MODULE 1

Introduction to the subject: Micro and Macro Economics, Relationship between Science, Engineering, Technology and Economic Development. Production Possibility Curve, Nature of Economic Laws.

MODULE 2

Time Value of Money: concepts and application. Capital budgeting; Traditional and modern methods, Payback period method, IRR, ARR, NPV, PI (with the help of case studies)

MODULE 3

Meaning of Demand. Law of Demand, Elasticity of Demand; meaning, factors effecting it and its practical application and importance. Demand forecasting (a brief explanation)

MODULE 4

Meaning of Production and factors of production, Law of variable proportions and returns to scale. Internal and external economies and diseconomies of scale. Concepts of cost of production, different types of costs; accounting cost, sunk cost, marginal cost, Opportunity cost. Break even analysis, Make or Buy decision (case study). Relevance of Depreciation towards industry.

MODULE 5

Meaning of market, types of market, perfect competition, Monopoly, Monopolistic, Oligopoly. (main features). Supply and law of supply, Role of demand and supply in price determination.

MODULE 6

Indian Economy, nature and characteristics. Basic concepts; fiscal and monetary policy, LPG, Inflation, Sensex, GATT, WTO and IMF. Difference between Central bank and Commercial banks

TEXT/ REFERENCES BOOKS

- 1. Jain T.R., "Economics for Engineers", VK Publication
- 2. Chopra P. N., "Principle of Economics", Kalyani Publishers
- 3. Dewett K. K., "Modern economic theory", S. Chand
- 4. H. L. Ahuja., "Modern economic theory", S. Chand
- 5. Dutt Rudar & Sundhram K. P. M., "Indian Economy"
- 6. Mishra S. K., "Modern Micro Economics", Pragati Publications
- 7. Pandey I.M., "Financial Management"; Vikas Publishing House
- 8. Gupta Shashi K., "Management Accounting", Kalyani Publication

.

Definition

Market is defined as place or point at which buyers and sellers negotiate their exchange of **well defined products or services**.

Meeting point of buyers and sellers is not necessarily a geographical one.

Features of Market

- i. Commodity (product or services)
- ii. Buyers and Sellers
- iii. Area there should be an area in which buyers and sellers of a commodity exist. It is not essential that the buyers and sellers come to a particular place to transact business.

Features of Market

- iv. Close Contact there should close contact /communication between buyers and sellers not necessarily by physical contact.
- v. Competition at least some amount of competition is expected in a market place.

Extent of Market

Markets may be geographically defined as Local, State level, Notional or International depending on the area of the coverage. The factors contributing towards that are:

i. Nature of Commodity – durable goods or services can have wide presence. Much would depend on connectivity and transportation infrastructure.

Extent of Market

- ii. Size of Production—large scale production can only meet wider demands
- iii. Extent of Demand a commodity with universal demand like Gold will have a wider market
- iv. Means of Communication and Transport a proper infrastructure is a must for industry to grow. For eg. Air Cargo in the modern market have contributed a lot towards widening the market which earlier was either by road or by sea.
- v. Peace and Security trade in any country / place is subject to market friendly environment

Extent of Market

- vi. Currency and Credit System in the absence of a Common Global Currency trade depends a lot on the Reserve Currencies and the currency and credit system of the country. With establishment of World Trade Organizations, World Bank and other International Financial / Regulatory bodies, world trade has expnded.
- vii. Trade Polices of the Country many countries follow restrictive trade policies to protect their home grown industries.

