fixed costs	<u>30,000</u>
Profit	<u>20,000</u>

Managerial Uses of Break-Even Analysis:

1. **Product planning:** it helps the firm in planning its new product development. Decisions regarding removal or addition of new products in their product line.
2. **Activity planning:** the firm decides the expansion of production capacity.
3. **Profit planning:** this helps the firm to plan about their profit well in advance and at the same time it helps to identify the quantity to be sold to achieve the targeted profit.
4. **Target capacity:** the targeted sales quantity helps to decide the purchase, inventory and management.
5. **Price and cost decision:** Decision regarding how much the price of the commodity should be reduced or increased to cover their cost of production.

PROFIT FORECASTING MAKING OR BUY DECISIONS:

Profit planning cannot be done without proper **profit forecasting**. **Profit forecasting** means projection of future earnings after considering all the factors affecting the size of business profits, such as firm's pricing policies, costing policies, depreciation policy, and so on. A thorough study including a proper estimation of both economic as well as non-economic variables may be necessary for a firm to project its sales volume, costs and subsequently the profits in future.

Approaches to Profit Forecasting in Managerial Economics

1. Spot Projection: Spot projection includes projecting the profit and loss statement of a business firm for a specified future period. Projecting of profit and loss statement means forecasting each important element separately. Forecasts are made about sales volume, prices and costs of producing the expected sales. The prediction of profits of a firm is subject to wide margins of error, from forecasting revenues to the inter-relation of the various components of the income statement.

2. Break-Even Analysis: It helps in identifying functional relations of both revenues and costs to output rate, keeping in consideration the way in which output is related to the profits. It also helps in doing so by relating profits to output directly by the usual data used in break-even analysis.

3. Environmental Analysis: It helps in relating the company's profits to key variable, in the economic environment such as the general business activity and the general price level. These variables are not considered by a business firm.

Buy decisions:

A make-or-buy decision is the act of choosing between manufacturing a product in-house or purchasing it from an external supplier. In a make-or-buy decision, the most important factors to consider are part of quantitative analysis, such as the associated costs of production and whether the business has the capacity to produce at required levels.

Buy Costs

Costs relating to purchasing the products from an outside source must include the price of the good itself, any shipping or importing fees, and applicable sales tax charges. Additionally, the expenses relating to the storage of the incoming product and labor costs associated with receiving the products into inventory must be factored into the decision.

LEARNING CURVE:

The learning curve is an important modern concept according to which cumulative experience in the production of a product over time increases efficiency in the use of inputs such as labour and raw materials and thereby lowers cost per unit of output.

Learning curves are also known as experience curve, cost curves, efficiency curves and productivity curves. These curves help demonstrate the cost per unit of output decreases over time with the increase in experience of the workforce. Learning curves and experience curves is extensively used by organization in production planning, cost forecasting and setting delivery schedules.

DEFINITION OF LEARNING CURVE:

According to Arrow, as a firm or its manager produces successive lots of output over various periods of time, it learns to produce more with a given quantity of resources or it is capable of producing a given output by using lesser quantities of inputs or resources than before.

The learning curve is graphically where on the X-axis cumulative total output over successive periods of time and on the Y-axis cost per unit of output are measured. It will be seen from Fig. 19.16 that the learning curve shows downward which shows declining cost per unit of output as cumulative output increases over time and the firm learns from its work experience.

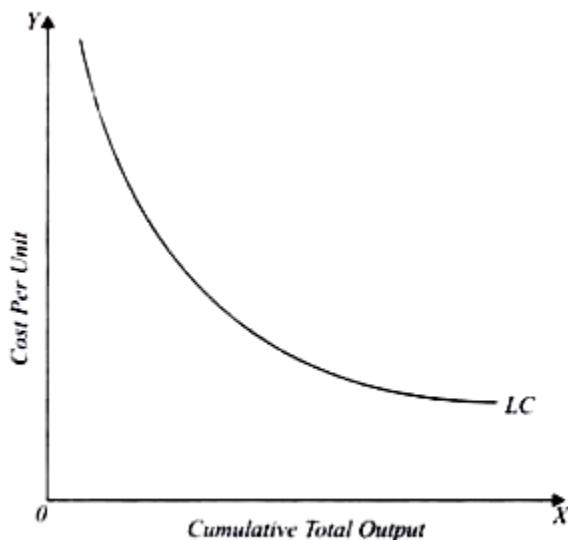


Fig. 19.16. The Learning Curve

The learning curve effect is usually expressed as a constant percentage. This percentage represents the proportion by which cost per unit of output declines with the increase in cumulative output in each successive time period.

