UNIT 1

I-BUSINESS DECISIONS

DECISIONS

"The Decisions is the point at which plans, policies & objectives are translated into concrete actions".

Decisions is a choice where by a person come to a conclusion about a situation. It represents a course of behaviour or action about what must or not be done".

BUSINESS DECISIONS

Business decision is the selection of a course of action among various alternatives to achieve a specific objective or to solve a specific problem.

Decision management, also known as enterprise decision management (EDM) or business decision management(BDM) entails all aspects of designing, building & managing the automated decision making systems that an organisation uses to manage its interactions with customers employees & suppliers.

Decision Making is the selection of one course of action from two or more alternative courses of action. It is a choice making activity & the choice determines our action or inaction.

Features of Business Decisions

1. Selective in character:- the manager select the best action among various available alternatives. If there is only alternative is available, there is no scope for decision making
2. Rational in Character:- based on reason , the manager has to analyse the effect of a decision before selecting a particular action.
3. Decision Making is the responsibility of the management executive at all levels.
4. Business decisions are Purposive:-. The purpose is finding solution to a problem provides an effective means to the desired goal.
5. Business decision are also based on intellectual capacity of managers. An intelligent managers take a good decisions independently.
6. It is a continuous process:- which goes on throughout the life of an organisation
7. Decision making is dynamic process:- an individual can take a number of decisions effectively on everyday.

8. The objective of business decision is to achieve organisational goal. It is not an end in itself but a means to reach the goal.
9. Decision is situational:- An individual take decision according to the situations prevailing in the business world. In order to solve the same problems different decisions may be taken, because the situation is changed from time to time.
10. Decisions are normally taken on the basis of past experiences & present circumstances for a future course of action.
11. Business decisions involves certain commitment management is committed to every decision it takes.

IMPORTANCE OF BUSINESS DECISIONS

1. **Implementation of Managerial function**:- Business decisions are necessary for effective functioning of the management. All managerial functions are exercised through decision making. Decisions are essential for the entire process of management activities like planning, organizing, controlling etc.
2. Solving business problems:- Decisions are necessary for various issues & problems of business activities like production finance, marketing, personnel etc.,
3. **Evaluation of managerial performance**:- Decision can evaluate managerial performance when decision is correct, it is understood that the manager is qualified, able & efficient. When the decision is wrong it is understood that the manager is disqualified.
4. **Tool for manager:-** Managers use tools of decisions making for discharging their duties. Whatever a manager does, he can do it on the basis of some decisions .
5. **Production planning/Helpful in planning & policies:-** any policy/plan established through decision making without decision making no plans & policies are performed. In the process of making plans appropriate decisions must be made from so many alternatives. In production planning the manager has to decide many things such as what to produce how , where, when to produce, what to sell & so on.
6. **Significance in organisation:-** in an organization, business decisions are taken in relation to structure & nature of organizations division of work, specialization & so on .
7. **Selecting the best alternatives:-** Decision making is the process of selecting the best alternatives. It is necessary in every organisation because there are many alternatives. So decision makers evaluate various advantages & disadvantages of ever y alternative & select the best alternative.

8. **Direction & control:-** In direction, decision relate to the determining the course of action, deciding the type of motivation, deciding the orders & instructions to be given & so on. Where as in control the decisions relate to the deciding of standards of control, policies, procedures etc.,
9. **Business concern:-** Decision making is necessary in a business concern because there are many alternative course of action to business situations. For instance for establishment of business the entrepreneur may select one of the form of organization such as a sole trading, partnership, joint stock company, & also raising for capital, the entrepreneur may issue shares or debentures so borrow for financial institutions.
10. **Successful: Operation of business:-** every individual department or organization make the decisions, in this competitive world. Organisation exist when the correct & appropriate decisions are made.

BASIC CONCEPTS OF BUSINESS DECISIONS

In economics there are many concepts & analytic tools which can be great use to business economics of course, economics does not have readymade law for immediate use in solving business problems. But it does offer broad principles which the managerial economist can put to practice. In applying the economic principles for solving his practical problems of decision making the business economist has to use additional skills & tools to fills the gap between economic theory & business practice. There are economic tools which are used widely in managerial economics.

The principles or tools are;-

1. Opportunity Cost principle
2. Incremental principle
3. Principle of time perspective
4. Discounting principle
5. The equi-marginal principle

1. **Opportunity Cost Principle:-**
   This principle is of immense use in decision making . It can be stated as follows:
   "The cost involved in any decision considers of the scarifies of alternatives required by that decision. If there are no scarifies there are no costs". Each alternative is a opportunity, when a right & lucrative opportunity is selected, the other opportunities less lucrative

are rejected. Opportunity cost mean profit/income which we ignore to select the better.
In simple words, Opportunity cost means ' Profit forgone" alternative-what you gave up when you got something , the opportunity cost of a decision is based on what must be given up (the next best alternative) as a result o the decision. Any decision that involves a choice between two or more options has an opportunity cost.
Acc. To Benham" the Opportunity cost of anything is the next best alternative that could be produced instead by the same factors, costing the same output of money".

2. **Incremental principle:**-
Increment means increase or raise. Under this principle two aspects are studies, they are incremental cost & incremental revenue.
Incremental cost means any raise in the cost due to implementation of any management decision such as expansion, diversification, addition of new product line, changing channel of distribution , adding new set of plant & machinery etc. . Raise in the cost due to above reasons is called incremental cost & it is measured by the following formula

$Ic = c2 - C1 = \Delta c$

IC= Incremental cost
C2 = New increased total cost
C1 = old total cost
$\Delta C = chanage$

This incremental cost is compared with the incremental revenue

IR = R2 – R1 =ΔR

IR = Incremental Revenue
R2 = Total Incremental new revenue
R1 = Total old Revenue
Δc = Change

" in price determination, this principle states that a firm would maximise its profits if it equates its marginal costs to its marginal revenue".

3. **Principle of Time Perspective:-** Another principle is the principle of time perspective which is useful in decision-making in output, prices, advertising & expansion of business. The principle of time perspective conduct a study of forces of Demand & supply at different point of time to determine price of a product.
Acc. To Alfred Marshall based on time market divided into 4 categories namely
   a) **Market Period**:- this is a period of few days or weeks, under this period supply remain constant because changes to factors of production is practically impossible. In this market period demand

is the factor influencing variation in the price. This is short term phenomenon.

b) **Short Period:-** Under short period supply can be increased in small measure to the extent of unutilised capacity of fixed factors of production. Time involves litter bigger than market period it may be a period of 3 to 6 months.

c) **Long Period:-** it is a time of 3 to 5 years. There is sufficient time change he capacity of production by varying. Fixed factors of production. Any quantity can be supply to the market under long period.

d) **Secular Period:-** under Secular period any quantity can be supplied by altering all factors.

4. Discounting Principle:- Generally people consider a rupee tomorrow to be worth less than a rupee today. This principle emphasis present value of future money i.e. to earn Ra 100 after one year @ 8% interest P.A how much is to be invested At present. Present amount of investment could be found out by applying the following formula

PV= Present Value

I = Rate of interest

We find out PV of Rs 100 = 100÷(1+8%)

= 100÷108

= 92.59 Rs.

The principle of economics used in the calculations given above is called Discounting Principle.

It can be explained as" if a decision affects costs & revenue at future dates. It is necessary to discount those costs & revenue to obtain the present values of both before a varied comparison of alternatives can be made". Financial Institution like UTI & other banks adopt this principle very much while making investment of present money.

5**) The Equi-Marginal Principle:-**

The principle states that an input should be allocated in such a way that the value added by the last unit of the input is the same in all its uses. This generalized law is known as the equi-marginal principle

Eg:- a firm has got two workers to employ 3 activities, say production of milk, butter & cheese, ghee. The firm must allocate these workers in such a way that the marginal productivity of the last worker employed in each of these activities is the same. To put it more clear

way, if the marginal worker given the duty of produced worker employed on butter & cheese production must also earn neither more nor less than Rs. 20. For the milk plant. Otherwise the firm will not be making the best use of the employed labour. The Rs. 20 worth of additional output product by the marginal worker is called " Value of Marginal Product of VMP". According to this law of equi-marginal principle in short as follows

VMPa = VMP b = VMPc

V = value

M = Marginal

P = Product

GOALS OF BUSINESS(Business Goals)

A sound business goal is a target that's specific measurable, achievable, relevant & time-bound. Such goals have an intrinsic quantitative or qualitative value that makes it worthwhile to consume & resource to achieve them.

Types of Business Goals

1. **Economic objectives:**

Economic objectives of business refers to the objectives of earning profit and also other objective that are necessary to be persude to achieve the profit objective which includes creation of customer, regular innovation and best possible use of available resources.

a. **Profit Earning:**

Profit is the life blood of business without which no business can survive in a competitive market. In fact, profit making is a primary objective for which a business unit is brought into existence.

b. **Creation of customer:**

A business unit cannot survive unless there are customers to buy the products and services.

c. **Regular Innovation:**

Innovation means changes which bring about improvement in products process of production and distribution of goods business through innovation are able to reduce cost by adopting better methods of production and also increases their sales by attracting more customers because of improved products.

d. **Optimum use of Resources:**

The amount of capital may be used to buy machinery raw materials employment and have cash to meet day to day expenses. Thus business activity requires various resources like men, materials, money and machines.

e. Sales Maximization:

Sales maximization is an approach to business where the company primary objective is to generate as much revenue as possible. Sales or revenue is the generation of cash flow through the sale of goods and services.

f. Cost Maximization:

Each firm aims at becoming cost effective in its operations measures are taken to use the scarce resources in the best possible manner. Employee the latest technique to minimise the wastage to recycle the resource to save time. Since profit is represented as the difference between revenue and cost of firm. All possible efforts are taken to minimize the cost.

Profit= Revenue-Expenses or Cost of production

2. Social objectives:

Social objectives are those objectives of business which are desire to be achieved for the benefits of the society.

a. Production and supply of quality goods and services:

The objective of business should be to produce better quality goods and supply them at the right time at right place. It is not desirable on the part of the businessmen to supply adulterated or inferior goods which cause injuries to the customers.

b. Adoption of fair trade practices:

In every society activities such as black marketing and over charging are considered as undesirable. Misleading advertisement give a false impression about the quality of products. All these activities earn a bad name and sometimes make the businessman liable for penalty and imprisonment under the law.

c. Contribution to the general welfare of the society:

Business unit should work for the general welfare and upliftment of the society. There is a possible through running of schools and colleges for better education, centres to train the people to earn their livelihood.

3. Human objective:

These objectives are aimed at the well being as well as fulfilment of expectations of employees and also peoples who are disables, handicapped and illiterate people. The handicapped objectives of business may thus includes,

a. **Economic well being of the employees:**

In business employees must be provided with fair remuneration and incentives for provident fund, pension and other facilities by this they feel more satisfied at work and contribute more for one business.

b. **Social and psychological satisfaction of employees:**

It is the duty of business units to provide, social and psychological satisfaction to their employee, this is possible by making the job interesting and challenging, putting the right person in the right job and reducing the monotony of work.

c. **Development of human resources:**

Employees are human beings always to grow. Their growth requires proper training as well as development. If the peoples employee can improve their skills and develop their thus it is important that business should arrange training and development programme for their employees it helps to grow better and activate participation in the organisation.

d. **Well being of social and economically backward peoples:**

Business unit being inspirable part of society helps backward classes and also peoples who are physically and mentally challenged this can be done in many ways.

For example:

Vocational training programme may be arranged to improve the earning capacity of backward peoples in the community.