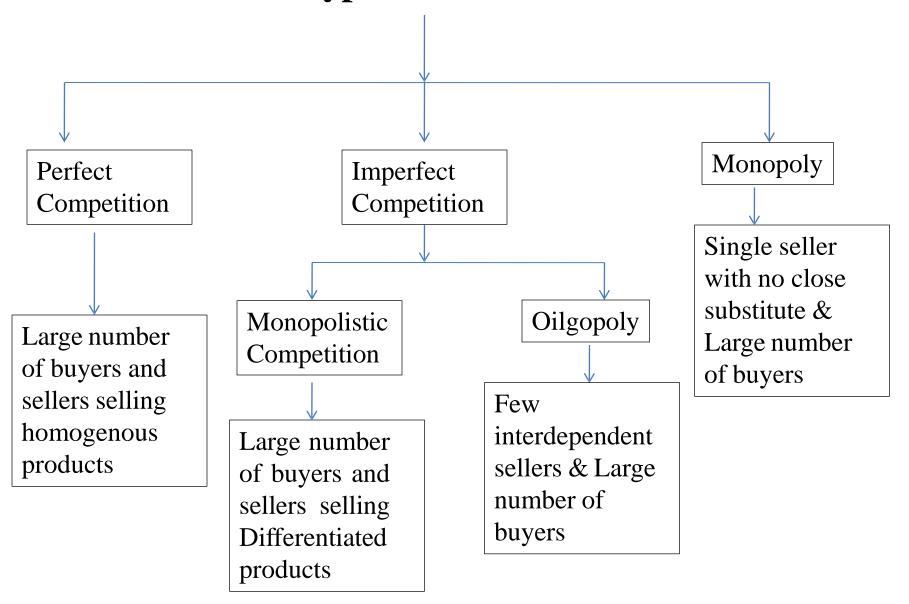
Types of Market

Market Structure & its Types

Market structure refers to the characteristics of a market that influence the behaviour and performance of firms that sell in the market.

- Number and size of buyers and sellers of the product degree of concentration of buyers and sellers
- Type of product bought and sold (homogeneous or differentiated)
- Degree and mobility of resources freedom of movement of goods and factors of production
- Degree of knowledge that economic agents have of prices and costs
- Demand and supply conditions
- Conditions of entry into the market

Types of Market



Perfect Competition:

Perfect competition prevails in the market when demand for the output of each of the producer is perfectly elastic.

Features of Perfect Competition

- Large number of buyers and sellers** no individual seller can influence price
- Homogenous product identical so no consumer preference
- Free entry and exit to industry
- Sellers are price takers have to accept the market price
- Perfect information available to buyers and sellers
- Perfectly elastic demand curve implying that at a particular point only One
 Price prevails in the market depending on demand & supply
- Perfect mobility of resources
- Examples are Financial markets stock exchange, currency markets, bond markets, Agriculture etc.
- **Internet related industries**. The internet has made many markets closer to perfect competition because the internet has made it very easy to compare prices, quickly and efficiently (perfect information).

Monopoly

- A *monopoly* (from the Greek word "mono" meaning single and "polo" meaning to sell) is that form of market in which a single seller sells a product (good or service) which has no substitute.
- Monopoly exists when there is *no close substitute* to the product and also when there is a single producer and seller of the product.
 - e.g., Indian Railway is a monopoly, since there is no other agency in the country that provides railway service.
 - Electricity companies
 - Oil Companies like IOCL, BP, HP
 - Transport like bus
 - Microsoft on operating systems

Monopoly - Features

- **Single Seller** Market is under control of a single firm.
- No close Substitute –product being sold has no close substitute
- **High entry barriers** barriers may be legal, natural or institutional
- Price maker Firm controls price or output/supply
- Abnormal profits in long run
- **Possibility of price discrimination** product can be sold at different price to different customers based on:
 - Purchasing power urgency, quality conciousness, indispensability etc.
 - Quantity bought
 - Customers from different market conditions
- Limited consumer choice

Types and Sources of Monopoly

Types of Monopoly

- Pure monopoly industry is the firm
 - e.g., Indian railways, Aluminium Company of America, etc.
- Actual monopoly where firm has >50% market share.
 - Post office, Ration shops, Arm shops, etc.
- Natural Monopoly exists in case of public utilities
 - Gas, electricity, water, local transportation, etc.
- Regional Monopoly
 - Mumbai Taxi industry, Delhi Metro, etc.