Learning curve is relevant in taking following decision:

- Pricing decision based on estimation of future costs.
- Workforce schedule based on future requirements.
- Capital requirement projections
- Set-up of incentive structure

SUPPLY FUNCTION:

The supply function is the mathematical function explaining the quantity supplied in terms of its various determinants, including price; thus the algebraic representation of the supply curve. The supply curve is a two-dimensional representation of a supply function, with supply shown as a function of price on the supply of labour.

Supply Function

$$S_x = f(p_x, p_f, o \dots \dots \dots T, t, s)$$

The supply function is the mathematical expression of the relationship between supply and those factors that affect the willingness and ability of a supplier to offer goods for sale

SX = Supply of goods

PX = Price

PF = Factor input employed (used) for production.

- Raw material
- Human resources
- Machinery

O = Factors outside economic sphere.

T = Technology.

t = Taxes.

S = Subsidies

There is a functional (direct) relationship between price and supply.

Unit -4

PRICING DECISIONS:

Pricing of a product or service refers to the fixation of a selling price to a product or service provided by the firm. Selling price is the amount for which customers are charged for some product manufactured or for a service provided by the firm.

PERFECT COMPETITION:

Perfect competition is a market structure characterized by a complete absence of rivalry among the individual firms. A perfectly competitive firm is one whose output is so small in relation to market volume that its output decisions have no perceptible impact on price. No single producer or consumer can have control over the price or quantity of the product.

Characteristic features of perfect market:

1. Large number of buyers and sellers
2. Homogeneous product
3. Perfect knowledge about the market
4. Ruling prices 5. Absence of transport cost
6. Perfect mobility of factors
7. Profit maximization
8. Freedom in decision making

In perfect market, the price of the commodity is determined based on the demand for and supply of the product in the market. The equilibrium price and output determination is as shown in the graph.

PRICING UNDER PERFECT COMPETITION:

Demand and supply curves can be used to analyze the equilibrium market price and the optimum output.

1. If quantity demanded is equal to quantity supplied at a particular price then the market is in equilibrium
2. If quantity demanded is more than the quantity supplied then market price may not be stable. i.e., it will rise.

3. If quantity demanded is less than quantity supplied then market price is fixed not in a equilibrium position.

When the price at which quantity demanded is equal to quantity supplied, buyers as well as sellers are satisfied. If price is greater than the equilibrium price, some sellers would not be able to sell the commodity. So they would try to dispose the unsold stock at a lower price. Thus the price will go on declining till they get equalized ($Q_d = Q_s$). The various possible changes in Demand and supply are expressed in the following graphs to understand the price fluctuations in the market.

MONOPOLY:

Mono means single, poly means seller and hence monopoly is a market structure where only one sells the goods and many buyers buy the same. Monopoly lies at the opposite extreme from perfect competition on the market structure continuum. A firm produces the entire supply of a particular good or service that has no close substitute.

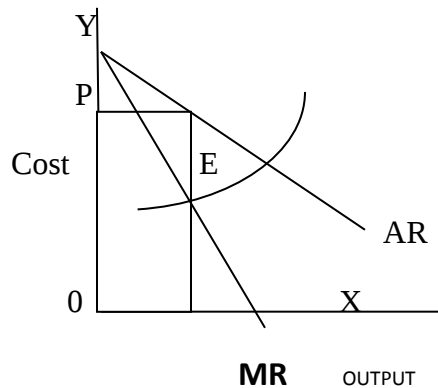
Characteristic Features:

1. A single seller in the market
2. There are no close substitutes
3. There is a restriction for the entry and exit for the firms in the market
4. Imperfect dissemination of information.

PRICING UNDER MONOPOLY:

A firm under monopoly faces a downward sloping demand curve or average revenue curve. Further, in monopoly, since average revenue falls as more units of output are sold, the marginal revenue is less than the average revenue. In other words, under monopoly the MR curve lies below the AR curve. The Equilibrium level in monopoly is that level of output in which marginal revenue equals marginal cost.

The producer will continue producer as long as marginal revenue exceeds the marginal cost. At the point where MR is equal to MC the profit will be maximum and beyond this point the producer will stop producing. It can be seen from the diagram that up till OM output, marginal revenue is greater than marginal cost, but beyond OM the marginal revenue is less than marginal cost. Therefore, the monopolist will be in equilibrium at output OM where marginal revenue is equal to marginal cost and the profits are the greatest. The corresponding price in the diagram is MP' or OP. It can be seen from the diagram at output OM, while MP' is the average revenue, ML is the average cost, therefore, P'L is the profit per unit.