4. **National objective:**

Being an important part of the country of every business must have the objective of fulfilling national goals and aspiration. The goals of the country may be provided employment opportunity to its citizen.

a. **Creation of employment:**

It is an important national objective of business is to create opportunity for gainfull employment of peoples. This can be achieved by establishing new business units expanding markets and distribution channels.

b. **Production according to national priority:**

Business units should produce and supply goods in accordance with the priorities laid down in the plans and policies of government one of the national objective of business in our country should be increases the production and supply of essential goods at reasonable price.

c. **Contribution to the revenue of the country:**

The business owner should pay their taxes and dues honesty and regularly this will increases the revenue of the government.

d. **Promotion of social justice:**

As a responsible citizen a businessman is expected to provide equal opportunities to all persons with whom he\she deals. And he\she is also expected to provide equal opportunities to all the employees to work and progress.

e. **Self-sufficiency and export promotion:**

To help the country to become self relevant business unit have a added responsibility of restriction for import of goods. Every business unit should aim at increasing exports and adding to the foreign exchange reserves of the country. Business firms expected to take industries [SSI] which are backbone of our country.

5. **Organisational objectives:**

Organisational goals are the general aim of an organization as expressed in the corporate charter, annual reports, public statements and mission statement.

a. **Business growth:**

Business growth is defined as an innovation that delivers solution to customers while adding value both internally and externally to our process as well as increasing customer value while increasing profits.

b. **Wealth maximization:**

Wealth maximization is a process that increases the current net value of the business or share holder capital gains with the objective of being in the highest strategy generally involves making sound financial investments which take into consideration any risk factors that would compromise the anticipated benefit.

c. **Staff maximization:**

Employee empowerment means giving employees the freedom to be activity involved in decision that involves there functions within the company. The goals of employee empowerment is to engage employees so that they feel valued and more motivated to perform to a high standard in order to contribute to companies overall development.

d. **Long run sustainability:**

Business firms are interested in creating long run sustainability brand name, goodwill in the economy no firm wants to lose its popularity and brand for the sake of quick profits.

6. **Global objectives:**

   Earlier India at a restricted business relationship with other nations. The was a very rigid policies for imports and export of goods and services but now-a-days due to liberal economic policies, export import policies restriction on foreign investment have been largely abolished and duties on imported goods have been sustainably reduced.

   a. **Raise general standard of living:**

      Growth of business activities across national boundaries makes available quality goods at reasonable price all over the world. The peoples of our country get to use similar types of goods that people in other countries are using . This improves the standard of living of people.

   b. **Reduce disparities among nations:**

      Business should help to reduce disparities among the rice and poor nations of the world by expanding its operations. By way of capital investments in developed countries it can faster a industrial and growth.

   c. **Make available global competition goods and services:**

      Business should produce goods and services which are globally competitive and have huge demand in foreign markets this will improve the image of exporting countries and also earn more foreign exchange for the countries.

7. **Strategic Goals**

   A goal is a broad primary outcome. A strategy is the approach you take to achieve a goal. An objective is a measurable step you take to achieve a strategy . A tactic is a tool you use in pursuing an objective associated with a strategy.

   a) A bigger market share
   b) To give newly developed products quickly in the market than rivals
   c) Higher product quantity than rivals
   d) Wider or more attractive product line.
   e) To improve internet sales capabilities the rivals
   f) To maintain the time schedule for delivery
   g) Providing superior customer service compared to rivals
   h) To gain as leader in technology
   i) Stronger global distribution & sales capabilities than rivals
   j) Obtain higher level of customer satisfaction them competitors to have a wider coverage than rivals.

PROFIT MAXIMIZATION:

Profit maximization refers to the process were by companies focus on maximising profit or getting the best possible profit in their particular kind of [profit] business.

Features of profit maximization:

1. Profit maximization is called as cashing per share maximization. It leads to maximize the business operations for profit maximization.
2. Ultimate aim of business concern is earning profit. Hence it is considered all the possible ways to increase the profitability of the business.
3. Profit is the parameter of measuring the efficiency of the business concern.
4. Its objective helps to reduce the risk of the business.
5. It leads to exploiting workers and consumers.
6. It creates immoral practices such as corruption, unfair trade practices etc.

Advantages or Arguments in favour of profit maximization:

1. **Profit is the test of economic efficiency:**
   It is a measuring rod by which the economic performance of the company can be judged.
2. **Efficient allocation of funds:**
   Profit leads to efficient allocation of resources tend to be directed to uses which in terms of profitability are the most desiable.
3. **Social Welfare:**
   It ensures maximum social welfare i.e maximum divident to share holders, timely payments to creditors more and mare wages and other benefits to employees and to the consumers also.

4. **Internal resources for expansion:**
   It will consume a lot of time to raise equity funds in primary market. Retained profit can be used for expansion and modernization.
5. **Reduction in risk and uncertainty:**
   Once after availing huge profit the company develops risk bearing capacity. The gross present value of a course of action is found by discounting and low capiling is benefited at the rate which reflects their timing and uncertainty.
6. **More competition or more competitive:**
   More and more profits enhances the competitive sprit thus under such conducts firms having more and more profit are

considered to be more dependable and can survive in any environment.

Arguments against profit maximization or disadvantage:

a. It is argued that profit maximization assumes perfect completion and in the face of imperfect modern market. It cannot be a important objective of the firm.
b. It is also feared that profit maximization behaviour in a market economy m ay tend to produce goods and services that are waste full and unnecessary from the societies point of view.
c. Profit cannot be ascertained in advance to express the profitability of returns as further is uncertain.
d. The executive or the decision maker may not have enough confidence in the estimates of future returns.
e. Firms producing same goods and services differ sustainably in terms of technology, cost and capital. In view of such condition it is difficult to have a truly competitive price system and thus it is doubt full if the profit maximizing behaviour will lead to the optimum social welfare.

WEALTH MAXIMIZATION:

Wealth Maximization is a process that increases the net current value of business or share holder capital gain with the objective of bringing in the highest possible return. The wealth maximization strategy generally involves making sound financial investment decision which takes into consideration any risk factor that would compromise or out weight the anticipated benefits.

Features:

1. **Protection of interest of shareholders:**
   Shareholders interest is protected by increased market value of profit.
2. **Security to financial lenders:**
   It provides security to short term and long term financial lenders who supply funds to the business enterprise. Short term lenders are interest in the firm liquidity position whereas long term lenders enjoy over shareholders at the time of returns of funds besides getting fixed rate of interest.
3. **Protection of interest of employee's:**

Employee's contribution is a primary consideration in raising the wealth of an enterprise their productivity and efficiency ultimately leads to fulfilling companies' objective and also the employee's.

4. **Survival management:**

   Management is a representative body of shareholders when shareholders interest is protected there may be not wishing to change the management and hence it can survive for a longer period of time.

5. **Interest of society:**

   When all the available productive resource is put to optimum and efficient use economic interest of the society is survived.

Favourable arguments or advantages of wealth maximization:

a. Wealth maximization is a clear term. Hence the present value of cash flow in considered. The net effect of investment and benefit can be measured clearly.
b. Wealth maximization is superior to profit maximization because the main aim of the business concern under this concept is to provide improve the value or wealth of the share holders.
c. Wealth maximization considers the comparison of the value to cost associated with the business concern.
d. Wealth maximization considers both time and risk of the business concern.
e. It provides efficient allocation of the resources.
f. It ensures the economic interest of the society.

Unfavourable arguments or disadvantages of wealth maximization:

1. Wealth maximization is also nothing but profit maximization because the ultimate aim of the wealth maximization objective is to maximize the profit.
2. It creates ownership management controversy.
3. Management alone also enjoys certain benefits.
4. Wealth maximization can be activated only with the help of the profitability position of the business concern.

Difference between Profit maximization and Wealth maximization:

	Profit Maximasation	Wealth Maximization
1.	Profit cannot be ascertain wealth in advance to express the probability of returns. The term profit as no clear meaning .	It represents the value of benefits and cost of investment.
2.	The executive or the decision maker may not have enough confidence of future returns.	It is argued that a firm's goal cannot be maximising profit but to ascertain certain level of share of market.
3.	The risk variations and related capitalisation rate is not considered in the concept of profit maximisation.	It is considered there should be balance between expected returns and risk.
4.	The goal of profit maximisation is considered to be narrow outlook.	The goal of wealth maximisation is considered to be a broad outlook.
5.	It ignores the interest of the community	It's objective is to enhance the share holders wealth.
6.	The profit maximisation ignores the time value of money	It fully considers time value factor and also cash in flow.

II- DEMAND AND REVENUE CONCEPTS

Meaning of Demand

- Demand in economics means desire backed up by adequate purchasing power to pay for the product when demanded & willgness to spend the money for the satisfaction of that desire.
- "Demand refers to decide or want for something, in Economics demand means the effective demand, that is quantity that the buyer willing to purchases at a given price and over a given period of time".

Definition

According to Melvin and boyes "demand is a relationship between two variables, price and quantity demanded, with all other factors that could affect demand being held constant".

Acc. to Hasen " we means the quantity of a commodity that will be purchased at particular price & not merely the desire of a things.

FEATURES OF DEMAND

1. **Difference between Desire & Demand:-** As former is only a wish, while demand implies that consumer has the willingness & abilities to buy certain commodity in the market that a given price.
2. **Relationship between Demand & Price:-** Demand is always at a price per unit of time, without price demand of commodity is no meaning. Every customer know the what price he is ready to demand a commodity.
3. **Demand at a point of Time:-** it is always referred that given period of time

DETERMINENTS (Factors) OF DEMAND

1. **Price of a commodity:**

   Price of the basic factor responsible for the demand changed. The quantity demand of a product changes basically due to change in price of that product. More quantity is demanded at lower price than at Higher price is the common phenomenon.

2. **Income of the consumer:**

   Income of the consumer is another Prime determining factor of demand. The demand for superior commodities comfort and luxury

products trend to change in the proportion when there is a rise in income. Similarly, overall demand for the commodity decreases as the income of the consumer Falls.

3. **Taste, preferences and habits:**
   The demand for the product also depends on consumer taste, preferences and habits similarly the habits, when the consumer give up drinking alcohol, the demand for Alcohol decreases. When the new habit comes in, the demand for old habit exit or demand for new habits increases. Taste and preferences changes after the demand for product.

4. **Fashion and Customs:**
   New fashions attract the new demand and old fashions lose the demand. In the same way, the customs and tradition in the country creates demand for the commodities. Example: Diwali festival will have exclusive demand for crackers and other ceremonies also create more demand for the consumables.

5. **Change in population:**
   Increase in population lead to overall rice in demand for goods. Similarly change in population characteristics like sex ratio, age group, marital status, lead change in demand for commodities. Example: increase in number of children brings about a change in demand for garments.

6. **Change in climate conditions:**
   The seasonal change in climate brings about a change in demand for some goods. Thus, the demand for woollen will more during winter season. The demand for cold drinks, ice cream, umbrellas, air coolers, fans etc. will be more in summer season. But in rainy season demand for raincoat and umbrella increases.

7. **Development in technology:**
   New technology leads to new products. New products attract new customers. As a result, the consumer purchasing old products shift over to the new products. Thus, the demand for LCD TV has increased in the place of tube version TVs.

8. **Institutional policies:**

An increase in Quantum credit facility by the banks and Financial Institutions lead to increase in supply of money. In turn there will be greater demand for goods and services.

9. **Propensity to consume and save:**

When the income of the consumer remains constant and if the propensity to consume increases the demand for goods increases and vice versa. If the people prefer to save more means demand for goods diminishes.

10. **Value of money:**

When there is inflationary and deflationary tendency in the general price level, consequently value of money Falls or Rises and there may be a change in relative prices of different goods, causing widespread change in demand pattern.

11. **Distribution of income and wealth:**

Through fiscal measures, government can produce the inequality of income and wealth. Thus, in a dynamic welfare society, welfare programs like free education, free medical aid, pension schemes would bring about a change in demand Pattern.