Sources of Monopoly

- Government policies and legal provisions Indian Railways, franchise : Electricity, Gas, Water, Telephone, Petrol outlet
- **Patents or copyrights** through Research & Development
- Control of an essential input
- **Natural monopoly** as a result of economies of scale Government regulates natural monopoly so that sellers do not exploit consumers by charging high prices
- Advertising and Brand Loyalties of Established Firms e.g. Cadbury Chocolates

CAUSES OF MONOPOLY

- 1.Product differentiation
- 2. Strategic barriers like limit pricing
- 3.Government Regulation licensing gas company, electricity undertaking
- 4. Capital requirements
- 5. Possession of certain scarce raw materials, patent rights etc.
- 6.Ignorance laziness and prejudice of buyers may create monopoly in favor of a particular producer.

ADVANTAGES OF MONOPOLY

- 1.Innovation Oriented
- 2.It may encourage Research and Development.
- 3. Gain of economies of scale

DISADVANTAGES OF MONOPOLY

- 1.Restricted consumer choice
- 2. Power of market in few hands
- 3. High prices as no control on monopolist
- 4. Not good for society / Risk to economy
- 5. Misallocation of resources

Monopolistic competition

- Introduced by Joan Robinson (*The Economics of Imperfect Competition*, 1933) and Edward H. Chamberlin (*The Theory of Monopolistic Competition*, 1933)
- It is more realistic form of market structure because it is difficult to have products which have No Close Substitutes or are perfect substitutes. Therefore few monopoly or perfect competition exists.
- It is a market situation in which there are many producers competing against each other, but selling products that are differentiated from one another (e.g. by branding or quality) and hence are not perfect substitutes. In monopolistic competition, a firm takes the prices charged by its rivals as given and ignores the impact of its own prices on the prices of other firms
- A combination of perfect competition and monopoly.
 - Imperfect competition because a large number of sellers sell heterogeneous or differentiated products and buyers have preferences for specific sellers.
 - Monopolistic, because each of these sellers makes the product unique by some differentiation and has control over the small section of market, just like a monopolist.

Monopolistic Competition – Features

- Large number of buyers and sellers
- Heterogeneous products.
 - A differentiated product enjoys some degree of uniqueness in the mindset of customers, be it real, or imaginary.
- Unrestricted entry and exit.
- Non Price competition sellers try to compete on the basis other than price like aggressive advertising, product development, better distribution etc.
- Independent decision making pricing and output policy of each firm is independent of the other. No strong rivalry.
- Selling costs exist
- Imperfect knowledge.

Monopolistic or Imperfect Competition

- Restaurants
- Plumbers/electricians/local builders
- Private Schools
- Insurance brokers
- Health Clubs
- Hairdressers
- Estate Agents

Distinction between Perfect and Monopolistic Competition

Perfect Competition

- 1. Large number of firms no one firm can influence the market
- 2. Homogeneous Product
- 3. Perfect competition among sellers
- 4. Price taker price strictly decided by demand and supply
- 5. Perfect mobility of factors of production
- 6. Selling cost is minimal since firms produce homogenous products, aggressive advertising is not required

Monopolistic Competition

- 1. Many firms each having a small share in market
- 2. Product differentiation
- 3. Competition coexists with monopoly
- 4. Price maker firm can have independent pricing policy
- 5. Factors of production are not perfectly mobile
- 6. Significant impact of advertisement on the sale of commodity resulting into substantial selling cost

Distinction between Perfect and Monopolistic Competition

Monopoly

- 1. Single firm
- 2. Unique product
- 3. Price discrimination is possible
- 4. Selling cost is minimal
- 5. Entry restricted

Monopolistic Competition

- 1. Many firms each having a small share in market
- 2. Product differentiation many close substitutes
- 3. Price discrimination is not possible at individual firm level
- 4. Significant impact of advertisement on the sale of commodity resulting into substantial selling cost
- 5. Free entry

OLIGOPOLY (OLIGOPOLISTIC COMPETITION)

Oligopoly is defined as a market structure in which there are a few sellers selling homogenous or differentiated products. Oligopoly is a market structure with a small number of firms, none of which can keep the others from having significant influence. The concentration ratio measures the market share of the largest firms. A monopoly is one firm, a duopoly is two firms and an oligopoly is two or more firms.