OLIGOPOLY:

The **Oligopoly Market** characterized by few sellers, selling the homogeneous or differentiated products. In other words, the Oligopoly market structure lies between the pure monopoly and monopolistic competition, where few sellers dominate the market and have control over the price of the product.

Features of Oligopoly Market:



1. Few Sellers: Under the Oligopoly market, the sellers are few, and the customers are many. Few firms dominating the market enjoys a considerable control over the price of the product.

2. Interdependence: it is one of the most important features of an Oligopoly market, wherein, the seller has to be cautious with respect to any action taken by the competing firms. Since there are few sellers in the market, if any firm makes the change in the price or promotional scheme, all other firms in the industry have to comply with it, to remain in the competition.

3. Advertising: Under Oligopoly market, every firm advertises their products on a frequent basis, with the intention to reach more and more customers and increase their customer base. This is due to the advertising that makes the competition intense.

4. Competition: It is genuine that with a few players in the market, there will be an intense competition among the sellers. Any move taken by the firm will have a considerable impact on its rivals. Thus, every seller keeps an eye over its rival and be ready with the counterattack.

5. Entry and Exit Barriers: The firms can easily exit the industry whenever it wants, but has to face certain barriers to entering into it. These barriers could be Government license, Patent, large firm's economies of scale, high capital requirement, complex technology, etc. Also, sometimes the government regulations favor the existing large firms, thereby acting as a barrier for the new entrants.

6. Lack of Uniformity: There is a lack of uniformity among the firms in terms of their size, some are big, and some are small.

PRICING UNDER OLIGOPOLY:

We shall confine our study to the non-collusive oligopoly model of Sweezy, and to the collusive oligopoly models relating to cartels and price leadership.

1. The Sweezy Model of Kinked Demand Curve:

Sweezy presented the kinked demand curve analysis to explain price rigidities often observed in oligopolistic markets. Sweezy assumes that if the oligopolistic firm lowers its price, its rivals will react by matching that price cut in order to avoid losing their customers. Thus the firm lowering the price will not be able to increase its demand much. This portion of its demand curve is relatively inelastic.

On the other hand, if the oligopolistic firm increases its price, its rivals will not follow it and change their prices. Thus the quantity demanded of this firm will fall considerably. This portion of the demand curve is relatively elastic. In these two situations, the demand curve of the oligopolistic firm has a kink at the prevailing market price which explains price rigidity.

Assumptions:

The kinked demand curve hypothesis of price rigidity is based on the following assumptions:

- (1) There are few firms in the oligopolistic industry.
- (2) The product produced by one firm is a close substitute for the other firms.
- (3) The product is of the same quality. There is no product differentiation.
- (4) There are no advertising expenditures.
- (5) There is an established or prevailing market price for the product at which all the sellers are satisfied.

- (6) Each seller's attitude depends on the attitude of his rivals.
- (7) Any attempt on the part of a seller to push up his sales by reducing the price of his product will be counteracted by the other sellers who will follow his move.
- (8) If he raises the price, others will not follow him. Rather they will stick to the prevailing price and cater to the customers, leaving the price-raising seller.
- (9) The marginal cost curve passes through the dotted portion of the marginal revenue curve so that changes in marginal cost do not affect output and price.

MONOPOLISTIC COMPETITION:

Monopolistic Competition refers to the market situation in which there is a keen competition, but neither perfect nor pure, among a group of a large number of small producers or suppliers having some degree of monopoly because of the differentiation of their products. Thus, we can say that monopolistic competition (or imperfect competition) is a mixture of competition and a certain degree of monopoly, on the basis of a correct appraisal of the market situation.

Definition:

1. Monopolistic Competition refers to competition among a large number of sellers producing close but not perfect substitutes for each other.
2. According to Prof. Lerner – “The condition of imperfect competition arises when a seller has to face the falling demand curve.”

Features of Monopolistic Competition ↓

The following are the features or characteristics of monopolistic competition:-

1. Large Number of Sellers

There is large number of sellers producing differentiated products. So, competition among them is very keen. Since number of sellers is large, each seller produces a very small part of market supply. So no seller is in a position to control price of product. Every firm is limited in its size.

2. Product Differentiation

It is one of the most important features of monopolistic competition. In perfect competition, products are homogeneous in nature. On the contrary, here, every producer tries to keep his product dissimilar than his rival's product in order to maintain his separate identity. This boosts up the competition in market. So, every firm acquires some monopoly power.