12. **Substitute and complementary goods:**

Change in supply and price of substitute and complementary goods would bring about a change in demand for other products. Ex: introduction to ballpoint pen has changed the demand for fountain pen. The price change in Surf soap powder leads to change in demand for aerial soap powder (substitute goods). Similarly fall in price of cement lead to rise in demand for bricks and sand (complementary goods).

13. **Level of taxation:**

The change in tax structure by the government– direct tax or indirect tax, bring down the disposable income of the people. The decrease in tax rate leads to overall rise in demand for products and vice versa.

14. **Advertisement and salesmanship:**

A clear, intelligent and persistent advertisement in different media and efficient salesmanship create new demand and enhance the existing demand.

DEMAND SCHEDULE

Meaning:- The response of amount demanded to change in price of a commodity (it summarises the information on prices & quantity demanded.

TYPES OF DEAMND SCHEDULE

1. **Individual Demand Schedule :-**
The quantities of the commodities demanded by the consumer at various prices.
Individual demand refers to the demand for a commodity from each individual. That is quantity of a product a consumer would buy at a given price over a given period of time. It is represented by individual demand schedule.

Price per unit	Quantity of demand
50	10
40	20
30	30
20	40
10	50

2. **Market Demand Schedule:-**
The market demand is the summation of demand of all persons of homogeneous commodity.
Market demand refers to the total quantity of product being purchase it by all the buyers in the market at a given price over a given period of time.

Price per unit	Quantity Demanded A	Quantity demanded B	Total Quantity demanded (A+B)

50	10	15	25
40	15	20	35
30	20	25	45,
20	25	30	55
10	30	35	65

DEMAND CURVE

Meaning:- The Graphical representation of demand schedule is called as Demand curve.

Types of Demand Curve

1. **Individual Demand Curve:-** the quantity demanded by the consumer at different levels of prices.

2. **Market Demand Curve:-**it is the horizontal summation of all individuals demand for the commodity.

Assumption of the law

1. No change in consumer income.

2. No change in consumer taste and preferences.
3. No change in consumer fashion and tradition.
4. No change in price of related goods.
5. No change in consumer expectation or no shortage on product supply.
6. No change in population demographic characters like sex ratio, age composition, and way of living.
7. No availability of substitute commodities.
8. No change in government policy.
9. No change in climate and weather conditions.

EXPLANATION OF THE LAW

The law of demand states that there is inverse relation between the price & demand for a commodity. The demand of a commodity is more at a lower price & less at higher price.

This relationship is not proportional yet it does not means that when price falls by one-half the demand for goodwill be doubled. It simply shows the direction of change in demand as a result of change in price.

Price per kg (in Rs.)	**Quantity demanded (In kgs)**
5	10
4	20
3	30
2	40
1	50

Explanation of Table :- it is obvious from the above table that with the fall in the price per kg, quantity demanded rises & as the price goes on rising quantity demanded goes on falling. Eg:- when the price of Apple in Rs. 5 per kg the quantity demanded of apples amounts to 10 kgs & as the price falls from Rs. 5 to Rs. 2 the quantity demanded of apples increase from 10-40 kg. there by establishing a negative relationship between price & quantity demanded.

Explanation of Graph

It is obvious from the above table that with the fall in the price per kg, quantity demanded rises & as the price goes on rising quantity demanded goes on falling. Eg:- when the price of apples in Rs 5 per kg the quantity demanded of apples amounts to 10kgs & as the price falls from Rs 5 to Rs 2 the quantity demanded of apples increase from 10-40 kg. there by establishing a negative relationship between price & quantity demanded.

Exceptions to the law of demand

The demand curve generally slopes left to right down words comma but sometimes it may arise from left to right upwards, this is called exception to the law of demand. It means, when price rises, more units of the commodity may be demanded. If price Falls less units of the commodity may be demanded. Such cases are very rare.

1. **Giffen Paradox:**

Sir Robert Griffin, and economic scientist was surprised to find out that as the price of bread increases the British workers purchase a more bread and not less of it. This was something against the law of demand. Since bread, even when its price was higher than before, was still the cheapest food article, people consume more of it and not less. When its place went up. Hence, necessary communities are an exception The Law of demand because in their cases demand is strengthened with a rise in price and weekend with the fall in price.

2. **Brand loyalty:**

If the consumers are loyal to a particular brand, they will continue to buy even with the rise in price of that particular brand.

3. **Future predictions:**

If the consumer expects further increase in price of a commodity, they will buy more even through the present price is more.

4. **Ignorance:**

Ignorance of the price prevailing in the market makes the consumer to buy more even at higher price and it is also observed that the consumer will prefer high price of product because he assumes that high prices means high quality and low prices means low quality. Hence to this kind of ignorance, the law of demand will not be applicable.

5. **Unavoidable circumstances:**

During some cases, we cannot go by the prices if the purchase of the product is inevitable, we have to purchase it, even at high prices. Example: price of medicine etc.

6. **Prestige goods/ Veblen's effect:**

Veblen, a noted American economist contents that there are certain commodities which are purchased by the rich people, not for their direct satisfaction, but for their snob appeal. In case of such status value commodities, it is not the price which is important but he Prestige conferred by that commodity makes a person go for it. Example Diamond Jewellery, antiques, world famous paintings etc.

7. **Conceptions necessities:**

Certain things become the necessity of modern Life. So we have to purchase them despite their high price. The demand for TV sets automobiles and refrigerators etc. Has not gone down in spite of the increase in their price. These things have become the symbol of status. So, they are purchased despite their rising price. These can be termed as "U" sector goods.

8. **Change in fashion:**

A Change in fashion and taste affects the market for a commodity. When a branded toe shoe replaces a narrow toe, no amount of reduction in the price of the latter is sufficient to clear the stocks. Brand toy on the other hand, will have more customers even through its price maybe going up. The law of demand becomes ineffective.

ELASTICITY OF DEMAND

The law of demand simply explains the inverse relationship between price and quantity demanded. It does not specify how much is purchases, when price Falls and how much less is purchases, when price Rises. In order to understand the rate of change in price and consequently change in demand elasticity of demand concept is used.

Meaning:

The degree of correlation between price & demand. Elasticity of demand is the measure of the responsiveness to a change in the price & demand.

Elasticity of demand is the responsiveness of demand for a commodity to changes in its determinants.

$$ED = \frac{\text{\% change in quantity demanded of commodity}}{\text{\% change in its price.}}$$

Definition:

According to Marshall, "The elasticity or responsiveness of demand in market is great or small accordingly as the demand changes (rise or falls) much or little for a given change in price.

<u>Types of elasticity of demand</u>

1. **Price elasticity of demand:**

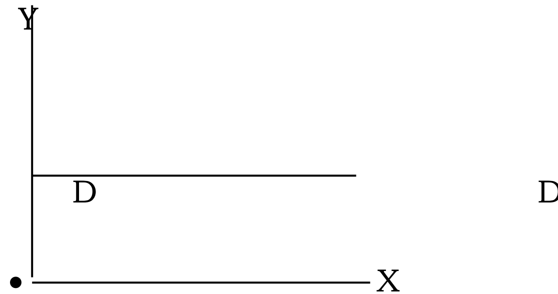
The price elasticity of demand can be defined as the ratio of the relative change in demand and price variable. It is generally defined as the responsiveness or the sensitiveness of demand to a given change in the price of a commodity.

$$Ped = \frac{\text{\% change in quantity demanded of commodity}}{\text{\% change in its price.}}$$

<u>Types of Price Elasticity of Demand</u>

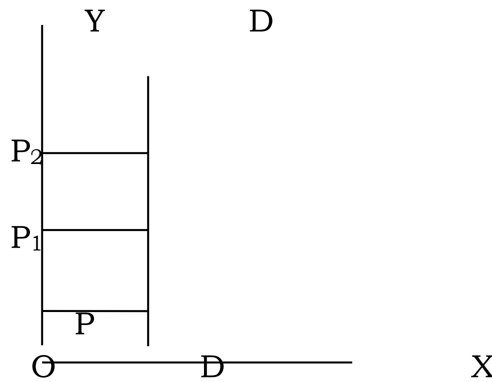
a. **Perfectly elastic of demand:**

In this case, a very small change in price leads to infinity change in demand. The demand curve is a horizontal curve and is parallel to ox-axis, the numerical coefficient of perfectly elastic demand is ∞ (infinite)



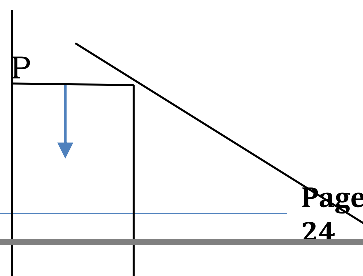
b. Perfectly inelastic demand:

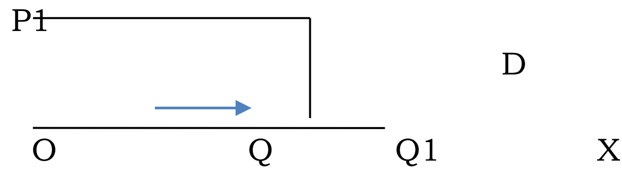
In this case whatever may be the change in price quantity demanded will remain perfectly constant full stop the demand curve is a vertical straight line and is parallel to o y axis. The numerical Coefficient perfectly inelastic demand is zero.



c. Relatively elastic demand:

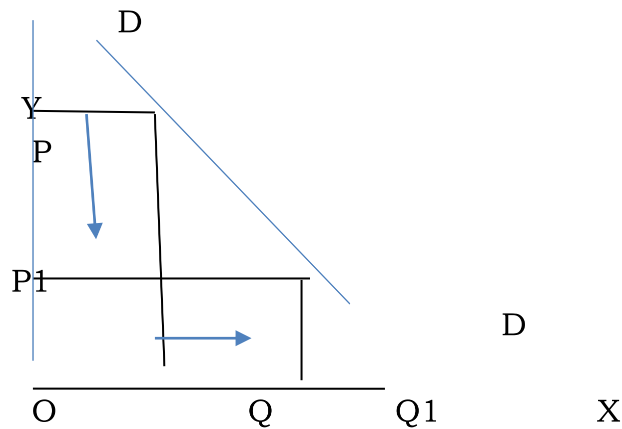
In this case is slight change in price leads to more than proportionate change in quantity demanded. This can be represented by a gradually sloping demand curve. The numerical coefficient of relatively elastic demand is >1.





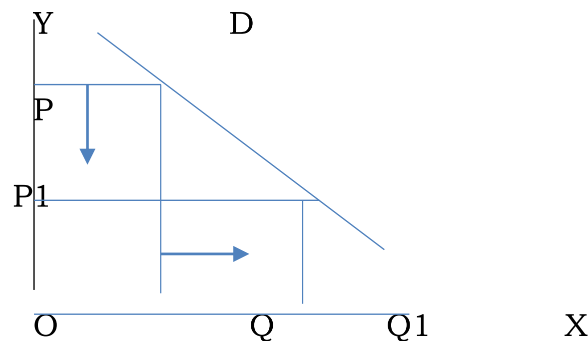
d. Relatively inelastic demand:

In this case, a large change in price lead to less proportionate change in demand. This can be represented by steeply sloping demand curve. The numerical coefficient of relatively inelastic demand is<1.



e. Unitary elastic demand:

In this case, any change in price brings about equal proportionate change in the quantity demanded. The numerical coefficient of unitary Elastic demand is always 1.