It may be of two types-

- Pure oligopoly Homogeneous product
 - For e.g. steel and aluminium
- Differentiated oligopoly Differentiated product
 - For e.g. cars, computers, scooters, cigarettes, liquors, telecommunications, etc.
 - Duopoly- two sellers
 - Coca Cola and Pepsi

FEATURES OF OLIGOPOLY

- 1.Small no. of large firms, few sellers
- 2. Each seller knows his competitors individually in each market.
- 3.Any increase or decrease in the output will affect the market price. or The firms are independent.
- 4. These firms apply theory of group behavior to avoid the competition.
- 5.produce identical or differentiated products.
- 6.Direct impact of advertising and selling costs.

Sources or Reasons for the Existence of Oligopoly

- Economies of scale: Small firms cannot secure the economies of large scale production as compared to large firms
- Large capital investment: The number of firms in an industry may be small due to the large requirements of capital.
- Legal Restriction and Patents: In public utility sector, the entry of new firms
 is closely regulated through the grant of certificate by the state. Another
 factor for the emergence of oligopoly is the patent right which a few firms
 acquire in matter of some goods.
- Control of a raw material or resource: A few firms may control some indispensable resources which may enable them to secure several advantages in costs over all others.
- Mergers and Acquisition: Many oligopolies have been created by combining two or more independent firms.
- Brand loyalty
- Government franchise
- Limit pricing

Type of market	Num ber of firms (selle rs)	Nature of product	Number of buyers	Freedom of entry and exit	Price Elasticity of Demand	Degre of Control over Price	Examples
Perfect compet ition	Very Large	Homogeneo us (undifferen tiated)	Very Large	Unrestricted	Infinite	None	Agricultural commodities , unskilled labour
Monop olistic compet ition	Many	Differentiat ed (real or fancy)	Many	Unrestricted	Large or small	Some	Retail stores, detergents, restaurants
Oligop oly	Few	Undifferent iated or differentiat ed	Few	Restricted	Small	Some	Cars, computers, universitie s
Monop o ly	Single	Unique	Many	Restricted	Zero	Very High	Agricultural commodities, unskilled labour



Hindustan Unilever leads in product diversity!



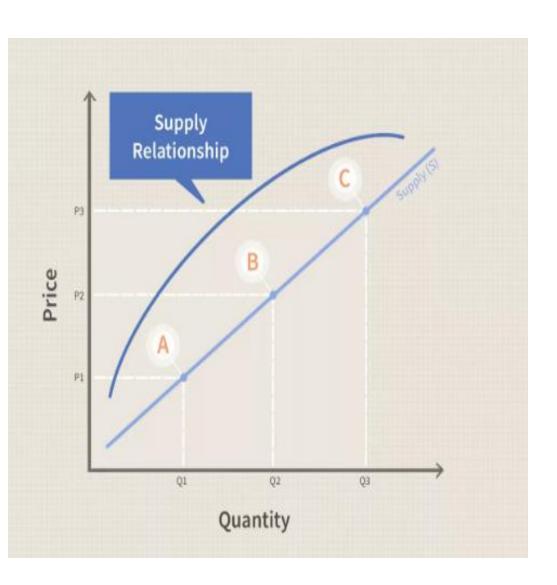


Supply and Law of Supply

- •Like law of demand which states a relation between the price and the quantity demanded for a good or service, law of supply states a relation between price and quantity supplied. Supply, like demand, is a flow concept.
- •As Lipsey has put it: "Supply is a desired flow: how much firms are willing to sell per (unit) period of time not how much they actually sell." Law of supply refers to the amount of a goods or services that producers are willing and able to offer for sale at each possible price per unit. The law of supply simply states that, as the price of a good or service rises, the quantity supplied (i.e., offered for sale) also rises.
- •"The law of supply states that other things being equal the higher the price, the greater the quantity supplied or the lower the price, the smaller the quantity supplied."