3. Freedom of Entry and Exit

This feature leads to stiff competition in market. Free entry into the market enables new firms to come with close substitutes. Free entry or exit maintains normal profit in the market for a longer span of time.

4. Selling Cost

It is a unique feature of monopolistic competition. In such type of market, due to product differentiation, every firm has to incur some additional expenditure in the form of selling cost. This cost includes sales promotion expenses, advertisement expenses, salaries of marketing staff, etc. But on account of homogeneous product in perfect competition and zero competition in monopoly, selling cost does not exist there.

5. Absence of Interdependence

Large numbers of firms are different in their size. Each firm has its own production and marketing policy. So no firm is influenced by other firm. All are independent.

6. Two Dimensional Competition

Monopolistic competition has two types of competition aspects viz.

Price competition i.e. firms compete with each other on the basis of price.

Non price competition i.e. firms compete on the basis of brand, product quality advertisement.

7. Concept of Group

In place of Marshallian concept of industry, Chamberlin introduced the concept of Group under monopolistic competition. An industry means a number of firms producing identical product. A group means a number of firms producing differentiated products which are closely related.

8. Falling Demand Curve

In monopolistic competition, a firm is facing downward sloping demand curve i.e. elastic demand curve. It means one can sell more at lower price and vice versa.

Price discrimination

Price discrimination is the practice of charging a different price for the same good or service. There are three types of price discrimination – first-degree, second-degree, and third-degree price discrimination. Price discrimination is one of the competitive practices used by larger, established businesses in an attempt to profit from differences in supply and demand from consumers. Price discrimination is a pricing strategy that occurs when a business or seller charges a different price to various customers for the same product or service. A company can enhance its profits by charging each customer the maximum amount he is willing to pay, eliminating consumer surplus, but it is often a challenge to determine what that exact price is for every buyer. For price discrimination to succeed, businesses must understand their

customer base and its needs, and there must be familiarity with the various types of price discrimination used in economics. The most common types of price discrimination are first, second and third degree discrimination.

First Degree Price Discrimination

In an ideal business world, companies would be able to eliminate all consumer surplus through first degree price discrimination. This type of pricing strategy takes place when businesses can accurately determine what each customer is willing to pay for a specific product or service and selling that good or service for that exact price.

In some industries, such as used car or truck sales, an expectation to negotiate final purchase price is part of the buying process. The company selling the used car can gather information through data mining relating to each buyer's past purchase habits, income, budget and maximum available output to determine what to charge for each car sold. This pricing strategy is time-consuming and difficult to perfect for most businesses, but it allows the seller to capture the highest amount of available profit for each sale.

Second Degree Price Discrimination

In second degree price discrimination, the ability to gather information on every potential buyer is not present. Instead, companies price products or services differently based on the preferences of various groups of consumers.

Most often, businesses apply second-degree price discrimination through quantity discounts; customers who buy in bulk receive special offers that are not granted to those who buy a single product. This type of pricing strategy is used most often in warehouse retailers, such as Sam's Club or Costco, but it can also be seen in companies that offer loyalty or rewards cards to frequent customers.

Second degree price discrimination does not altogether eliminate consumer surplus, but it does allow a company to increase its profit margin on a subset of its consumer base.

Third Degree Price Discrimination

Third degree price discrimination occurs when companies price products and services differently based on the unique demographics of subsets of its consumer base, such as students, military personnel or seniors.

Companies can understand the broad characteristics of consumers more easily than the buying preferences of individual buyers. Third degree price discrimination provides a way to reduce consumer surplus by catering to the price elasticity of demand of specific consumer subsets.

This type of pricing strategy is often seen in movie theater ticket sales, admission prices to amusement parks or restaurant offers. Consumer groups that may otherwise not be able or willing to purchase a product due to their lower income are captured by this pricing strategy,

increasing company profits.

Multiple Products

As the name indicates multiple products signifies production of more than one product. The traditional theory of price determination assumes that a firm produces a single homogenous product. But firms in reality usually produce more than one product and then there exists interrelationships between those products. Such products are joint products or multi-products. In joint products the inputs are common in the production process and in multi-products the inputs are independent but have common overhead expenses. Following are the pricing methods followed –

Full Cost Pricing Method

Full cost plus pricing is a price-setting method under which you add together the direct material cost, direct labor cost, selling and administrative cost, and overhead costs for a product and add to it a markup percentage in order to derive the price of the product. The pricing formula is –

Pricing formula = $\frac{\text{Total production costs} - \text{Selling and administration costs}}{\text{Number of units expected to sell}} + \text{Markup}$

Number of units expected to sell

This method is most commonly used in situations where products and services are provided based on the specific requirements of the customer. Thus, there is reduced competitive pressure and no standardized product being provided. The method may also be used to set long-term prices that are sufficiently high to ensure a profit after all costs have been incurred.