2. Income elasticity of demand:

The income elasticity is defined as a ratio percentage or proportional change in the quantity demanded to the percentage or proportional change in income.

$$YeD = \frac{\text{\% change in quantity demanded of commodity}}{\text{\% change in income.}}$$

Types of Income Elasticity

a. **Negative income Elasticity:-** if the demand for a commodity decreases with an increase income the demand is said to be negative income elasticity. The demand curve will be sloping downwards is " a", the co-efficient is Ed > 0
b. **Zero Income Elasticity:-** when the change in income do not being any changes in quantity demanded i.e. quantity demanded remain the same. The shape of demand curve is vertical straight line "b". the efficient is Ed=0
c. **Income Elasticity less than one:-** when the proportionate change in quantity demanded is less than the proportionate change in income, the income elasticity is said to be less than one . the demand curve is "c" , coefficient Ed <1.
d. **Income elasticity equal to one:-** if proportionate change in quantity demanded is equal to percentage or proportionate change in income. Co efficient is Ed=1.
e. **Income elasticity greater than one :-** the proportionate change in quantity demanded is greater than the proportionate change in income, then income elasticity it is said to be greater than one. The demand curve is "e". co efficient is Ed >1.

3. Cross elasticity of demand:

The cross elasticity of demand for degree of responsiveness of demand for a commodity to a given change in the price of some related commodity.

$$Xed = \frac{\text{\% change in quantity demanded of commodity A}}{\text{\% change in the price of commodity B}}$$

DEMAND FORCASTING

Demand forecasting is based on the statistical data about past behaviour and empirical relationship of the demand determinants. Demand forecasting is not a speculative exercise into the unknown. It is essentially a reasonable judgement of future probabilities of the market events based on scientific

background. Demand forecasting is an estimate of the future demand. It cannot be hundred percent precise. But, it is a reliable approximate regarding the possible outcome, with a reasonable accuracy. It is based on the mathematical laws of probability.

Meaning:

Demand forecasting means expectation about the future course of the market demand for product.

Levels of demand forecasting:

1. **Micro levels.**
   It refers to the demand forecasting by the individual business form for estimating the demand for its product.

2. **Industrial level.**
   It refers to the demand estimate for the product of the industry as a whole. It is written by an industrial or Trade Association. It relates to the market demand as a whole.

3. **Macro level.**
   It refers to the aggregate demand for the industrial output by the nation as a whole. It is based on the national income or aggregate expenditure of the country. Countries consumption function provides as estimated for the demand forecasting at micro level.

METHODS OF DEMAND FORECASTING

The methods of demand forecasting can be broadly classified into two categories such as survey method and statistical method. The detailed explanation of demand forecasting methods are given below.

A. **survey method of demand forecasting:**

The survey method is the methods of gathering data by asking questions to people who are thought have decide information. A formal list of questionnaires is prepared. Generally a non-disguised approach is used. The respondents are asked questions on their demographic interest opinion.

<u>Types of Survey method:</u>

1. **Expert Opinion method:**

The main advantages of Expert Opinion survey method are its simplicity. It does not required extensive statistical or mathematical calculations however this method has its own limitations. it is subjective.

2. **Consumer survey method:**

Consumer survey is undertaken by questioning consumers about what they are planning or intended to buy a questionnaire may be prepared and mail it to the consumer or it may be sent through enumerators in the questionnaire the respondents may be asked for their reactions to hypothetical changes in demand determinants such as price, income comprises of substitutes etc.

Consumer survey may acquire three forms:

- Complete enumerator survey
- Sample Survey
- End use method.

a) **Complete enumerator survey:**

Complete enumeration survey covers all the consumers. It resembles the census data collection which considers the entire population. In this case all the consumers are covered information is obtained from all regarding the prospective demand for the product under consideration. No doubt it is not very easy to carry out the survey on such a large scale.

b) **Sample Survey:**

Compared to the former survey this method is less tendency and less costly and subject to less data error but the choice of sample is very critical. In case of the Sample Survey method few consumers are selected to represent the entire population of the consumer of the commodity consumed.

c) **End use Method:**

Under this method comma the sales of a product are projected through a survey of its end users. A product is used for final consumption or as an intermediate product in the production of Other goods in the domestic market or it may be exported as well as imported. The demands for final consumption and exports net of imports are estimated through some other forecasting method, and its demand for intermediate use is estimated through a survey of its use sir industries.

3. **Market controlled experiment method:**

Under this method the main determinants of demand of your like price, advertising, packaging and quality are identified. Here the market division must be homogeneous regard to Income, population, caste, religion, sex, age, tastes and preferences.

4. Delphi method:

In Delphi method, an attempt is made to arrive at a constant source of opinion. The participants are supplied with responses to previous questions from others in the group by a leader. The leader provides each export with opportunity to react to the information given by others including reason advancer, without disclose the source.

5. Consumer clinics method:

An artificial market situation is created and consumer clinics selected**.** Consumers spend time in artificial departmental store and different prices are set for different buyers group. The response is the price Changes are observed and necessary.

B. statistical methods of demand forecasting.

Statistical methods of demand forecasting include the time series analysis, moving average exponential smoothing, index numbers, regression analysis as well as economic models and input output analysis. This Method use video types of statistical equations and mathematical models to estimate long term demand for a product.

Types of statistical method:

1. Trend projection method:

Trend projection method is a classical method of business forecasting. This Method is Essential concerned with the study of movement of variable through time. The use of this method requires a long and reliable time series data.

Methods of finding Trend.

a) The least square method:

statistical technique to determine the line of best fit for a model. The least squares method is specified by an equation with certain parameters to observed data. This method is extensively used in regression analysis and estimation.

$$Yc = a + bx.$$

b) **The moving average method:**

The moving average method is one of the most useful and objective tools available to the technical analyst. Moving averages shows the average value of security's price over a certain number of time periods. Moving averages smooth a data series and make it easier to spot Trends and smooth out price and volume fluctuation or noise that can confuse interpretation.

2. Economic indicators:

An economic indicators is a statistic about the economy. Economic indicators allow analysis of economic performance and predictions of future performance. One application of economic indicators is the study of business cycles.

Economic indicators include various indices coming reports and economic summaries. Example unemployment rate, quits rate, Housing starts consumer Price index, consumer leverage ratio, industrial production, bankruptcies, Gross Domestic Product Broadband Internet penetration, retail Sales, stock market prices, money supply changes.

Types of economic indicators.

Economic indicators can be classified into three categories according to their usual timing in relation to the business cycle leading indicators lagging indicators and coincident indicators.

1. **Leading indicators**.

Leading indicators are indicators that usually change before the economy as whole changes. They are therefore useful as short-term predictors of the economy. Stock market returns are a leading indicator in stock market usually beings to decline before the economy as whole declines and usually beings to improve before the general economy beings to recover from a slump. Other leading indicators include the index of consumer expectation building permits and the money supply.

2. **Lagging indicators:**

Lagging indicators are indicators that usually change after the economy aswhole does. typically, the lag is a few quarters of a year. the unemployment rate is a lagging indicators employment trends to increase two or three quarters after an upturn in the general economy.

3. Coincident indicators:

Coincident indicators change at approximately the same time as a whole economy, thereby providing information about the current state of the

economy. There are many coins and indicators, such as Gross Domestic Product, industrial production, personal income and retail sales. A coincident index may be used to identify after the fact, the dates of pics and troughs in the business cycle.

Other statistical methods

1. **Exponential Smoothing:**
   In this technique more, recent data are given more weight age. This is based on the argument that the more recent the observations, the more its impact on future and therefore is given relatively more weight than the earlier observation.

2. **Index Numbers:**
   The index numbers offer a device to measure changes in a group of related variables over a period of time. In case of index number-basedyear, which is given the value of 100 and then Express all subsequent changes as a movement of this number. The most commonly used is the Laspeyres' price index.

3. **Correlation and Regression:**
   Correlation refers to the interdependency of co relationship of variables. It reflects the closeness of the linear relationship between X and Y.
   Regression is a way of describing how one variable the outcome is numerically related to predictor variables. The dependent variable is also referred as Y, dependent or response and is plotted on the vertical axis of a graph.

4. **Simultaneous equation method:**
   Simultaneous equation method is a sophisticated method of forecasting. It is also known as the complete system approach or economic model building. This method is normally used in macro level forecasting for the economy as a whole; in this course, our focus is limited to micro elements only.

REVENUE CONCEPT

Meaning of Revenue

Revenue refers to the income obtained by a firm through the sale of goods at different prices. The revenue depends on the price at which the quantities of output are sold by firm.

Types of Revenue

1. **Total Revenue(TR)**

The income earned by a seller or producer after selling the output is called total revenue.

Total revenue is the multiple of price & output. The behaviour of total revenue depends on the market where the firm produces or sells.

TR = AR * Q

TR = P * Q

TR = Total Revenue

AR= Average Revenue or price Per unit

Q= output.

2. **Average Revenue(AR)**

It refers to the revenue obtained by the seller by selling the per unit commodity. It is obtained by dividing the total revenue by total output.

$$AR = \frac{TR}{Q}$$

TR= Total revenue

Q = Output.

3. **Marginal Revenue (MR)**

It refers to the net revenue obtained by selling an additional unit of the commodity.

MR=TRn – TRn-1.

UNIT III

PRODUCTION & COST ANYALSIS

PRODUCTION FUNCTION

Meaning:- the functional relationship between the quantity of a goods produced (output) & factors of productions (inputs). Or

The production function express the technological relationship between the quantity of output & the quantities of inputs used in production.

Definition:- Acc. Prof Koutsoyiannis " the production function is purely a technical relation which connects factor inputs and outputs"

Acc. To Watson "the relationship between a firm's physical production (output) & the material factors of production (inputs).

Attributes of Production Function

1. **Flow concept:**- a production function is flow concept . it relates to the low of inputs & the resulting flows of output of a commodity during a period of time. Here, time is taken to be functional of operational time period.
2. **Physical Concept:**_ a technical relationship between inputs & outputs expressed in physical terms & not in terms of a monetary unit, such as a rupee or dollar.
3. **State of Technology & input:**_ it implies that the production of a firm depends on the state, of technology & inputs. Technology refers to the sum total of knowledge of the means & methods of producing goods & services. It is the society's knowledge concerning the

industrial agricultural arts. Inputs refers to anything that used by the firm in the process of production.

4. **Factors combination for the maximum Output:**- it is taken to be the technical relationship showing the maximum output that can be produced by a specific set of combination of factor inputs.
5. **Short run & Long run production:-** Variability of factors depends on the functional time period under consideration. On functional criteria, there are short period & long period.

Types of Production Function

1. **Short Run Production Function:-**
   It is possible to raise the quantities of one input while keeping the quantities of other inputs constant. This aspect is known as the **Law of Variable Proportions**. When a producer beings change in his production by changing only one factor of production & a result there is a change in the proportion of combination of factors of production.

2. L**ong Run Production Function :-**
   It is possible for a firm to change all inputs according to its scale. This know as **Returns to scale.** In this case a producer change all the factors of production in the same proportion, thus, proportional relationship between production & factors of production is termed as a law of Returns.

LAW OF VARIABLE PROPORTIONS

Meaning:- Due to change in the proportion of factors there will also emerge a change in total output at different rates. This tendency in the theory of economics is called the Law of Variable Proportions.

Definition:- Acc. To G.Stigler" as equal increment of one input are added, the input of other productive services being held constant, beyond a certain point the resulting increments of product will decrease that the marginal products will diminish".

Assumptions of Law of Variable Proportions

1. Constant Technology:- the state of technology is assumed to be given & constant. If there is an improvement in technology the production function will move upwards.

2. Factor proportions are variable:- the law assumes that factor proportions are variable. If factors of production are to be combined in fixed proportions, the law has no validity.
3. Homogeneous factor units:- the units of variable factor are homogeneous. Each unit is identical in quality & amount with every other unit.
4. Short run:- the law operates in the short-run when it is not possible to vary all factor inputs.