- 1. For example, a business will make more video game systems if the price of those systems increases. The opposite is true if the price of video game systems decreases. The company might supply 1 million systems if the price is \$200 each, but if the price increases to \$300, they might supply 1.5 million systems.
- 2. When college students learn that computer engineering jobs pay more than English professor jobs, the supply of students with majors in computer engineering will increase.

Supply Curve



The supply curve is upward sloping because, over time, suppliers can choose how much of their goods to produce and later bring to market. At any given point in time however, the supply that sellers bring to market is fixed, and sellers simply face a decision to either sell or withhold their stock from a sale; consumer demand sets the price and sellers can only charge what the market will bear.

What are the factors that determine "supply"?

"P.I.G. T.O.E.S"

- Productivity (workers, machines, and/or assembly)
- Inputs (Change in the price of materials needed to make the good)
- Government Actions (Subsidies, Taxes, and Regulations)
- Technology (Improvements in machines and production)
- Outputs (Price changes in other products)
- Expectations (outlook of the future)
- Size of Industry (Number of companies in the industry)

Supply Function or Determinants of Supply

Supply function studies the functional relationship between supply of a commodity and its various determinants.

 $S_x = f (P_x, P_R, N_F, G, P_F, T, E_x, G_P)$

Where,

 $S_x = Supply of a Commodity$

Px = Price of the Commodity

PR = Price of the Related Goods

N_F = Number of Firms

G = Goal of the Firm

PF = Price of factors of Production

T = Technology

Ex = Expected Future Price

G_P = **Government Policy**

Price of the Commodity

There is a direct relationship between price of a commodity and its quantity supplied. When price increases, supply also increases because it motivate the firm to supply more in order to get more profit. When price decreases, smaller quantity will be supplied as profit decreases.

Price of Related Goods

Producers always have the tendency of shifting from the production of one commodity to another commodity. If the prices of another commodity increases, especially substitute goods, producers will find it more profitable to produce that commodity by reducing the production of the existing commodity.

For Example: Suppose the seller of tea notice that the price of coffee increases. They may reduce the amount of resources devoted to the selling of tea in favour of coffee.

Number of Firms

Market supply of a commodity depends upon number of firms in the market.

Increase in the number of firms implies increase in the market supply, and decrease in the number of firms implies decrease in the market supply of a commodity.

Goal of the Firm

If goal of the firm is to maximise profits, more quantity of the commodity will be offered at a higher price.

On the other hand, if goal of the firm is to maximise sale more will be supplied even at the same price.

Price of the Factor of Production

Supply of a commodity is also affected by the price of factors used for the production of the commodity.

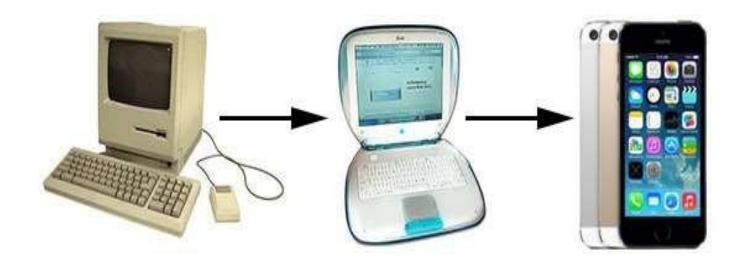
If the factor price decreases, cost of production also reduces. Accordingly, more of the commodity is supplied at its existing price.

Conversely, if the factor price increases cost of production also increases. In such a situation less of the commodity is supplied at its existing price.

Change in Technology

Change in technology also affects supply of the commodity.

Improvement in the technique of production reduce cost of production. Consequently, more of the commodity is supplied at its existing price.



Expected Future Price

If the producer expects price of the commodity to rise in the near future, current supply of the commodity will reduce.

If, on the other hand, fall in the price is expected, current supply will increase.