Marginal Cost Pricing Method

The practice of setting the price of a product to equal the extra cost of producing an extra unit of output is called marginal pricing in economics. By this policy, a producer charges for each product unit sold, only the addition to total cost resulting from materials and direct labor. Businesses often set prices close to marginal cost during periods of poor sales.

For example, an item has a marginal cost of \$2.00 and a normal selling price is \$3.00, the firm selling the item might wish to lower the price to \$2.10 if demand has waned. The business would choose this approach because the incremental profit of 10 cents from the transaction is better than no sale at all.

Transfer Pricing

Transfer Pricing relates to international transactions performed between related parties and covers all sorts of transactions.

The most common being distributorship, R&D, marketing, manufacturing, loans, management fees, and IP licensing.

All intercompany transactions must be regulated in accordance with applicable law and comply with the "arm's length" principle which requires holding an updated transfer pricing study and an intercompany agreement based upon the study.

Some corporations perform their intercompany transactions based upon previously issued studies or an ill advice they have received, to work at a "cost plus X%". This is not sufficient, such a decision has to be supported in terms of methodology and the amount of overhead by a proper transfer pricing study and it has to be updated each financial year.

Dual Pricing

In simple words, different prices offered for the same product in different markets is dual pricing. Different prices for same product are basically known as dual pricing. The objective of dual pricing is to enter different markets or a new market with one product offering lower prices in foreign country.

There are industry specific laws or norms which are needed to be followed for dual pricing. Dual pricing strategy does not involve arbitrage. It is quite commonly followed in developing countries where local citizens are offered the same products at a lower price for which foreigners are paid more.

Airline Industry could be considered as a prime example of Dual Pricing. Companies offer lower prices if tickets are booked well in advance. The demand of this category of customers is elastic and varies inversely with price.

As the time passes the flight fares start increasing to get high prices from the customers whose demands are inelastic. This is how companies charge different fare for the same flight tickets. The differentiating factor here is the time of booking and not nationality.

Price Effect

Price effect is the change in demand in accordance to the change in price, other things remaining constant. Other things include – Taste and preference of the consumer, income of the consumer, price of other goods which are assumed to be constant. Following is the formula for price effect –

Price Effect = Proportionate change in quantity demanded of X

Proportionate change in price of X

Price effect is the summation of two effects, substitution effect and income effect

$$\text{Price effect} = \text{Substitution effect} - \text{Income effect}$$

Substitution Effect

In this effect the consumer is compelled to choose a product that is less expensive so that his satisfaction is maximized, as the normal income of the consumer is fixed. It can be explained with the below examples –

- Consumers will buy less expensive foods such as vegetables over meat.
- Consumers could buy less amount of meat to keep expenses in control.

Income Effect

Change in demand of goods based on the change in consumer's discretionary income. Income effect comprises of two types of commodities or products –

Normal goods – If there is a price fall, demand increases as real income increases and vice versa.

Inferior goods – In case of inferior goods, demand increases due to an increase in the real income.

PRICING PRACTICES:

Pricing is one of the most important elements of the marketing, as it is the only factor which generates a turnover for the organization. It can be defined as "Activities aimed at finding a product's optimum price, typically including overall marketing objectives, consumer demand, product attributes, competitors' pricing, and market and economic trends." It costs to produce and design a product; it costs to distribute a product and costs to promote it. Price must support these elements of the mix. Pricing is difficult and must reflect supply and demand relationship. Pricing a product too high or too low could mean a loss of sales for the organization. Pricing should take into account the following factors:

Fixed and variable costs

Competition

Company objectives

Proposed positioning strategies

Target group and willingness to pay

An organization can adopt a number of pricing strategies. The pricing strategies are based much on what objectives the company has set itself to achieve.

1. PENETRATION PRICING

Penetration pricing is a strategy adopted for quickly achieving a high volume of sales and deep market penetration of a new product. Under this approach, a product is widely promoted and its introductory price is kept comparatively low.

This strategy is based on the assumption that the product does not have an identifiable price-market segment, it has elasticity of demand (buyers are price sensitive), the market is large enough to sustain relatively low profit margins, and the competitors too will soon lower their prices.