Explanations of the Law

In order to understand the law of variable proportions we take the example of agriculture. Suppose land & labour are the only two factors of production. By keeping land as a fixed factor, the production of variable factor i.e. labour can be shown with the help of following table

Units of Land(acres)	Units of Labor	Total production	Average Production	Marginal production Stages
10	-	-	-	
10	20	20	20	
10	50	25	30	1st stage
10	90	30	40	
10	120	30	30	2nd stage
10	140	28	20	
10	150	25	10	
10	150	21.3	0	3rd stage
10	140	17.5	-10	

From the above table . it is clear that there are 3 stage of the law of variable proportions . in the first stage average production increases as there are more & more doses of labour & capital employed with fixed factor(land). We see that total product, average & marginal product increases but average product & marginal product increases upto 40 units. Later on both start decreasing proportion of workers to land was sufficient & land is not properly used. This is the end of the first stage.

Second stage starts from where the first stage ends or where AP=MP. In this stage average product & marginal product start falling. We should note that marginal product falls at a faster rate than the average product. Here total product increase at a diminishing rate. It is also maximum at 70 units f labour where marginal product becomes zero while average product is never zero or negative.

The third stages begins where second stage ends. This starts from 8th unit. Here, marginal product is negative total product falls but average product is still positive. At this stage any additional dose ends to positive nuisance because additional dose leads to negative marginal product.

The position to three stages can be explained

Total Product	Marginal Product	Average Product
Stage I First increases at increasing rate, then at diminishing rate.	Increases in the beginning then reaches a maximum & begins to decrease.	First increases, continues to increase & becomes maximum.
Stage II Continues increases at diminishing rate & becomes maximum	Continues to diminish & becomes equal to zero	Becomes equal to MP & then begins to diminish.
Stage III Diminishes	Becomes negative	Continues to diminish beut will always be greater than zero.

LAW OF RETURNS OF SCALE

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

Definition:- Acc. To Koutsoyiannis " the term returns to scale refers to the changes in output as all factors change by the same proportion".

Assumptions of the law

i. Techniques of production is unchanged.
ii. All units of factors are homogeneous
iii. Returns are measured in physical terms.

Explanation of Law

In the long run, output can be increased by increasing all factors in the same proportion. Generally laws of returns to scale refer to an increase in output due to increase in all factors in the same proportion. Such an increase is called returns to scale.

Units of Labour	Units of Capital	% age increase in	Total product	% age increase in	Returns to

		labour & capital		TP	scale
1	3	-	15	-	Increasing
2	5	100%	35	20%	
3	7	50%	65	100%	
4	9	33%	85	33%	Constant
5	11	25%	105	25%	
6	13	20%	115	10%	
7	15	10%	125	9%	Decreasing
8	17	14%	130	4%	

The above stated table explain the following three stages of returns

1. Increasing Return 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.

   OX axis represents increase in labour & capital while OY axis shows increase in output. When labour & capital increases from Q & Q1 output also increases from P to P1 which is higher than the factors of production i.e. labour & capital.

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. It means, if inputs are doubled output will be less than double. If 20 % increase in labour & capital is followed by 10 % increase in output, then it is an instance of diminishing returns to scale. The main cause of the operation of the law of diminishing returns to scale is that internal & external economies are less than internal & external diseconomies.

In this diagram diminishing returns to scale have been shown on OX axis, labour & capital are given while on OY axis, output. When factors of production increase from Q to Q1 (more quantity) increase in factors of production is more & increase in production is comparatively less, thus diminishing returns to scale apply.

3. **Constant Returns to Scale:-** Constant returns to scale refers to the production situation in which output increases exactly in the same proportion in which factors of production are increased. In this case internal & external economies are exactly equal to internal & external diseconomies. This situation arises when after reaching a certain level of production, economies of scale are balanced by diseconomies of scale.

We see that increase factors of production i.e. labour & capital are equal to the proportion of output increase. Therefore, the result is constant returns to scale.

EQUILIBRIUM THROUGH ISO QUANTS & ISO COST CURVES

ISO QUANTS

Meaning:- Iso= equal , quant=quantity or product=output. Iso-quant or Iso product . it means equal quantity or equal product. Different factors are needed to produce a good. These factors may be substituted for one another. A given quantity of output may be produce with different combinations of factors.

If different combinations of two factors yielding equal amount of total output are diagrammatically expressed in the from of a curve, thsn such a curve is called Iso-quant or Iso-product curve. Iso-quatn curves are also known as equal-product or iso-product or production indifference curves.

Definition :- Acc. To Bilas " the iso-product curve shows the different combinations of two resources with which a firm can produce equal amount of product".

Assumption of Iso-quants

1. Two factors of Production:- only two factors are used to produce a commodity.
2. Divisible factor:- Factors of production can be divided into small parts.
3. Constant Techniques:- Techniques of production is constant or is known before hand.
4. Possibility of Technical substitution:- it is assumed that substitution between the two factors is technically possible. That is, production function is of 'variable proportion' type rather than fixed proportion.
5. Efficient Combinations :- Under the given technique, factors of production can be used with maximum efficiency.

Iso-Quant/Iso Product Schedule

Let us suppose that there are two factor inputs- labour & capital. An iso-quant schedule shows the different combination of these two inputs that yield the same level of output as show below

Combination	Units of labour	Units of capital	Output of cloth (metres)
A	1	15	200
B	2	11	200
C	3	8	200
D	4	6	200
E	5	5	200

Iso-Quant/Product Curve

An equal product curve represents all those combinations of two inputs which are capable of producing the same level of out

Properties of Io-Quant curves

1. Iso-quant curves slope downward from left to right:- they slope downward because marginal rate of technical substitution(MTRS) of labour for capital diminishes. When we increase labout, we have to decrease capital to produce a given level of output. The downward sloping iso-quant curves can be explained with the help of following graph

2. Iso-product curves are convex to the origin:- the iso-quant curves are convex to the origin because of diminishing MRTS. As we increase capital, we have to reduce labour units to produce the same level of output. Lesser amounts of capital are substituted for one more unit f labour.

3. Two iso-product curves never cut each other:- as two indifference curves cut each other so is the case of iso-product curves.

4. Higher iso-quant curves represent higher level of output:- a higher iso-quant curve represents a higher level of output .

5. Iso-quant need not to be parallel to each other:- it so happens because the rate of substitution in different iso-quant schedules need not be equal.

Iso cost Curves

The isocost curves represent the locus of all combinations of the two input factors which result in the same total cost. If the unit cost of labour (L) is W & the unit cost of capital © is r, then the total cost: Tc=wL=rC. The slope of the isocost line is the ration of prices of labour & capital i.e. w/r.

The output possibilities of a firm from a given combination of two inputs.

COST CONCEPTS

COST

Meaning ;- the expenses incurred in producing a commodity.

The cost concept which are relevant to business operations & decision can be studied on the basis of their purpose. The various cost concept are:-

1. TOTAL COST:- the amount of money spent on the production of different level of a goods is called total cost.
   Acc. Dooley" total cost of production is the sum of all expenditure incurred in producing a given volume of output".
   Thus, **TC=FC=VC**
   Types of Total cost
   a. FIXED COST OR SUPPLEMENATARY COST:- The cost that remains fixed at any level of output is know as the fixed cost. These cost must be paid whether there is production or not. Eg:- depreciation, allowance, licence fee, salaries
      Thus, **TFC=TC-TVC or**
      TFC=EXPLICIT FIXED COST=IMPLICIT COST

   b. VARIABLE COST OR PRIME COSTS:- the costs which change with the change in the volume of output. These costs are unavoidable or contractual costs. It is also called as Prime cost, Direct cost or special cost. Eg:- transport wages, electricity charges, price of raw material etc
      Thus, **TVC=TC-TFC**

2. AVERAGE COST:- Average cost of production is the total cost of production dividend by the total number of units produced.

   Thus, $AC = \frac{TC}{Q}$

   TC= total cost, Q= quantity / units

   Two types of Average cost

   a. AVERAGE FIXED COST:- it is the total fixed cost divided by the number of units of output produced .

   Thus, $AFC = \frac{TFC}{Q}$

   b. AVERAGE VARIABLE COSTS:- it is the total variable cost divided by the number of units of output produced.

   Thus, $AVC = \frac{TVC}{Q}$

3. MARGINAL COST

   It is an addition to the total cost caused by producing one more unit of output.

   Thus. MC

4. OPPORTUNITY COST

   It refers to the loss of earnings due to opportunities forgone due to scarcity of resources. If resources were unlimited, there would be no need to forego any income-yielding opportunity & therefore, there would be no opportunity cost.it is also called Alternative cost.

5. EXPLICIT COST
   It refers to the actual money outlay or out-of pocket expenditure of the firm to buy, or hire the productive resources it needs in the process of production.
   Direct contractual monetary payments incurred through market transactions.

6. IMPLICIT COST
   Implicit costs are the opportunity costs of the use of factors which a firm does not buy or hire but already owns. unlike out of pocket cost they do not require current cash expenditure.

UNIT III

PRODUCTION & COST ANYALSIS

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8. State of Technology & input:_ it implies that the production of a firm depends on the state, of technology & inputs. Technology refers to the sum total of knowledge of the means & methods of producing goods & services. It is the society's knowledge concerning the industrial agricultural arts. Inputs refers to anything that used by the firm in the process of production.
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Types of Production Function

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   It is possible for a firm to change all inputs according to its scale. This know as **Returns to scale.** In this case a producer change all the factors of production in the same proportion, thus, proportional relationship between production & factors of production is termed as a law of Returns.

   LAW OF VARIABLE PROPORTIONS

Meaning:- Due to change in the proportion of factors there will also emerge a change in total output at different rates. This tendency in the theory of economics is called the Law of Variable Proportions.

Definition:- Acc. To G.Stigler" as equal increment of one input are added, the input of other productive services being held constant, beyond a certain point the resulting increments of product will decrease that the marginal products will diminish".

Assumptions of Law of Variable Proportions

5. Constant Technology:- the state of technology is assumed to be given & constant. If there is an improvement in technology the production function will move upwards.
6. Factor proportions are variable:- the law assumes that factor proportions are variable. If factors of production are to be combined in fixed proportions, the law has no validity.
7. Homogeneous factor units:- the units of variable factor are homogeneous. Each unit is identical in quality & amount with every other unit.
8. Short run:- the law operates in the short-run when it is not possible to vary all factor inputs.

Explanations of the Law

In order to understand the law of variable proportions we take the example of agriculture. Suppose land & labour are the only two factors of production. By keeping land as a fixed factor, the production of variable factor i.e. labour can be shown with the help of following table

Units of Land(acres)	Units of Labor	Total production	Average Production	Marginal production Stages
10	-	-	-	
10	20	20	20	
10	50	25	30	1st stage
10	90	30	40	
10	120	30	30	2nd stage
10	140	28	20	
10	150	25	10	
10	150	21.3	0	3rd stage
10	140	17.5	-10	

From the above table . it is clear that there are 3 stage of the law of variable proportions . in the first stage average production increases as there are more & more doses of labour & capital employed with fixed

factor(land). We see that total product, average & marginal product increases but average product & marginal product increases upto 40 units. Later on both start decreasing proportion of workers to land was sufficient & land is not properly used. This is the end of the first stage.

Second stage starts from where the first stage ends or where AP=MP. In this stage average product & marginal product start falling. We should note that marginal product falls at a faster rate than the average product. Here total product increase at a diminishing rate. It is also maximum at 70 units f labour where marginal product becomes zero while average product is never zero or negative.

The third stages begins where second stage ends. This starts from 8th unit. Here, marginal product is negative total product falls but average product is still positive. At this stage any additional dose ends to positive nuisance because additional dose leads to negative marginal product.

The position to three stages can be explained

Total Product	Marginal Product	Average Product
Stage I First increases at increasing rate, then at diminishing rate.	Increases in the beginning then reaches a maximum & begins to decrease.	First increases, continues to increase & becomes maximum.
Stage II Continues increases at diminishing rate & becomes maximum	Continues to diminish & becomes equal to zero	Becomes equal to MP & then begins to diminish.
Stage III Diminishes	Becomes negative	Continues to diminish beut will always be

		greater than zero.