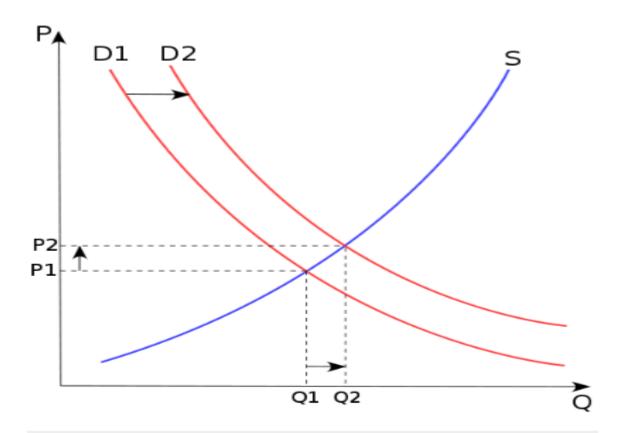
Government Policy

'Taxation and Subsidy' policy of the government affects market supply of the commodity.

Increase in taxation tends to reduce supply. On the other hand, subsidies tend to increase supply of the commodity.



Role of Supply and demand in price determination



Price affected by supply and demand: The price P of a product is determined by a balance between production at each price (supply S) and the desires of those with purchasing power at each price (demand D). The diagram shows a positive shift in demand from D1 to D2, resulting in an increase in price (P) and quantity sold (Q) of the product.

Role of Supply and demand in price determination

Supply and demand is an economic model of price determination in a market. It concludes that in a competitive market, the unit price for a particular good will vary until it settles at a point where the quantity demanded by consumers (at current price) will equal the quantity supplied by producers (at current price), resulting in an economic equilibrium of price and quantity.

The four basic laws of supply and demand are:

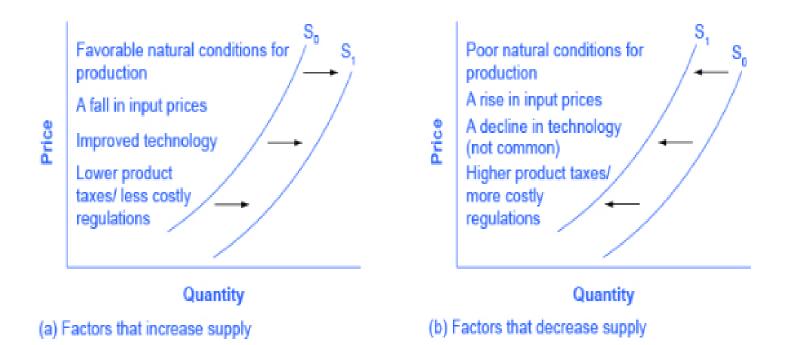
- 1. If demand increases and supply remains unchanged, then it leads to higher equilibrium price and higher quantity.
- 2. If demand decreases and supply remains unchanged, then it leads to lower equilibrium price and lower quantity.
- 3. If supply increases and demand remains unchanged, then it leads to lower equilibrium price and higher quantity.
- 4. If supply decreases and demand remains unchanged, then it leads to higher equilibrium price and lower quantity.

Equilibrium is defined as the price-quantity pair where the quantity demanded is equal to the quantity supplied, represented by the intersection of the demand and supply curves. Market equilibrium is a situation in a market when the price is such that the quantity that consumers wish to demand is correctly balanced by the quantity that firms wish to supply.

Impacts of Supply and Demand on Pricing

- •In the supply and demand model of price determination, there is never a surplus or shortage of goods at the equilibrium level. The market always settles at the point where supply equals demand.
- •If demand increases (decreases) and supply is unchanged, then it leads to a higher (lower) equilibrium price and quantity.
- •If supply increases (decreases) and demand is unchanged, then it leads to a lower (higher) equilibrium price and higher (lower) quantity.
- •If a price for a particular product goes up and the customer is aware of all relevant information, demand will be reduced for that product.
- •Demand-oriented pricing focuses on the nature of the demand curve for the product or service being priced.

Factors that shift supply curves



(a) A list of factors that can cause an increase in supply from S_0 to S_1 . (b) The same factors, if their direction is reversed, can cause a decrease in supply from S_0 to S_1 .