2. Price skimming

The practice of 'price skimming' involves charging a relatively high price for a short time where a new, innovative, or much-improved product is launched onto a market. The objective with skimming is to "skim" off customers who are willing to pay more to have the product sooner; prices are lowered later when demand from the "early adopters" falls. The success of a price-skimming strategy is largely dependent on the inelasticity of demand for the product either by the market as a whole, or by certain market segments. High prices can be enjoyed in the short term where demand is relatively inelastic. In the short term the supplier benefits from 'monopoly profits', but as profitability increases, competing suppliers are likely to be attracted to the market (depending on the barriers to entry in the market) and the price will fall as competition increases.

3. Prestige Pricing

Prestige pricing is a marketing strategy where prices are set higher than normal because lower prices will hurt instead of helping sales, such as for high-end perfumes, jewelry, clothing, cars, etc. It is also called image pricing or premium pricing.

It is a price system that implies added value of a product because of its location at the higher end of the price scale. Prices within this type of financial modeling are artificially elevated for a psychological marketing advantage. This type of pricing aims to capitalize on buyers' notions that one brand's high-priced item is superior in quality to a similar item that could be purchased for significantly less.

4. Value Pricing

Under this strategy, you will price your product based on the value it creates for the customer. This is usually the most profitable form of pricing, if you can achieve it. The most extreme variation on this is "pay for performance" pricing for services, in which you charge on a variable scale according to the results you achieve. Let's say that your widget above saves the typical customer Rs. 1,000 a year in, say, energy costs. In that case, Rs. 60 seems like a bargain - maybe even too cheap. If your product reliably produced that kind of cost savings, you could easily

charge Rs. 200, Rs. 300 or more for it, and customers would gladly pay it, since they would get their money back in a matter of months.

5. Price lining strategy

The strategy of price lining, also known as product line pricing, is a pricing method used in many retail stores. It helps make purchasing easier by creating distinct categories of products and services.

Price lining is defined as the technique of categorizing goods and services according to price in order to form obvious levels of quality. When items are priced in this way, customers can clearly identify which products are superior even if they know very little about the item they are shopping for.

6. Peak load pricing

Peak load pricing involves charging the highest possible prices in accordance with the rising demand for a service with few competitive peers. Often used by electricity companies during the summer, to capture the highest load of demand at the highest prices for the highest profit.

7. Two part tariff

A two-part tariff is a pricing scheme according to which the buyer pays to the seller a fixed fee and a constant charge for each unit purchased. When it is used, the average price paid decreases as more units are purchased. Further, it is the marginal charge and not the fixed fee that determines how many units will be purchased. Therefore, a two-part tariff can be used as a vehicle for price discrimination and also for manipulating the incentives given to the buyers, allowing also the sellers to capture part of the residual surplus through an appropriately chosen fixed fee.

8. Limit pricing

Limit pricing is the practice by a competitor engaging in monopolistic behavior of setting a product or service price at a level just low enough to deter potential market entrants from competing in the market. This limit price may not be the price point at which the existing competitor earns the largest profit, but it does keep other companies out of the market.

9. Price matching

"We'll match any price or give you a discount if you find the same item for less at another store." You've probably heard these claims before, often from major retailers, who obviously want your patronage. This is called price matching, when one retail outlet offers to sell something for the same price you'd purchase it for somewhere else.

Unit-5INVESTMENT DECISIONS:

The **Investment Decision** relates to the decision made by the investors or the top level management with respect to the amount of funds to be deployed in the investment opportunities. Simply, selecting the type of assets in which the funds will be invested by the firm is termed as the investment decision. These assets fall into two categories:

1. **Long Term Assets**
2. **Short-Term Assets**



The decision of investing funds in the long term assets is known as **Capital Budgeting**. Thus, Capital Budgeting is the process of selecting the asset or an investment proposal that will yield returns over a long period.

The first step involved in Capital Budgeting is to select the asset, whether existing or new on the basis of benefits that will be derived from it in the future.

The next step is to analyze the proposal's uncertainty and risk involved in it. Since the benefits are to be accrued in the future, the uncertainty is high with respect to its returns.

Finally, the minimum rate of return is to be set against which the performance of the long-term project can be evaluated.

NATURE OF CAPITAL BUDGETING

Nature of **capital budgeting** can be explained in brief as under

- Capital expenditure plans involve a huge investment in fixed assets.
- Capital expenditure once approved represents long-term investment that cannot be reserved or withdrawn without sustaining a loss.
- Preparation of capital budget plans involve forecasting of several years profits in advance in order to judge the profitability of projects.