LAW OF RETURNS OF SCALE

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

Definition:- Acc. To Koutsoyiannis " the term returns to scale refers to the changes in output as all factors change by the same proportion".

Assumptions of the law

iv. Techniques of production is unchanged.
v. All units of factors are homogeneous
vi. Returns are measured in physical terms.

Explanation of Law

In the long run, output can be increased by increasing all factors in the same proportion. Generally laws of returns to scale refer to an increase in output due to increase in all factors in the same proportion. Such an increase is called returns to scale.

Units of Labour	Units of Capital	% age increase in labour & capital	Total product	% age increase in TP	Returns to scale
1	3	-	15	-	Increasing
2	5	100%	35	20%	
3	7	50%	65	100%	
4	9	33%	85	33%	Constant
5	11	25%	105	25%	
6	13	20%	115	10%	
7	15	10%	125	9%	Decreasing
8	17	14%	130	4%	

The above stated table explain the following three stages of returns

4. Increasing Return 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.

OX axis represents increase in labour & capital while OY axis shows increase in output. When labour & capital increases from Q & Q1 output also increases from P to P1 which is higher than the factors of production i.e. labour & capital.

5. 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. It means, if inputs are doubled output will be less than double. If 20 % increase in labour & capital is followed by 10 % increase in output, then it is an instance of diminishing returns to scale. The main cause of the operation of the law of diminishing returns to scale is that internal & external economies are less than internal & external diseconomies.

In this diagram diminishing returns to scale have been shown on OX axis, labour & capital are given while on OY axis, output. When factors of production increase from Q to Q1 (more quantity) increase in factors of production is more & increase in production is comparatively less, thus diminishing returns to scale apply.

6. Constant Returns to Scale:- Constant returns to scale refers to the production situation in which output increases exactly in the same proportion in which factors of production are increased. In this case internal & external economies are exactly equal to internal & external diseconomies. This situation arises when after reaching a certain level of production, economies of scale are balanced by diseconomies of scale.

We see that increase factors of production i.e. labour & capital are equal to the proportion of output increase. Therefore, the result is constant returns to scale.

EQUILIBRIUM THROUGH ISO QUANTS & ISO COST CURVES

ISO QUANTS

Meaning:- Iso= equal , quant=quantity or product=output. Iso-quant or Iso product . it means equal quantity or equal product. Different factors are needed to produce a good. These factors may be substituted for one another.

A given quantity of output may be produce with different combinations of factors.

If different combinations of two factors yielding equal amount of total output are diagrammatically expressed in the from of a curve, thsn such a curve is called Iso-quant or Iso-product curve. Iso-quatn curves are also known as equal-product or iso-product or production indifference curves.

Definition :- Acc. To Bilas " the iso-product curve shows the different combinations of two resources with which a firm can produce equal amount of product".

Assumption of Iso-quants

6. Two factors of Production:- only two factors are used to produce a commodity.
7. Divisible factor:- Factors of production can be divided into small parts.
8. Constant Techniques:- Techniques of production is constant or is known before hand.
9. Possibility of Technical substitution:- it is assumed that substitution between the two factors is technically possible. That is, production function is of 'variable proportion' type rather than fixed proportion.
10. Efficient Combinations :- Under the given technique, factors of production can be used with maximum efficiency.

Iso-Quant/Iso Product Schedule

Let us suppose that there are two factor inputs- labour & capital. An iso-quant schedule shows the different combination of these two inputs that yield the same level of output as show below

Combination	Units of labour	Units of capital	Output of cloth (metres)
A	1	15	200
B	2	11	200
C	3	8	200
D	4	6	200
E	5	5	200

Iso-Quant/Product Curve

An equal product curve represents all those combinations of two inputs which are capable of producing the same level of out

Properties of Io-Quant curves

6. Iso-quant curves slope downward from left to right:- they slope downward because marginal rate of technical substitution(MTRS) of labour for capital diminishes. When we increase labout, we have to decrease capital to produce a given level of output. The downward sloping iso-quant curves can be explained with the help of following graph

7. Iso-product curves are convex to the origin:- the iso-quant curves are convex to the origin because of diminishing MRTS. As we increase capital, we have to reduce labour units to produce the same level of output. Lesser amounts of capital are substituted for one more unit f labour.

8. Two iso-product curves never cut each other:- as two indifference curves cut each other so is the case of iso-product curves.

9. Higher iso-quant curves represent higher level of output:- a higher iso-quant curve represents a higher level of output .

10. Iso-quant need not to be parallel to each other:- it so happens because the rate of substitution in different iso-quant schedules need not be equal.

Iso cost Curves

The isocost curves represent the locus of all combinations of the two input factors which result in the same total cost. If the unit cost of labour (L) is W & the unit cost of capital © is r, then the total cost: Tc=wL=rC. The slope of the isocost line is the ration of prices of labour & capital i.e. w/r.

The output possibilities of a firm from a given combination of two inputs.

COST CONCEPTS

COST

Meaning ;- the expenses incurred in producing a commodity.

The cost concept which are relevant to business operations & decision can be studied on the basis of their purpose. The various cost concept are:-

TOTAL COST:- the amount of money spent on the production of different level of a goods is called total cost.

Acc. Dooley" total cost of production is the sum of all expenditure incurred in producing a given volume of output".
Thus, **TC=FC=VC**
Types of Total cost

c. FIXED COST OR SUPPLEMENATARY COST:- The cost that remains fixed at any level of output is know as the fixed cost. These cost must be paid whether there is production or not. Eg:- depreciation, allowance, licence fee, salaries
Thus, **TFC=TC-TVC or**
TFC=EXPLICIT FIXED COST=IMPLICIT COST

d. VARIABLE COST OR PRIME COSTS:- the costs which change with the change in the volume of output. These costs are unavoidable or contractual costs. It is also called as Prime cost, Direct cost or special cost. Eg:- transport wages, electricity charges, price of raw material etc

   Thus, **TVC=TC-TFC**

AVERAGE COST:- Average cost of production is the total cost of production dividend by the total number of units produced.

Thus, $AC = \frac{TC}{Q}$

TC= total cost, Q= quantity / units

Two types of Average cost

c. AVERAGE FIXED COST:- it is the total fixed cost divided by the number of units of output produced .

Thus, $AFC = \frac{TFC}{Q}$

d. AVERAGE VARIABLE COSTS:- it is the total variable cost divided by the number of units of output produced.

Thus, $AVC = \frac{TVC}{Q}$

7. MARGINAL COST
   It is an addition to the total cost caused by producing one more unit of output.

   Thus. MC

8. OPPORTUNITY COST
   It refers to the loss of earnings due to opportunities forgone due to scarcity of resources. If resources were unlimited, there would be no need to forego any income-yielding opportunity & therefore, there would be no opportunity cost. it is also called Alternative cost.

9. EXPLICIT COST
   It refers to the actual money outlay or out-of pocket expenditure of the firm to buy, or hire the productive resources it needs in the process of production.
   Direct contractual monetary payments incurred through market transactions.

10. IMPLICIT COST
    Implicit costs are the opportunity costs of the use of factors which a firm does not buy or hire but already owns. unlike out of pocket cost they do not require current cash expenditure.

IV – MARKET STRUCTURE AND BUSINESS CYCLE

Meaning of market:
Market in economics means it is a place where buyer and seller meet each other directly or indirectly engaged in buying and selling of goods and services.
Definition:
In the words of **Jevous** "the word market as been generalised so as to mean anybody of person who are in intermit business relations and carry on extensite transaction in any commodity."

Components of market
1. Customer or consumer: The buyer of the produce are called consumer.

2. Sellers or producer or manufacturer: there should be manufacturers of product in the market.

3. Commodity or product: a market means buying and selling of commodity. If there is no commodity market will not exist.

4. Price: if the commodity is to be bought and sold there must be a price for the product. The exchange of the product between buyers and sellers occur between buyers and sellers occur at a particular place.

TYPES OF MARKET

1. Perfect Competitive market:
A perfect competitive market is a hypothetical market where competition is at its greatest possible level.
Or
There is a large number of buyers and sellers, buying and selling homogenous products is called perfect competitive market.
2. Imperfect competitive market
a. Monopoly: the work Monopoly been derived from Greek term '**Monopolies**' Mono means single, Poly means seller. The term monopoly means single seller in the market.

b. Monopolistic competition: it refers to a market situation in which there are either many producers producing goods and serviced which are close substitutes to one another. The product is differentiated.

c. Duopoly: the term duo means two poly means seller which means two sellers in the market.

d. Oligopoly: Oligo means few poly means seller, few sellers in the market.

Perfect Competitive Market:
Perfect competition refers to the market situation where there are large number of buyers and sellers engaged in buying and selling homogeneous product at uniform prices.
According to **Prof. Marshall** "the more nearly perfect a market is the stronger is the tendency for the same price to be paid for the same thing at the same time in all parts of the market."

Features of perfect competitive market:
1. **Infinite number of buyers and sellers:**
The first condition of pure competition is there should be an infinite number of buyer and seller operating in the market.
The quantity bought or sold by the buyer or seller respectively so small that no single seller or buyer can influence the market price.

2. **Homogeneous product:**

The products produced and sold by producers is homogeneous it is standardised and purely identical; it means that the product of various firms are indisguisable from each other.
3. **No entry and exit:**
This is another essential characteristic of perfect competitive market. The firms under perfect competition enjoy full freedom to start a strategic business or close their business in this situation all firms are earning normal profit if the firm .
4. **Perfect knowledge of the market:**
In the long run factor of production existence of perfect competition is that both buyers and sellers are fully aware of the prices that are being offered and accepted. In perfect competitive market all buyers are expected to know the market price of the product and as such the seller cannot charge more than the market price.

5. **Perfect mobility of factors of production:**

In the perfect competitive market the factors of production are perfectly mobile allowing adjustments according to the change in market condition.
6. **No transportation cost:**

It is assumed that under perfect competition all the firms work so close to each other and hence o cost is incurred on transportation or there is equal transportation cost faced by all.

7. **Existence of single and uniform price or cost:**

The important feature of perfect competition is the existence of single uniform price all the existence of single concerned as price takers i.e., both buyers and sellers cannot influence the price of the product.
8. **Non increase in the returns of scale:**
It ensures that there are sufficient firms in the industry.
9. **Government non-intervention:**

Since, perfect competition is assumed to work under market economy there is no government intervention there are no taxes, subsidies, tax holidays, licensing policy and any other government intervention.

MONOPOLY

Monopoly means single seller in the market and there is no close substitute. According to **Chamberlian** "monopoly refers to the control over supply." According to **Robert Triffin** "Monopoly is a market situation in which the firm is independent of price changes in the product of each and every other firm."
Characteristics of Monopoly:
1. Single Seller

Under monopoly there is a single producer of a particular commodity or service in the market accruing to a rather large number of buyers. The monopoly manufacturer may be an individual, a group of partners or a joint stock company or state, being the only source of supply for the goods or services with no close substitute. In this market structure, the firm is the industry and, thus, the market is referred to as 'pure monopoly', but it is more of a theoretical concept. At times, close substitutes are produced by few manufacturers holding a substantial market share and this imperfect form of extreme market is termed as monopolistic competition.

2. Restricted Entry:

Free entry of new organisation is this market arrangement is prohibited, that is, other sellers cannot enter the market of monopoly. Few of the primary barriers of the entry of new sellers are:

a. Government license or franchise.

b. Resource ownership.

c. Patents and copyrights.

d. High start-up cost.

e. Decreasing average total cost.

3. Homogeneous Product:

A monopoly firm manufactures a commodity that has no close substitute and is a homogenous product. With the absence of availability of a substitute, the buyer is bound to purchase what is available at the tagged price. For instance, there is no substitute for railways as the bulk carrier. Thus to be the sole seller, in the monopolistic setup, a unique product must be produced.

4. Full Control over Price:

In a monopoly market, restricted entry constricts competition and the monopolist exhibits full control over the market conditions. The absence of competition spares the monopolising company from price pressure and grants him the opportunity to charge the product as per his advantage, targeting profit maximising via pre determined quantity choice. Thus, a monopolist is a 'price maker' and not a 'price taker', wherein he decides the price and the buyers has to accept to accept it. Nevertheless, to evade the entry from new market participants, the company needs to regulate the set product or service price within the paradigms of the Monopoly Theorem.

5. Price Discrimination:

It can be defined as the 'practice by a seller of charging different prices from different buyers for the same good or service'. A monopolist has the leverage to carry out price discrimination as he is the market and acts as per his suitability.

6. Increased Scope for Mergers:

The scope for vertical and/or horizontal mergers is increase in lieu of control exhibited by a single entity under a monopoly. The mergers efficiently absorb competition and maintain the supply chain management.

7. Price Elasticity:

With regard to the demand of the product or service offered by the monopolizing company or individual, the price elasticity to absolute value ratio is dictated by price increase and market demand. It is not common to see surplus A S R B.com MBCA Page 6

and/or a loss categorised as 'deadweight' within a monopoly. The latter refers to gain that evades both, the consumer and the monopolist.

8. Lack of Innovation:

On account of solitary market domination, monopolies exhibit an inclination towards losing efficiency over a period of time; new designing and marketing dexterity takes a back seat.

9. Lack of Competition:

When the market is designed to serve a monopoly, the lack of business competition or the absence of viable goods and products shrinks the scope for 'perfect competition'. Being the sole merchant of a eccentric good with no close imitation, a monopoly has no opposition. The demand for turnout induced by a monopoly is the market demand, adhering extensive market control. The incompetence resulting from market dominance also makes monopoly a key type of market failure.

Monopolistic Competition

It refers to a market situation in which there are many producers producing goods which are close substitutes to one another or the product is differentiated.

According to **Joe. S Bain** "monopolistic competition is found in the industry where there are large numbers of small sellers selling differentiated but close substitute product".

Features of monopolistic competition:

1. Large firms:

Under monopolistic competition there are large firms producing the products but the number is not large as perfect competition. Each firm producing a small portion of total output and as a limited control over the price of the product.

2. Independent price policy/ Absence of interdependence:

The firms are producing differentiated products which are close substitute and as such each determines the price taking into consideration only his cost of production and demand.

3. Product Differentiation:

Firms under monopolistic competition are producing products which are similar but not identical this is called product differentiation.

4. Free Entry and Exit:

The firms can enter or exit the market the market freely under monopolistic competition.

5. Selling cost:

It is an important feature under monopolistic competition the expense incurred for advertisement and other selling mediums are called selling cost most important firm of selling cost is advertisement. A S R B.com MBCA Page 7

6. Lack of perfect knowledge:

Both the buyers and sellers don't have perfect knowledge of the market there are a large number of products each being close substitute of the other. Therefore, he may be able to choose the right product similarly the seller doesn't know the exact preference of the buyers and hence, he cannot get added advantage out of the situation.

7. Lack of mobility of factors:

It is assumed that both factors of producing goods and services are not perfectly mobile under monopolistic competition.

8. More elastic demand:

The firm under monopolistic competition have more elastic demand curve i.e., if the firm wants to sell more it must reduce its price.

Duopoly:

The word 'duo' means two and 'poly' means seller. Thus the word duopoly refers to that form of imperfect competition where there will be two sellers producing and selling either identical products or differentiated product.

Features of Duopoly:

1. Two Sellers:

Two sellers selling goods in the market.

2. Independence:

The decision of the seller is not independent of each other.

3. Identical or differentiated products:

The product can be homogenous or differentiated.

4. Competition:

The two firms may either resort to competition.

5. Simple form of oligopoly:

It is a simple form of oligopoly.

OLIGOPOLY

Oligopoly is defined as competition among the few or few sellers in the market.

According to **John Robinson** “Oligopoly is market situation in between monopoly and monopolistic competition in which the number of sellers is more than one but is not so large that the market price is not influenced by any one of them.”

Features of Oligopoly:

1. Few Sellers:

There are only few sellers selling either homogenous or differentiated. A S R B.com MBCA Page 8

2. Interdependence:

The firms under oligopolistic market depend on each other in fixing the price and determining the output.

3. Uncertainty:

Interdependence of firms creates uncertainty for all firms i.e., the demand or revenue curve of each firm is indeterminate.

4. High elastic demand:

The producer produced by the firm under oligopolistic market have a high cross elasticity hence, there is always a fear between the rivals.

5. Elements of monopoly:

Under oligopoly each firm controls a large share of the market and produces a differentiated product it enjoys monopoly power in determining price to that extent of differentiation.

6. Constant struggle:

The firms under oligopoly are subjected to constant struggle of rivals against rivals.

7. Rigid or sticky price:

The firms under oligopoly stick to its own price, oligopoly prices tend to be rigid or sticky.

8. Kinked demand curve:

A firm under oligopoly will have a kinky demand curve because of price rigidity.

BUSINESS CYCLE

Meaning:

Business cycle refers to a predicable long term pattern of alternating periods of economic growth and decline, characterised by changing employment industrial productivity and interest rate.

Definition:

According to '**Leeynes**', "A business is composed of periods of good trade characterised by rising prices and low unemployment percentage and also in the periods of bad trade characterised by decreasing prices and increases unemployment percentage."

(OR)

According to '**Gordon**', 'Business consist of recurring alternation of expansion and contraction in aggregate economic activity the alternative movements in each direction being self reinforcing and pervading virtually all parts of the economy."

Features of business cycle:

1. It is a wave like movement.

2. It is embracing: it covers the entire economy. The entire business of the economy acts like a living organism hence any change in one part of the economy affects the entire economy.

3. It occurs periodically.

4. It is to be noted that different trade cycle or similar but not identical in their nature.

5. The effect of different life cycle is in different activity.

6. It is international in character.

7. The downward movement is more sudden and violent then the change from downward to upward.

8. It is characterised by the presence of a crisis according to Lord Keynes

Stages of Business Cycle

1. Depression
2. Recovery
3. Prosperity or full employment
4. Boom or overfull employment
5. Recession

Stage 1 Depression

It is the first phase of a trade cycle. According to '**prof. Haberler**', " Depression is a state of offers in which the real income consumers or value of production per head and the rate of employment are falling during depression all construction activities comes to a halt stage." Capital goods industries suffer more than consumer goods industry.

Features:

- A sharp reduction in the value of out trade and other transactions.
- An increases in the level of unemployment
- Reduction in the aggregate income that is wages and profit in a few cases profit turns to be negative.
- A drop in prices of most of the products and fall in interest rate.
- A decline in marginal efficiency of capital and hence volume of investment.
- Absence of incentive for production as the market become dull.

- A low demand for loans, surplus, cash balance with bank leading to a contraction in the creation of bank credit.
- A high rate of business failure.
- An increasing difficulty in returning old debts from debtors.
- A decline in the level of investment in stock as it becomes less attractive and less profit and also reduces the deposit with the bank and other financial institutions.

Stage 2 Recovery

After a period of depression recovery starts it is the period where in economic activities receive stimulus and recover from the shock. This is the turning point from depression towards up swimming. Recovery helps to restart the confidence of the business and create a favourable climate from business venture as a result business people takes more risk and invest more low wages, low interest rate and low production cost recovery in marginal efficiency of capital industries the business people to take up ideas

Features

o Increase in government expenditure so as to increase purchasing power in the hands of customers.

o Change in production techniques and business strategies.

o Diversification in investment.

o Exploitation of new sources of energy.

o New innovations, developing new product or services, new marketing strategies.

Stage 3 Prosperity of full employment

The cumulative process of recovery continues till the economy reaches full employment. Full employment means it is a situation where in all available resources are fully employed at the current wage rates.

According to '**prof. Haberler**', "Prosperity is a state of affairs in which the real income consumed produced and the level of employment are raising and there is no ideal resources."

Features:

[illegible]

- A high level of purchasing power, consumption, expenditure and effective demand.

[illegible]

Firms operate almost at full capacity along with its production.

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Everyone seems to be happy in during this period.

Stage 4 Boom of overfull employment

Business optimum stimulates further investment leading to rapid expansion in all spheres of business activities during the stage of full employment unutilised capacity gradually disappears.

Features

Prices, wages, interest, profit, move in upward direction.

Marginal efficiency of capital raises leading to business expansion.

Business people borrow more and invest.

There is a higher output of income and employment, living standard of people increases.

There is higher purchasing power and level of effective demand will increase.

It is a symptom of end of the prosperity stage and the beginning of recession stage.

Stage 5 Recession

It is the period of time where in the aggregate level of economic activity starts declining. There is contraction or slowing down of business activities. There is imbalance between supply and demand. The cancellation of orders for the inputs by the producers of consumable goods create a chain reaction in the input market because the income of the employees or consumer is in decline stage.

V- ECONOMIC INDICATORS AND RECENT TRENDS

NATIONAL INCOME

Meaning:- The total income of the nation called National income" the aggregate economic performance of the whole economy is measured by the national income data.

" money measures of the aggregates of all commodities & services accruing to the inhabitants of community during a specified period".

METHODS & DIFFICULTIES OF MEASRUING NATIONAL INCOME

The different methods to measure national income are

1. Income method
2. Product method
3. Expenditure method

1. INCOME METHOD

The income method measures the national income from the distribution side. This method consist in adding together net income payments received by the citizens of a country in a particular year.

Steps in Income method

A. Identification of Producing Enterprise

The first step of income method relates to the identification of producing entrepreises which employ the factor inputs. These are;

1. Primary Sector:- Primary sectors refers to that particular sector which produces goods & service by exploiting natural resources. Eg:- agriculture, fishing, mining, quarrying.
2. Secondary Sector:- it is also termed as industry sector. In this sector one of commodity is transferred to another type of commodity
3. Tertiary sector:- is it also known as service sector like Banking, Industry, Transport communications, Trade etc.

B. Classification of Factor Income

Factor income can be classified into the following groups

1. Compensation of employees:- it comprises of wages & salaries, employers contribution to social security schemes payment in kind etc.

2. Operating surplus:- the operating surplus comprises of income from property & entrepreneurship. It is earned both in private as well as govt. enterprises.
3. Non-wage income:- non wage income refers to the incomes of self-employed persons using their own labour, land, capital etc.
4. Net factor income from Abroad:- net factor income from aboard is the income attributable to factor services rendered by normal residents of the county to the rest of the world.

C. Estimation of Factor Income
Income paid by every producing enterprises can be measured by multiplying the number of units of each input employed & the income paid to each unit. The resultant will be the income generated by the enterprises
Net national= Net Domestic Income+ Net factor Income from Abroad.
Gross National Income=Net national income = depreciation

Difficulties in Income Method

1. Classification of Income:- the major problem that arises is the classification of income among the factors of production in the forms of wages, interest & profit. No doubt, there is not much confusion as regards the classification of factor incomes but there is a wide dispute in this regard.
2. Determination of Factor Share:- it is a matter of great difficulty to determine the factor income of the entrepreneurs there is no unique way to estimate the contribution made by the entrepreneur in the process of production.
3. Change in the Price:- in the period of inflation, price rise is experienced. This affects the value of stock with the producers.
4. Allocation of Income:- In the underdeveloped countries there are many small shop-keepers & professionals. These small shop keepers do not maintain any accounts of their income. This is turn creates the problem of the allocation of income among different factors.
5. Allocation of mixed Income:- Allocation of mixed income is another hurdle in the computation of national income by the income method. As the income of the farms is included in factor income the income from ownership of farm building as well as financial assets is not included in the factor income.
6. Income of self-employed:- there exists uncertainty as to when self employed persons get their income. Self employed persons receive income at two points of time. First when income is generated second, when income is actually distributed.