It may be asserted here that decision regarding capital investment should be taken very carefully so that the future plans of the company are not affected adversely.

SIGNIFICANCE OF CAPITAL BUDGETING

a) Long-term Applications:

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

(b) Competitive Position of an Organization:

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

(c) Cash Forecasting:

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

(d) Maximization of Wealth:

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

**TYPES OF INVESTMENT METHODS OF EVALUATION CRITERIA FOR
SELECTION:**

There are many types of investments and investing styles to choose from. Mutual funds, ETFs, individual stocks and bonds, closed-end mutual funds, real estate, various alternative investments and owning all or part of a business are just a few examples.

Stocks

Buying shares of stock gives the buyer the opportunity to participate in the company's success via increases in the stock's price and dividends that the company might declare. Shareholders have a claim on the company's assets in the event of liquidation, but do not own the assets.

Holders of common stock have voting rights at shareholders' meetings and the right to receive dividends if they are declared. Holders of preferred stock don't have voting rights, but do receive preference in terms of the payment of any dividends over common shareholders. They also have a higher claim on company assets than holders of common stock.

Bonds

Bonds are debt instruments whereby an investor effectively is loaning money to a company or agency (the issuer) in exchange for periodic interest payments plus the return of the bond's face amount when the bond matures. Bonds are issued by corporations, the federal government plus many states, municipalities and governmental agencies.

Bonds can be purchased as new offerings or on the secondary market, just like stocks. A bond's value can rise and fall based on a number of factors, the most important being the direction of interest rates. Bond prices move inversely with the direction of interest rates.

Mutual funds

A mutual fund is a pooled investment vehicle managed by an investment manager that allows investors to have their money invested in stocks, bonds or other investment vehicles as stated in the fund's prospectus. Mutual funds are valued at the end of trading day and any transactions to buy or sell shares are executed after the market close as well.

Stocks

Buying shares of stock gives the buyer the opportunity to participate in the company's success via increases in the stock's price and dividends that the company might declare. Shareholders have a claim on the company's assets in the event of liquidation, but do not own the assets. Holders of common stock have voting rights at shareholders' meetings and the right to receive dividends if they are declared. Holders of preferred stock don't have voting rights, but do receive preference in terms of the payment of any dividends over common shareholders. They also have a higher claim on company assets than holders of common stock.

Bonds

Bonds are debt instruments whereby an investor effectively is loaning money to a company or agency (the issuer) in exchange for periodic interest payments plus the return of the bond's face amount when the bond matures. Bonds are issued by corporations, the federal government plus many states, municipalities and governmental agencies. Bonds can be purchased as new offerings or on the secondary market, just like stocks. A bond's value can rise and fall based on a number of factors, the most important being the direction of interest rates. Bond prices move inversely with the direction of interest rates.

Mutual funds

A mutual fund is a pooled investment vehicle managed by an investment manager that allows investors to have their money invested in stocks, bonds or other investment vehicles as stated in the fund's prospectus. Mutual funds can make distributions in the form of dividends, interest and capital gains. These distributions will be taxable if held in a non-retirement account. Selling a mutual fund can result in a gain or loss

ETFs

ETFs or exchange-traded funds are like mutual funds in many respects, but are traded on the stock exchange during the trading day just like shares of stock. Unlike mutual funds which are valued at the end of each trading day, ETFs are valued constantly while the markets are open.

Alternative investments

Beyond stocks, bonds, mutual funds and ETFs, there are many other ways to invest. We will discuss a few of these here. Real estate investments can be made by buying a commercial or residential property directly. Real estate investment trusts (REITs) pool investor's money and purchase properties. REITS are traded like stocks. There are mutual funds and ETFs that invest in REITs as well.

Hedge funds and private equity also fall into the category of alternative investments, although they are only open to those who meet the income and net worth requirements of being an accredited investor.

EVALUATION CRITERIA FOR SELECTION:

1. on your own: Individual stocks and bonds

If you prefer to take a hands-on approach to your investments and are comfortable being responsible for your portfolio's performance, then choosing individual stocks and bonds yourself may be the right move. "It's the most time-consuming alternative by far and demands the most individual responsibility," says John Manetta, senior portfolio manager, Investment Management and Guidance, Merrill Lynch. "Ask yourself if you're comfortable in the role of sole decision-maker, because your results will rely largely on your choices."