2. PRODUCT METHOD

This method is also known as Inventory method or Commodity service method. The sum total value of all the final goods & services produced during a given period in an economy. These totals are known as the net domestic product at market price.

Steps in Product Method

A. Classification of Enterprises
   In the initial stage of the computation of national income by product method, we classify all the producing enterprises into three categories viz primary, secondary & tertiary sector.
B. Classification of Output
   1. Consumer Goods:- Consumer goods comprise of all the goods & services for the purpose of consumption for the direct satisfaction of the consumers.
   2. Investment Goods:- These goods refer to all those final goods which are kept aside to increase the national wealth of a country. These goods are not for the direct consumption of the consumers.
   3. Govt. Produced goods:- Govt. produced goods & services which include health services, education, railway, roadways etc. these have no market value. These goods & service are provided by the govt to the people free of cost.
   4. Export less Imports:- Every country of the world has trade relationhs with other countries. Some goods & service are sold to other countries which are termed as exports. Similarly goods & services which we purchase from other countries are known as imports.
C. Measurement of Value of Output
   The last step involved in the measurement of national income by the product method relates to the measurement of the value of output. There are two methods to measure the value of output

i) Final Output Method:-
   In order to know the net value added, the following estimation is of immense use
   a) Value of Output:- the volume of physical output of each producing enterprises by their respective market place.
   b) Value of Intermediate Consumption:- by using the prices paid by each enterprises for the purchase of goods & service, we get the value intermediate consumption.
   c) Depreciation:- it refers the loss of the value of the capital asset during a given period.

ii) Double Counting:- it refers to the possibility of commodity like raw material or labour, being included in national income more than once.eg: a fromar produces one ton of cotton & sells it for Rs. 600 in the market so far as farmer is concerned his sale of cotton is the final sale & he gets Rs.600 for the same . but for the purchaser of the cotton, it is an intermediate goods he transfers it into thread & sells it at Ts.900 to manufacture of cloth.

iii) Value Added Method:- the addition of value of a producing unit to the raw material & services that are purchased from the other producing units before passing on the output to other economic agent in an economy.
Value added=value of output – Value of Raw material

Difficulties in Product Method

1. Double Counting:- it includes only final goods & services in the calculation of national income. But sometimes it becomes difficult to make a difference between final goods & intermediate goods.
2. Problem of Imputed values:- in national income accounting goods & services for self-consumption are also included. But to impute values for these goods & services is really a difficult job.
3. Change in prices:- while computing national income, prices go on changing. As a result it becomes difficult to have to correct measure of national income.
4. Insufficient Data:- in countries like India there is a lack of sufficient data which poses serve threat to the national income accounting.

C.Expenditure Method

This method is also known as Consumption & investment method. In order to use this method, we add up personal consumption expenditure, government purchases of goods & services, net domestic investment, net foreign investment. The summation of all these expenditure gives us gross national product at market prices. We deduct depreciation t find net national product market price less indirect taxes gives us net national income at factor cost.

Steps in Expenditure Method

A. Identification of Economic Units
All the economic units incurring final expenditure within the geographical boundaries of the country; these are categorized into
   i) Household Sector
   ii) Producer Sector
   iii) Govt. Sector

iv) Rest o the world sector

B. Classification of Final Expenditure

Final expenditure classified into

i. Final consumption expenditure:- consumer goods divided into following three types
   a. Single Use consumer Goods
   b. Durable consumer goods
   c. services

the amount incurred on the purchase of these goods in a particular year is called the consumption expenditure.

ii. Investment Expenditure :- raw material machines, plants etc are called the investment goods. Theses goods satisfy human wants indirectly. The amount which we incur in a year to purchase these investment goods is called the investment expenditure. Further it classified into
   a. Change in stock:- change in stock refers to the physical change in stocks of inventories like raw materials, semi-finished goods & finished goods.
      change in stock=closing stock-opening stock
   b. Gross Domestic capital formation:- it consist f tow items viz; construction, machinery & equipment.

Precautions

1. Expenditure on transfer payments by the Govt. is excluded from total expenditure.
2. Expenditure on second hand goods is excluded.
3. Expenditure on shares & bonds is excluded.
4. Intermediate expenditure is excluded from the national income accounting.
5. Gross investment is included in total expenditure.

Difficulties

1. Data regarding consumption expenditure & investment expenditure in private secor is not readily available.
2. Sometimes it become difficult to differentiate govt. consumption expenditure from govt. investment expenditure.
3. It is quite difficult to get data regarding change in stock.

USES OR IMPORTANCE OF NATIONAL INCOME

1. Inflationary & Deflationary gaps:- inflationary & deflationary gaps are the result of inconsistencies of certain sub-total related to national product & aggregate expenditure. The excess expenditure over the value of available output at base level prices will result in inflationary gap. This inflationary gap will lead to a rapid increase in the general price level of the country.
2. Basis of economic welfare:- national income analysis reflects the well being of the inhabitants of the country. They enable us to compare the standard of living of the people in different countries or the people living in same country are different times. The higher the per capita income, higher will be the standard of living, the higher will be the economic welfare.
3. Basis of economic policy:- in the era of planning national income statistics are regarded as comprehensive tool of economic policy. They throw light on the date pertaining to the country's gross income, output, saving, consumption etc. Without these estimate planning is almost impossible.
4. Basis f Economic Structure:- national income statistics enables us to have a detailed knowledge of the economic structure of the country. They help us to know the contribution made to national income by the different sector of the economy as mining, fisheries, transport & trade etc.
5. Basis of the distribution of national income:- the national income data helps us to know about the distribution of national income in the country. The date pertaining to wages, profits , interest enable us to learn about the disparities in income samong the different sections of the society.
6. Basis of budgetary policies:- the govt. prepares their budget policies on the basis of national income statistics. Even taxation & borrowing policies are so framed to neutralise the fluctuations in the level of income & employment.
7. National expenditure:- National income statistics are useful to know how the national expenditure should be divided between consumption & investment expenditure. It enables us to provide for reasonable depreciation to maintain the capital stock of a community.
8. Inter- national sphere:- national income statistics play a pioneer role in fixing the burden of international payments among different countries & to determine the quotas of different countries to international organisation like , IMF, IBRD, UNO. National income statistics are required for international comparison of the burden of taxation. It is only on the basis of these statistics that the under-developed countries of the world have claimed & from rich countries.

9. Distribution of Grants-in-aid:- in the federal set up national income estimate enable the central govt. to distribute the quantum of grant-in-aid among the state government & make allocations as grants to various states on the basis of the estimate of national income.
10. Public sector:- national income estimates help s to understand the role of public as well as private sectors in the economy. In an economy, most of the activities are performed by the state. It means that public plays a dominant role.

NATIONAL INCOME CONCEPTS

1. GROSS NATIONAL PRODUCT(GNP)
   GNP refers to the total value of final goods & services produced in the country during a given period of time.
   Acc. W.C. Peterson " GNP may be defined as current value of all goods & services produced by the economy during an incomer period".
   Features of GNP
   i. GNP does not take into account the depreciation of goods & services during the process of production.
   ii. GNP excludes the transfer payments viz; maternity benefits, unemployment, free scholarships, pensions etc.
   iii. Only those goods & services ar included in GNP that are brought for sale & purchase in the market. It means goods services having market value are included in GNP.
   iv. Capital gains which accrue on capital are excluded from GNP.
   v. GNP is measured in monetary terms.

2. GROSS DOMESTIC PRODUCT
   When we take the sum total of values of output of goods &services in the country without adding net factor incomes from abroad.
   GDP=C+I+G+(X-M)
   C= consumption
   I=Investment
   G=Government purchase
   (X-M)= net exports

3. NET NATIONAL PRODUCT(NNP)
   The value of total output of consumption goods & investments goods. But the process of production uses up a certain amount of fixed capital
   NNP=GNP-Depreciation
   - NNP AT MARKET PRICE:- the net money value of final goods & services produced at current prices in one year in a country.

If we subtract the depreciation charges from the GNP , well get the NNP at market price.

- NNP at Factor Cost:- the sum total of income payments made to the factors of production. The sum total of goods & services produced with the co-operation of factors of production at factor cost during one year in a country.

4. PERSONAL INCOME(PI)
   The income received by the individuals of a country in a year all sources .
   PI never equal to national income because it includes the transfer payments whereas in national income these are excluded. Eg- wages/salaries interest, rent & dividends received .
   PI= Net national income + transfer payments – Undivided corporate profit – Corporate Income tax – social security contribution.
5. DISPOSABLE INCOME
   The actual income which can be spent on consumption by individuals & families.
   An individual cannot spend all his income on consumption because, it is the income that accrues before the income tax has been actually paid. Therefore, disposable income is that part of income which is let after the education of direct taxes. But whole of the income is not spent on consumption; a part of it is saved.
   DI = Consumption Expenditure + savings
6. CORPORATE INCOME
   Income & profits of companies of public corporation. If we deduct the income tax & profit tax, it will give us the corporate income.
7. PER CAPITA INCOME
   Per capita income of a country may be defined average earning of an individual in a particular year. It refers to the income received by an individual in a certain year in a country. Generally, the concept of per-capita income refers to the measurement of income at current prices & at the prices of base year.

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

8. PRIVATE INCOME
   The income obtained by private individuals from any source whether productive or unproductive. It can be arrived at from NNP at factor cost by making certain additions & deductions.

9. REAL INCOME
   The national income expressed in terms of level of prices of a particular year taken as base.
10. DOMESTIC INCOME OR PRODUCT
   The income generated by the factors of production within the country from its own resources . It includes wages/ salaries, rent, interest, dividend, undistributed direct taxes. Etc.

INFLATION

Meaning:- Inflation is a process in which the price level is rising & the money is losing its value. Inflation occurs when quantity of money in circulation increases beyond the requirements.

Acc. To Pigue " inflation exists when income is expanding more than in proportion to income earning activities".

Types of inflation

A. On the basis of Rate of Inflation
   1. Creeping Inflation:- when the increase in the price level is not more than 2% p.a. the inflation is called creeping inflation.
   2. Walking Inflation:- in walking inflation, the price level increase more rapidly than in creeping inflation, it may go to 5% p.a.
   3. Running Inflation:-- a general rise in price level upto 8% - 10% p.a. is called running inflation.
   4. Galloping or Hyper Inflation:- in a situation where price level rises very rapidly within a short period of time, the inflation is called galloping inflation.
B. On the basis of degree of control
   Inflation is classified into the following categories on the basis of degree of control
   1. Open inflation :- the situation when inflation gets out of control & cannot be suppressed by the government price control or nay other similar steps.
   2. Suppressed Inflation:- the situation when government is in a position to control inflation by its price control policy.
C. On the basis of causes
   Inflation can be divided into categories on the basis of its causes
   1. Demand Pull Inflation:- when demand for goods & services is more than their supply the price level of these goods & service will rise demand pull inflation.

2. Cost Push Inflation:- when the cost of production or the remuneration of factors of production increases, there will be an increase in prices causing cost push inflation.
3. Profit induced inflation:- sometimes the businessmen increases the prices of their products only to increase their profit margin. It causes profit induced inflation
4. Budgetary inflation:- when the govt. covers the budget deficit by borrowing money, budgetary inflation will be caused.
5. Wage spiral inflation:- workers often demand increases, the cost of production will rise & prices of the products will go up. This inflation is called wage spiral inflation.
6. Devaluation inflation:- devaluation makes the domestic currency cheaper in terms of foreign currencies. It results in the increased prices. The inflation thus caused is known as devaluation inflation.