2. with a little help: Mutual funds and ETFs

Mutual funds and exchange-traded funds (ETFs) entail some research and hands-on involvement from you, but without the time and effort of managing a portfolio of individual securities on your own. The stocks or bonds within an actively managed fund will be selected and the fund continually rebalanced by a professional fund manager to meet the fund's objective. Knowing that you won't need to make day-to-day decisions might simplify investing for you.

3. with a lot of help: A professionally managed portfolio

Does the idea of navigating investment choices, analyzing performance and tracking trends and market fluctuations feel like more than you want to take on? A "professionally managed portfolio" could lessen the pressure of some of those responsibilities. With a managed portfolio, rather than choosing investments on your own, you talk through your goals with a financial

advisor, who helps you choose a portfolio that's appropriate for your needs and wishes. Professional managers select the underlying investments. "If your preference is to have someone else handle the minutiae of day-to-day portfolio management, with you checking in a few times a year, then this is the way to go," says Vale.

BUSINESS CYCLE:

Introduction

A study of fluctuations in business activity is called business cycle. Business cycle can be defined as a periodically recurring wave like movements in aggregate economic activity (like national income, employment, investment, profits, prices) reflected in simultaneous, fluctuations in major macro economic variables. R A Gordon defined business cycle as consisting of "recurring alteration of expansion and contraction in aggregate economic activity, the alternating movements in each direction being self-reinforcing and prevailing virtually all parts of the economy".

Phases Of A Business Cycle:

Recovery. In economics it has been observed that income and employment tend to fluctuate regularly overtime. These fluctuations are known as business cycle or trade cycle.

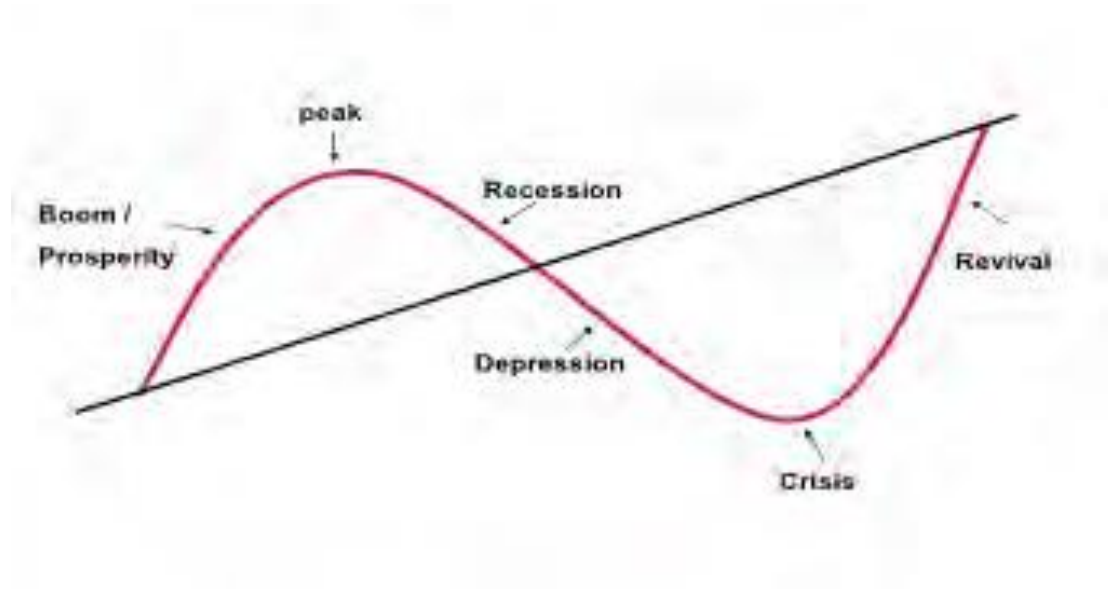
Peak / Boom:

When the economy is booming national income of the country is high and there is full employment, the consumption and investment is high. Tax revenue is high. Wages and profits will also increase. There will be inflationary pressure in the economy.

Recession: when the economy moves into recession, output and income fall leading to a reduction in consumption and investment. Tax revenue begins to fall and government expenditure begins to benefit the society. Wage demands moderate as unemployment rises, import and inflationary pressure declines.

Trough: economic activities of the country are low, mass unemployment exists, so consumption investment and imports will be low. Pricing may be falling (there will be deflation)

Recovery: as the economy moves into recovery, national income and output begin to increase. Unemployment falls, consumption, investment and import begins to rise. Workers demand more wages and inflationary pressure begins to mount.



managerial economics